

# Bus Vision Study - Framing Report

DECEMBER 2023

## Executive Summary



Chicago Transit Authority



# The Bus Vision Study is a chance to rethink Chicago's bus network.

How should CTA service change to better serve the needs of current bus riders and the broader public?

## What is Bus Vision?

The Chicago Transit Authority (CTA) is launching the **Bus Vision Study, a review of the entire CTA bus network.** This review seeks to understand:

- How well does the CTA bus network serve the people of Chicago and surrounding communities?
- What goals and priorities should drive CTA's decisions about where and how often the bus operates?
- How could the bus network change and improve in the next two to five years and what would it take for possible improvements to become real?

## Why is CTA reviewing its bus network?

Transit is essential to the past, present and future of Chicago. However, the last fifteen years have brought about **increasingly severe challenges to the bus system.**

- Service levels remain low since a major reduction in 2010 due to recessionary budget shortfalls.
- There was a sustained bus ridership decline since 2012 to 2019, linked to reduced service levels and shifts in population and jobs.
- Since Transportation Network Providers (TNPs) such as Uber and Lyft started operating in 2014, many riders have opted to ride transit less often and use TNPs.
- Since 2020, the COVID-19 pandemic has created new operational and staffing challenges. CTA is addressing these through temporary service adjustments and increased hiring.
- The fallout from the COVID-19 pandemic has exacerbated pre-existing social inequalities, and may change who rides transit and how often for years to come.

## Ongoing CTA efforts to improve bus service quality

The Bus Vision Study focuses on where and how often the bus runs, what outcomes that produces, and how to change those outcomes. At the same time, CTA is also looking at ways to improve service quality on the ground. This includes:

- **Bus Priority Zones.** The Bus Priority Zones (BPZ) program launched in 2019 with targeted street improvements on major bus corridors, and additional funding has been secured to expand and continue the program so buses can run faster and more reliably.
- **Better Streets for Buses.** CTA and the Chicago Department of Transportation (CDOT) developed a citywide plan to identify a toolbox of street treatments to give more priority to buses and bus riders, and the network of streets where those treatments would be targeted. The toolbox includes changes to streets, signals, or sidewalks that can help improve bus stops and make buses run faster and more reliably. Learn more about the plan at [betterstreetsforbuses.com](https://betterstreetsforbuses.com).
- **Fleet Electrification.** To help reduce local air pollutants and greenhouse gas emissions, CTA is seeking to electrify its bus fleet. CTA has been operating electric buses since 2014 and continues to expand its electric bus fleet. The award-winning "Charging Forward" plan establishes a strategy to convert the full fleet to electric vehicles by 2040.
- **Corridor-level improvements** including expanded Transit Signal Priority for faster service on Ashland Ave, and a joint study with Pace and CDOT to improve service on South Halsted St from the Pace Harvey Transportation Center to 79th St.



Figure 1: Buses arriving at the CTA terminal at 95th St Station

# For most Chicagoans, the bus is the face of public transit.

## Why focus on the bus?

CTA's services include bus and rail, and both are essential. But the future of transit in Chicago depends heavily on the bus network for a simple reason: **most Chicagoans live near the bus and far from rail.**

This is unlikely to change anytime soon, even if future decisions expand the rail network. According to the CTA Better Streets for Buses Study:

- 96% of residents of the City of Chicago live within a half-mile of a CTA bus stop.
- About 30% live within a half-mile walk of a CTA rail station<sup>1</sup>.

The CTA bus network is more extensive and has higher ridership than CTA Rail. In 2019:

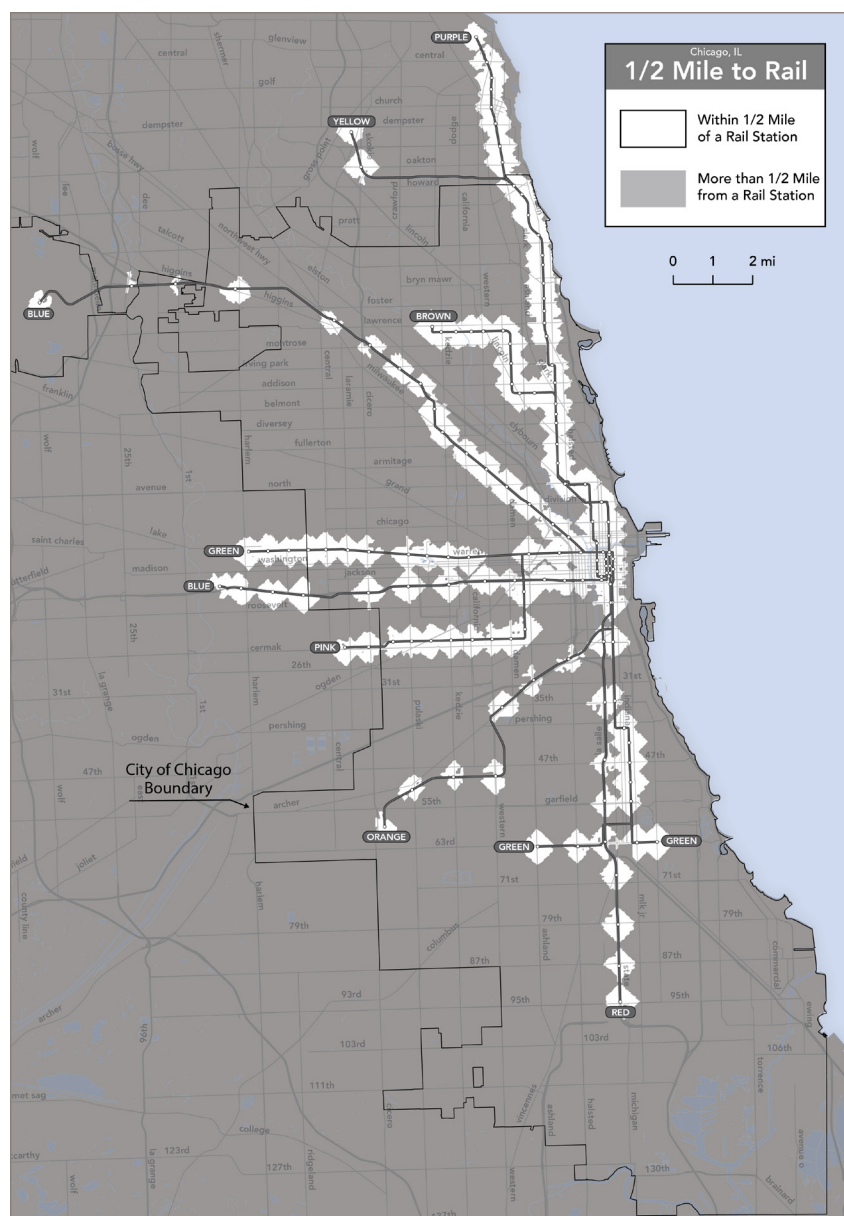
- Bus routes served 1,520 miles of streets, compared to 210 route miles of rail.
- Buses operated 5.8 million in-service hours, compared to 0.7 million train hours.
- The bus system generated 237 million boardings, compared to 218 million annual boardings on rail.

Bus ridership also remained steadier than rail ridership during the pandemic. In 2020, CTA bus boardings declined by nearly 50%, while CTA rail boardings declined by over 65%<sup>2</sup>.

<sup>1</sup> For residents of the CTA's full service area, which includes over 230 square miles in the City of Chicago and about 80 square miles in suburban areas, this report estimates that 86% of residents live within a half-mile of CTA bus (93% any bus), and 21% live near CTA rail.

<sup>2</sup> Per the FTA National Transit Database (NTD), 2020.

**Areas near Rail**  
within a half-mile walk to an L station



**Areas near Bus**  
within a half-mile walk to a bus stop with daytime service

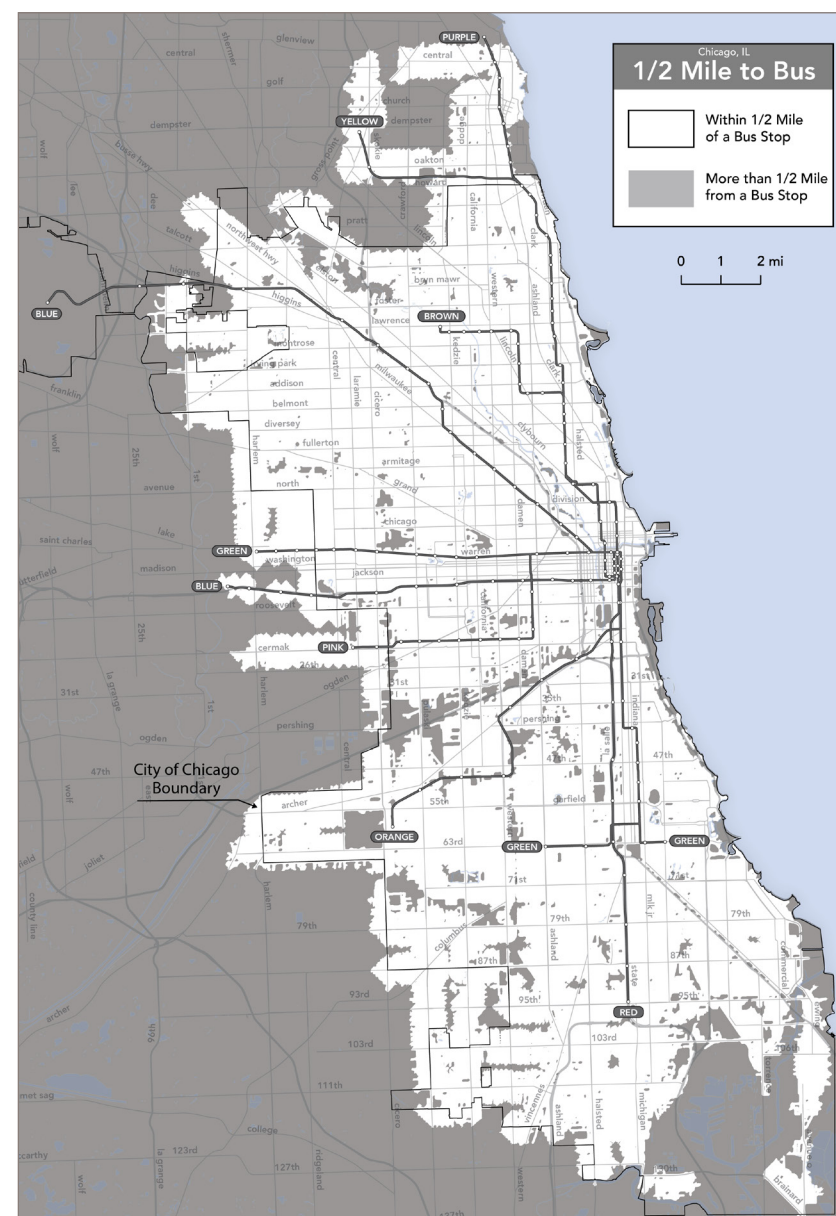


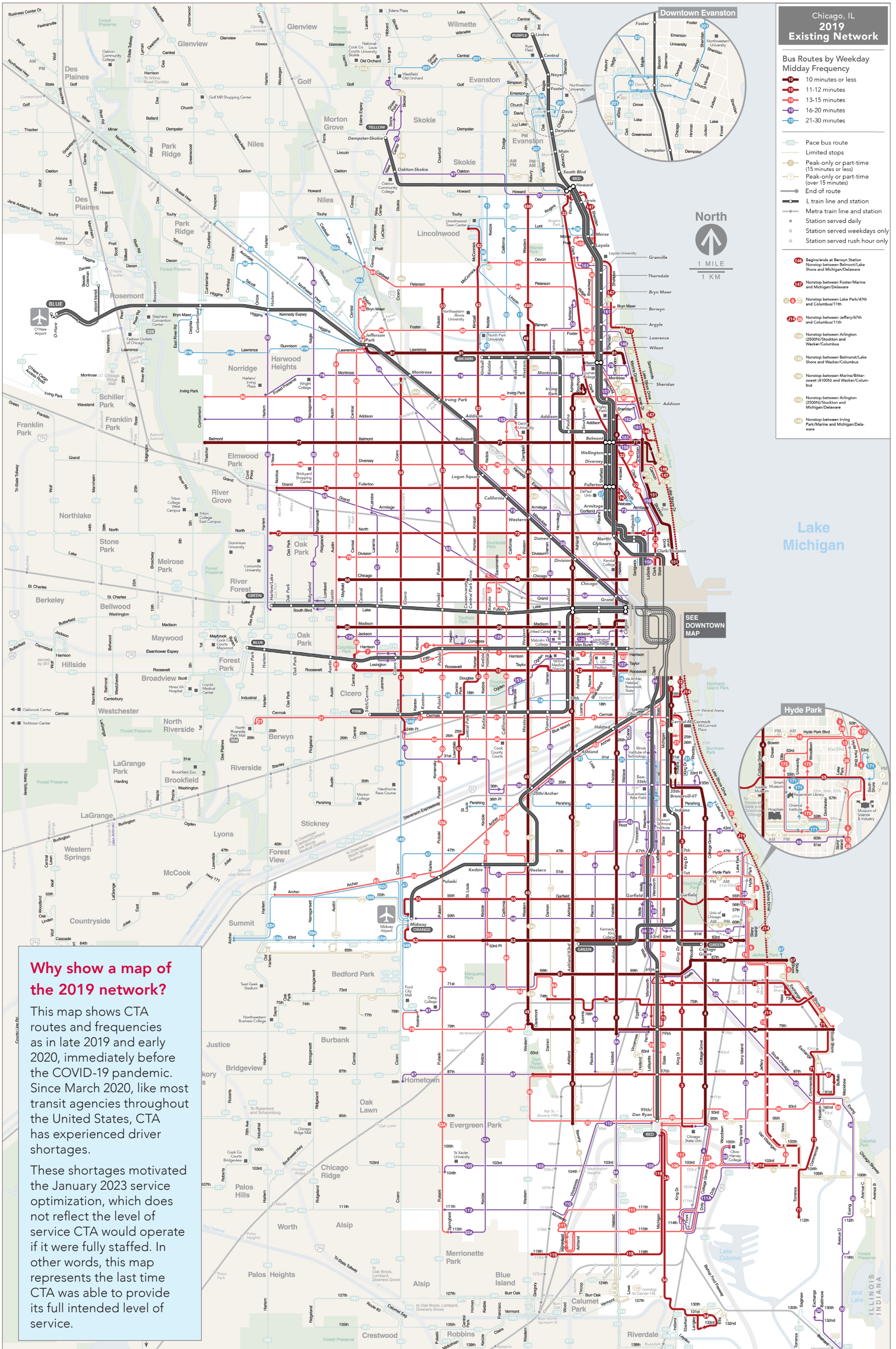
Figure 2: CTA rail lines serve a much smaller area (highlighted at left) than the bus network (at right).

The **bus has often taken a back seat** in discussions about the **future of transit.**

The **Bus Vision Study** aims to **change this.**



# Map of the 2019 CTA Network with Bus Frequencies



**Chicago, IL  
2019  
Existing Network**

**Bus Routes by Weekday  
Midday Frequency**

- 10 minutes or less
- 11-12 minutes
- 13-15 minutes
- 16-20 minutes
- 21-30 minutes

**Legend:**

- Pace bus route
- Limited stops
- Peak-only or part-time (15 minutes or less)
- Peak-only or part-time (over 15 minutes)
- End of route
- L train line and station
- Metra train line and station
- Station served daily
- Station served weekdays only
- Station served rush hour only

**Route Callouts:**

- 146 Begins/ends at Berwyn Station  
Nonstop between Belmont/Lake Shore and Michigan/Delaware
- 147 Nonstop between Foster/Marine and Michigan/Delaware
- 148 Nonstop between Lake Park/47th and Columbus/11th
- 149 Nonstop between Jefferson/67th and Columbus/11th
- 151 Nonstop between Arlington/2500N/Stockton and Wacker/Columbus
- 152 Nonstop between Belmont/Lake Shore and Wacker/Columbus
- 153 Nonstop between Marine/Bittersweet (4100N) and Wacker/Columbus
- 154 Nonstop between Arlington/2500N/Stockton and Michigan/Delaware
- 155 Nonstop between Irving Park/Marine and Michigan/Delaware

**Why show a map of the 2019 network?**

This map shows CTA routes and frequencies as in late 2019 and early 2020, immediately before the COVID-19 pandemic. Since March 2020, like most transit agencies throughout the United States, CTA has experienced driver shortages.

These shortages motivated the January 2023 service optimization, which does not reflect the level of service CTA would operate if it were fully staffed. In other words, this map represents the last time CTA was able to provide its full intended level of service.



# The bus network can serve many possible goals.

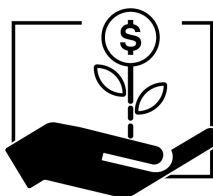
## Possible goals of transit

Public transit can serve many different goals. **Understanding which goals matter most in Chicago is a key step in designing future CTA bus service.** Some possible goals of transit include:



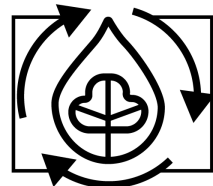
### Social Safety Net

Transit can help meet the needs of people in situations of disadvantage, with access to essential services and jobs. Transit can also alleviate social isolation by providing a basic affordable transportation option.



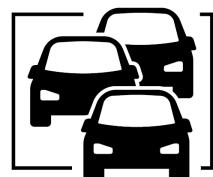
### Economic Opportunity

Transit can give workers access to more jobs; businesses access to more workers; and students more access to education and training.



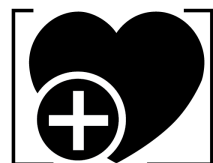
### Climate & Environmental Benefits

By reducing car trips, transit use can reduce air pollution and greenhouse gas emissions. Frequent transit can also support compact development and help conserve land.



### Congestion Mitigation

Buses carry more people than cars; transit use can mitigate traffic congestion by reducing Vehicle Miles Traveled (VMT). This is especially important in areas with high jobs-housing imbalances and a preponderance of long commutes.



### Health

Transit can support physical activity. This is partly because most riders walk to their bus stop, but also because riders will tend to walk more in between their transit trips.



### Personal Liberty

By providing people the ability to reach more places than they otherwise would, a transit system can be a tool for personal liberty, empowering people to make choices and fulfill their individual goals.

## Ridership and coverage goals

**Some goals are only served if many people use transit. We call these ridership goals.**

For example, transit can only mitigate congestion and pollution if many people ride the bus rather than drive.

But if CTA focused only on ridership, it might not provide service to every neighborhood or reach into any suburban areas.

**CTA provides service in areas where ridership is low because it is also expected to meet coverage goals**, like providing a small amount of service as a basic social service in every neighborhood in Chicago.

## How does equity fit in?

Chicago remains defined in many ways by spatial segregation by income and race. On average, Black and Latino people live farther from jobs, retail, healthcare and many other services compared to people of other races.

CTA can't solve all the issues created by decades of segregation. But **by focusing on equity goals, bus service can help reduce the differences in opportunity available to people in different parts of Chicago.**

This goes beyond coverage, because it is not just about providing some service everywhere, but about providing equally useful service to all kinds of people.

By expanding access to opportunity for marginalized people and communities, transit plays a part in addressing disadvantages that come from historic and ongoing injustices.



Figure 3: Is a lightly used bus failing? It depends on why you are running it.



# ACCESS to all the city has to offer is the most important product of transit.

## WHAT IS ACCESS?

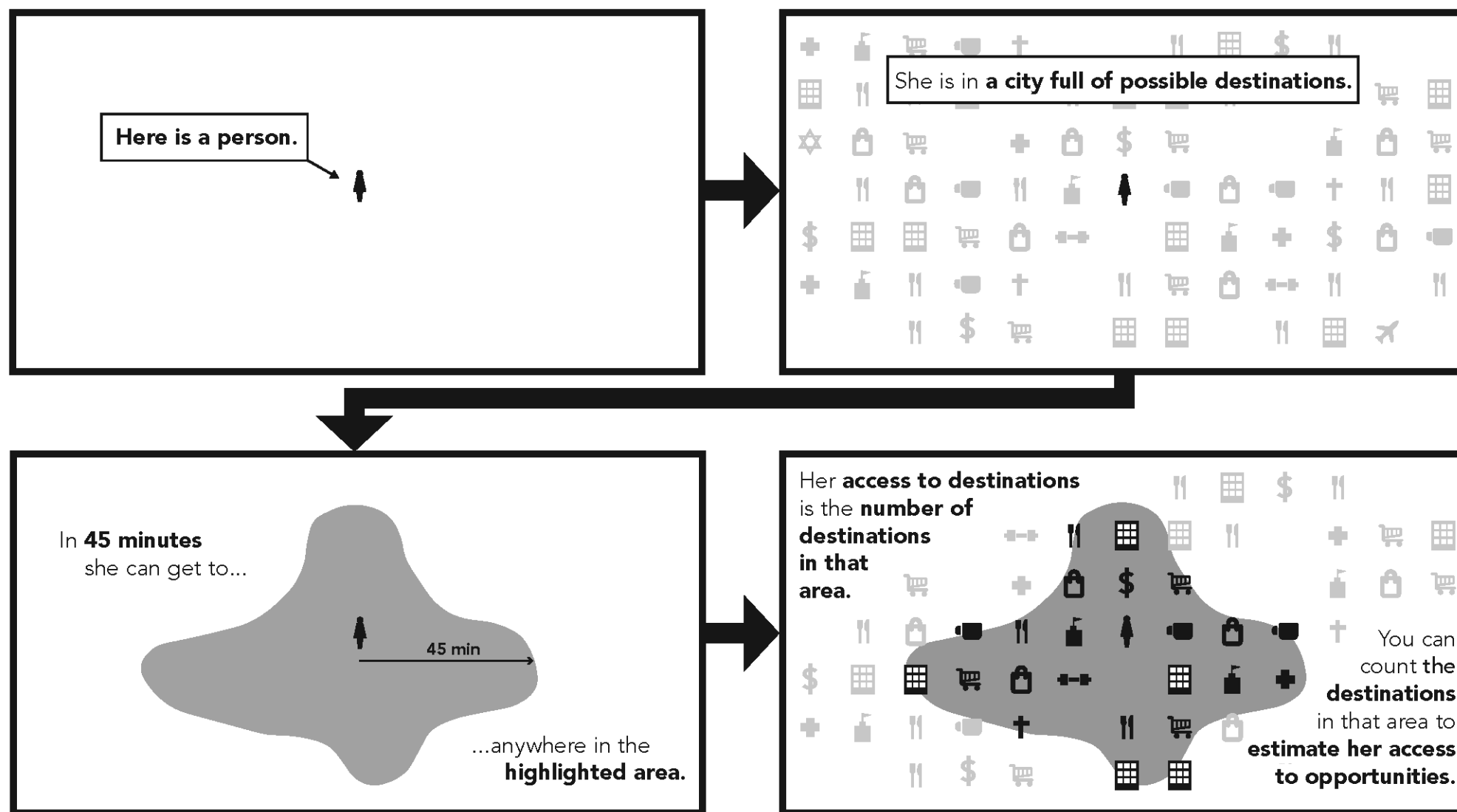


Figure 4: A person's access to opportunity can be pictured as an area on a map. Depending on what's in the area, someone may have more or less access.

The best thing CTA can do to make a person more likely to use transit is to increase the number of places they can reach quickly.

**Access to opportunity** is the **ability to reliably reach useful places** in a **reasonable amount of time**.

High frequency and broad coverage are necessary for an effective transit network, but they are only interesting because they reflect something more important: the ability to reach many places in a reasonable amount of time.

Whoever you are, and wherever you are, you have a limited amount of time available to travel for any particular trip. That amount of time defines how far you can go, and how many places you can reach. You can think of all the places you are able to reach as an area on a map, as shown in the illustration in Figure 4. Within this area are all the things you can do. Outside this area are opportunities you usually can't access.

**Fundamentally, transit makes it possible for people to access more places, without requiring a car.**



# Chicago's transit system creates access with a FREQUENT GRID.

## Frequent grids combine high frequencies with long and straight routes.

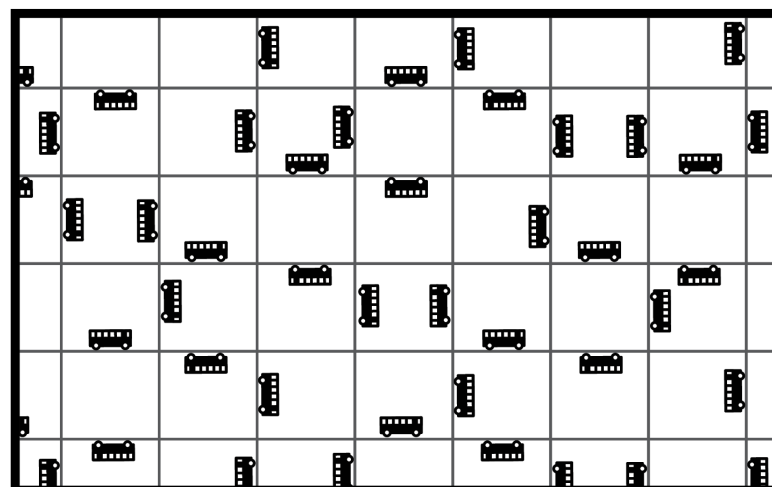
Chicago's extremely regular street grid naturally leads to a regular grid of straight bus lines, spaced on main streets every half-mile in both the North-South and East-West directions.

Frequent grids minimize transit travel times in two important ways:

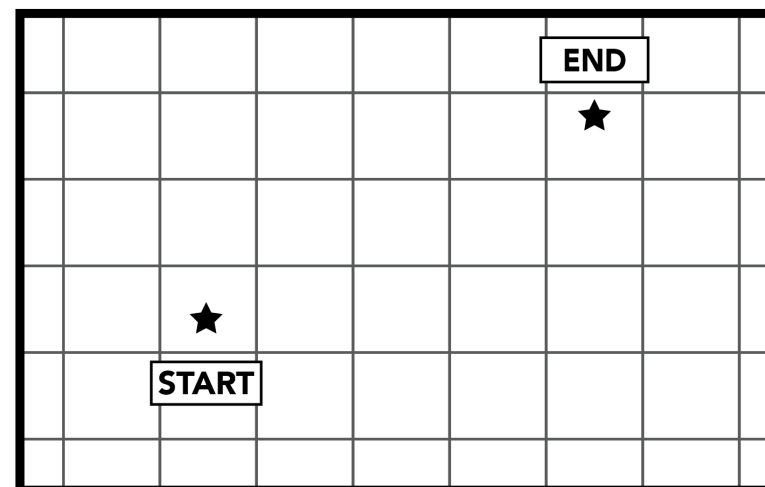
- **Less time waiting.** High frequencies allow people to travel from anywhere to anywhere with a single fast transfer. If you need to transfer, you have to wait twice. So grids work much better when they connect frequent routes to other frequent routes, cutting down the total waiting time.
- **Less time riding.** The straight lines of the grid, without deviations, are the shortest possible path. In fact, the L-shaped trip, made by using two buses in the grid, often follows exactly the same path that you would use if driving.

## The Power of the Frequent Grid

A frequent grid consists of perpendicular lines all running FREQUENTLY.



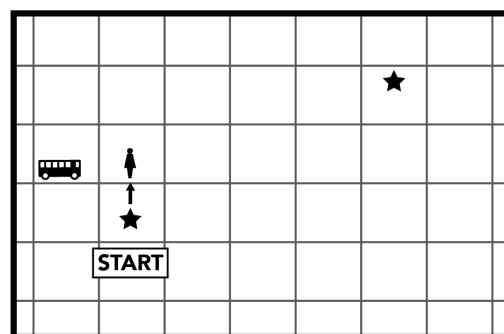
A grid serves trips from ANYWHERE to ANYWHERE. For example:



### For ANY trip...

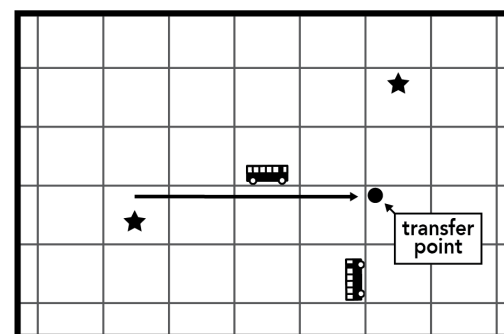
1. WALK and WAIT\* for the first bus.

\*The wait is SHORT because service is FREQUENT.



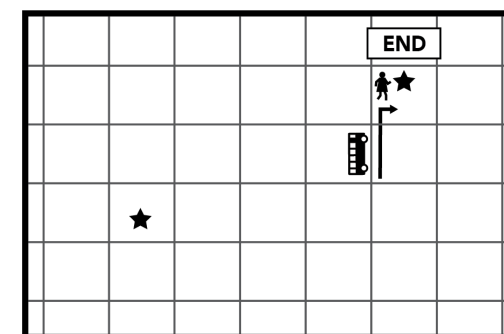
2. RIDE and WAIT\* for the second bus.

\*The wait is SHORT because service is FREQUENT.



3. RIDE and WALK to the destination.

You've arrived!



## THE HIGH FREQUENCY IS CRITICAL.

It makes the transfer fast, so that the whole travel time is reasonable.

Figure 5: How frequent grids work.

The combination of grid routes with high frequencies is what has allowed CTA service to provide high levels of access to opportunity in most of the service area.



# The 2010 service cuts had a major impact and frequency has not been restored.

## Visualizing the impacts of the 2010 service cuts

In spring 2010, CTA implemented a **16% reduction in bus service** and a **10% reduction in rail service** due to recessionary budget shortfalls.

Figure 6 shows maps comparing 2007 and 2019 bus line frequencies on weekdays at noon<sup>1</sup>. These help illustrate the magnitude of bus service reduction since the late 2000s, and its impacts in terms of the loss of convenience for passengers. In particular, the maps illustrate that:

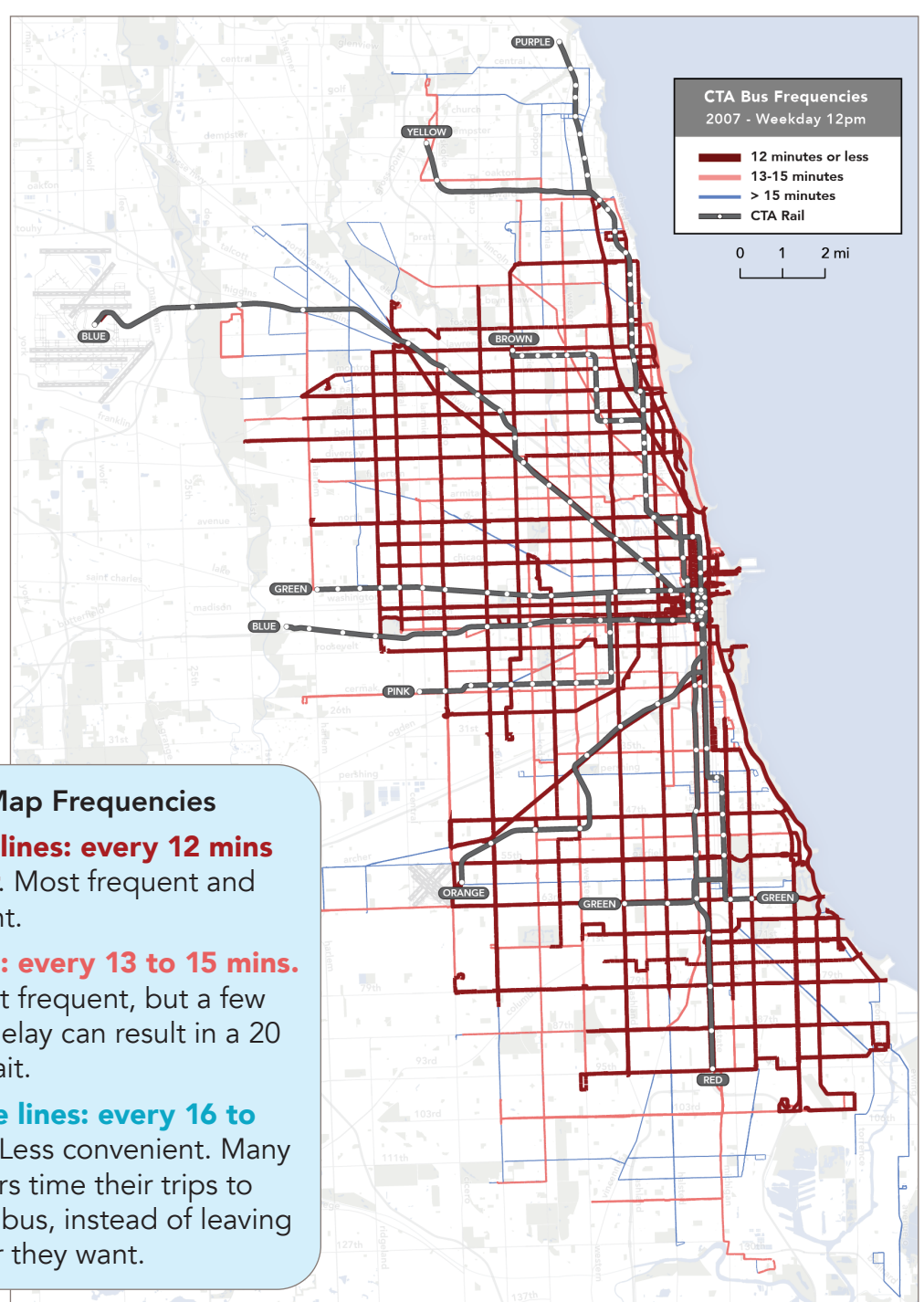
- **The share of residents near the most frequent service has declined considerably.** In 2007, 68% of service area residents lived within a half-mile of service every 12 minutes or better all day on weekdays. In 2019, this had declined to 56%.
- **Many areas used to have more frequent service than they do now.** The impacts of frequency reductions are particularly visible west of Kedzie Ave and north of Belmont Ave.

## Challenges since 2020

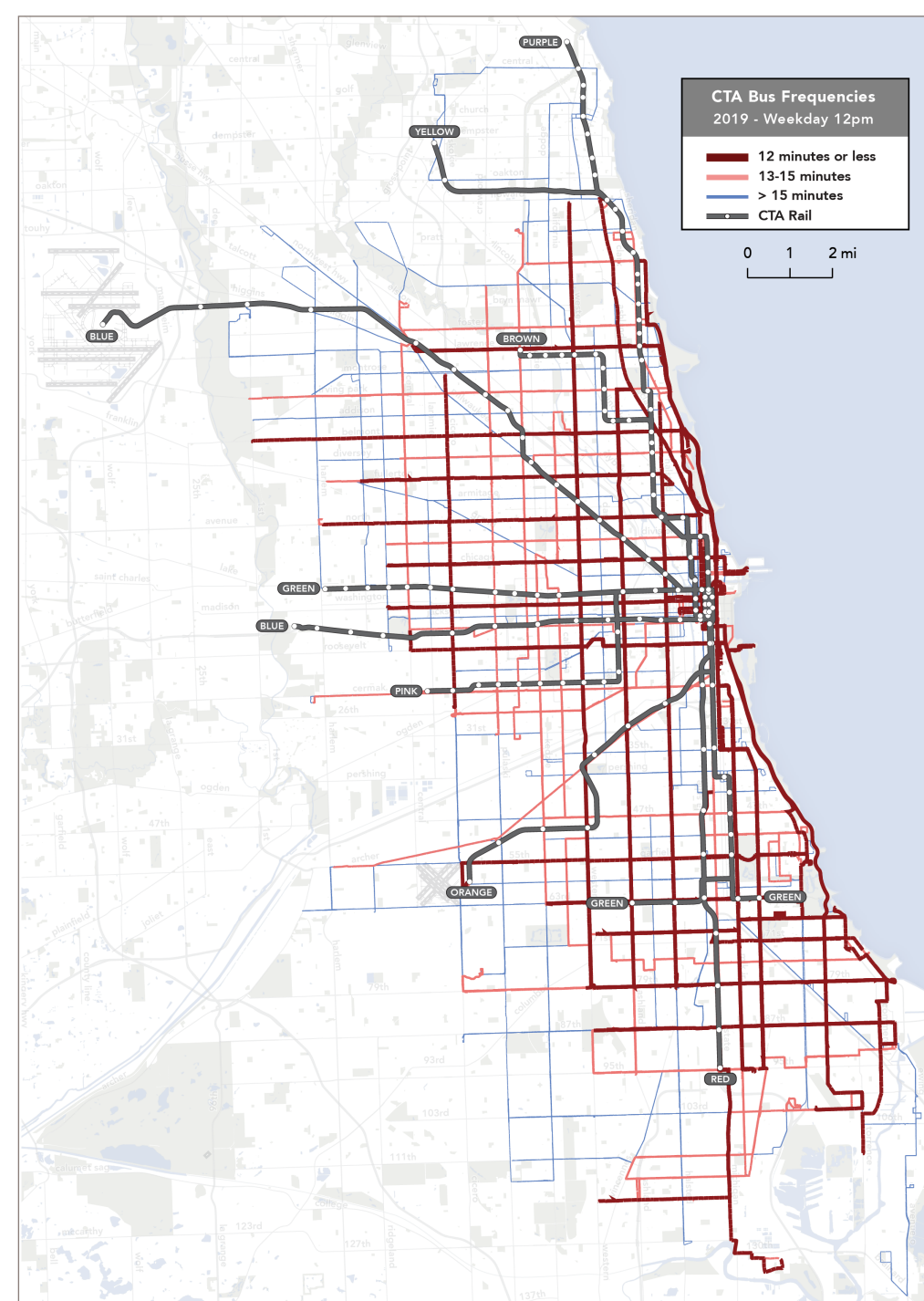
Since 2020, like most transit agencies, CTA has experienced driver shortages. These issues motivated the January 2023 service optimization, which does not reflect the level of service CTA would operate if it were fully staffed.

<sup>1</sup> Noon is typically when service levels are lowest in the daytime, so this illustrates a minimum frequency many riders learn to rely on.

### 2007 CTA Bus Line Frequencies Weekdays at 12 PM



### 2019 CTA Bus Line Frequencies Weekdays at 12 PM



**Reading Map Frequencies**

- **Dark red lines: every 12 mins or better.** Most frequent and convenient.
- **Pink lines: every 13 to 15 mins.** Somewhat frequent, but a few minutes delay can result in a 20 minute wait.
- **Light blue lines: every 16 to 30 mins.** Less convenient. Many passengers time their trips to catch the bus, instead of leaving whenever they want.

Figure 6: Maps of bus frequencies on weekday in the middle of the day, in 2007 vs. 2019. Frequencies depicted correspond to the 90th percentile of scheduled time between any two buses on each line between 11 AM and 1 PM in each year.



# Lower frequencies on evenings and Sundays make service less useful.

## Less frequency = less access

The maps in Figure 7 show what every CTA rider knows: you have to wait longer to get on the bus in the evenings and on weekends.

In 2019, **the average CTA service area resident using transit could access 10% fewer places and 20% fewer job locations on Sundays than on weekdays in 45 minutes or less.**

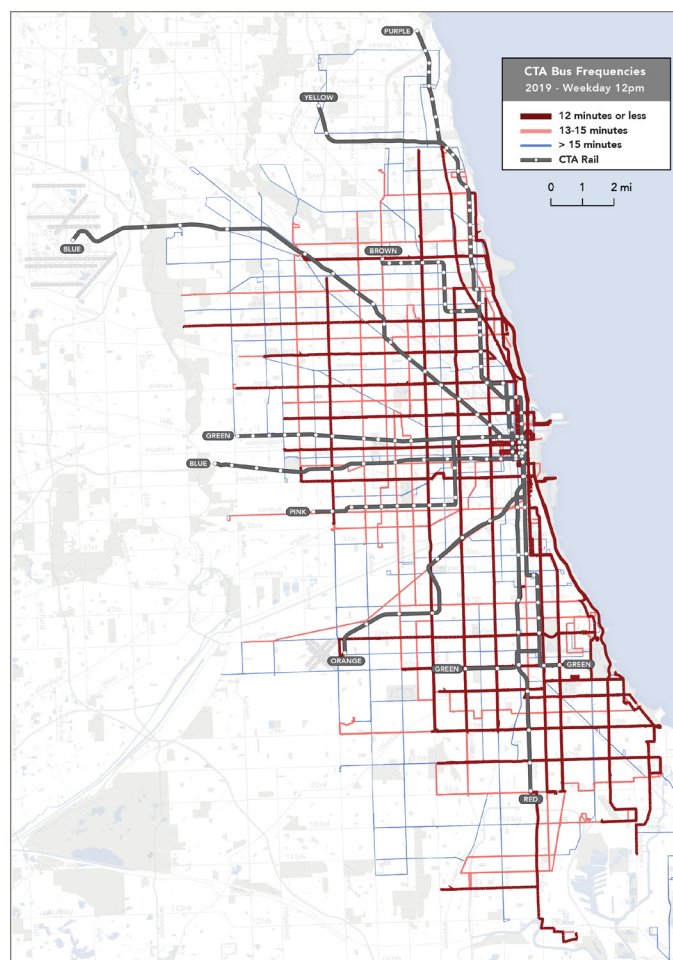
## Low frequencies undermine ridership and equity goals.

Low evening and weekend frequencies may seem efficient, because fewer people travel at off-hours. However, longer evening and weekend waits also mean that some people won't use transit, because they learn the bus is not reliable for their needs.

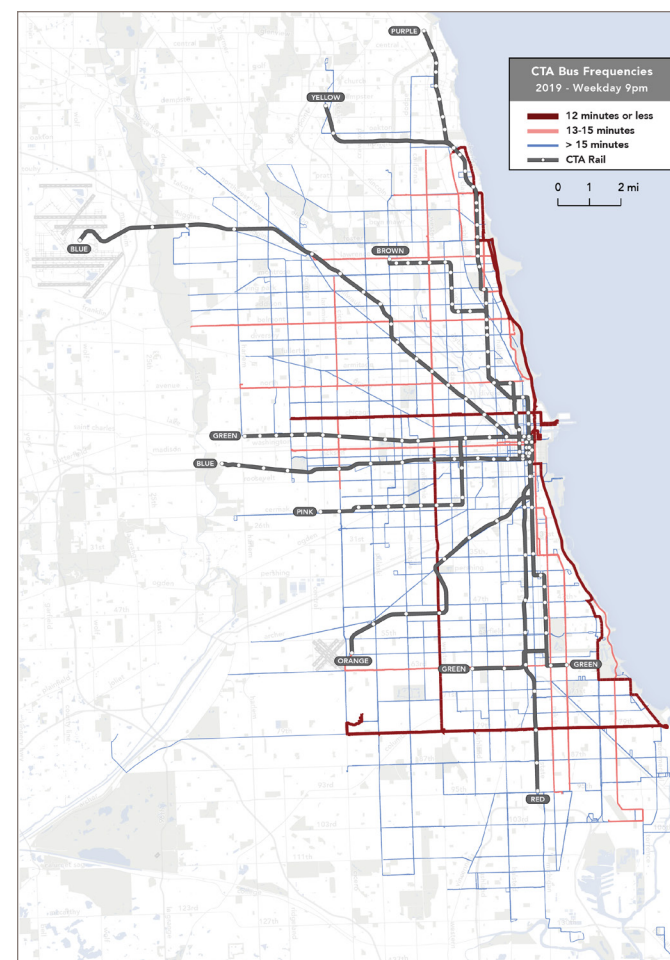
People who buy a car to avoid having to wait a long time for a bus in the evening or on the weekend are less likely to ride transit at any time.

This is also an equity issue. Low-income people are more likely to hold jobs with evening and weekend shifts. For people in high-crime areas, the bus will take the longest when streets are emptiest and waiting at the bus stop feels least safe.

Weekdays at Noon



Weekdays at 9 PM



Sundays at Noon

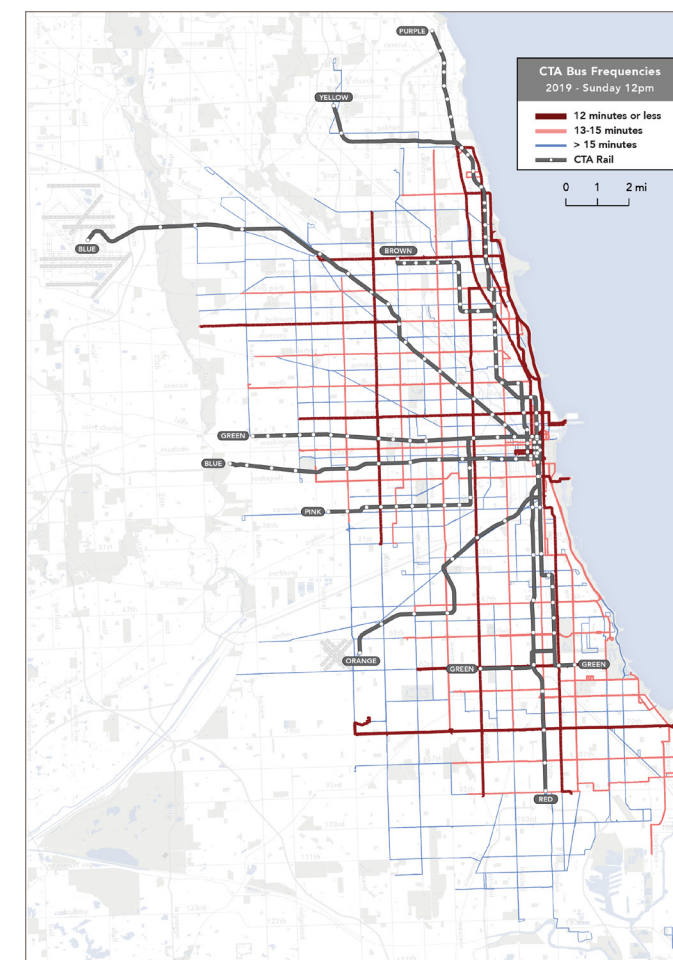


Figure 7: Maps of CTA bus frequencies in 2019, comparing frequencies available on weekday middays (left), weekday evenings (middle), and Sunday middays (right).

How far can people reach within 45 minutes if they are...	Area Reachable (sq. miles) Weekdays	Area Reachable (sq. miles) Sundays	% Difference	No. of Jobs Accessible Weekdays	No. of Jobs Accessible Sundays	% Difference
"Average" Resident (for comparison)	30.7	27.7	-10%	136,000	108,000	-20%
Low Income (below 150% federal poverty)	32.0	29.1	-9%	151,000	116,000	-23%
Hispanic or Latino	31.7	28.6	-10%	130,000	104,000	-20%
Black or African-American	31.7	29.2	-8%	91,000	71,000	-22%

Figure 8: Impacts of lower Sunday frequencies on access within 45 minutes by transit.

Low evening and weekend frequencies send a message to the public: transit isn't a service you can rely on all the time.



# Bus ridership declined during the 2010s.

## Service levels remained below pre-recession levels.

CTA has made many adjustments to service since 2010, and bus service did increase in the 2010s, from 5.68 million in-service hours in 2011 to 5.84 million hours in 2019 (+3%). Nonetheless:

- **CTA provided nearly 14% less bus service in 2019 than it did in 2007**, as illustrated in Figure 9.
- **Service reductions have impacted nearly all times of day**, as shown for weekdays in Figure 10. Similar patterns exist on weekends, although the percentage reduction is slightly less.
- **The impact of service cuts has been felt throughout Chicago**, as shown on the maps in Figure 6 on page 8.

## Ridership decline

From 2012 to 2019, ridership on CTA buses declined by over 20%. Several factors likely contributed to ridership losses since 2012, including:

- **Shifts in population and jobs** increased travel demand to areas near rail stations, shifting some passengers from bus to rail.
- **Competition from Transportation Network Providers (TNPs)**, such as Uber and Lyft likely reduced the total number of transit riders.
- The relative **increase in pass costs in 2013** caused many riders to switch to individual fares, likely reducing their transit use<sup>1</sup>.

However, the sheer scale of bus ridership decline throughout Chicago suggests it may also partly be due to the **reduced availability and convenience of bus service**.

<sup>1</sup> The CTA has since reversed direction. Pass costs were reduced significantly in 2021, and have not increased since.

## CTA Bus Service Levels and Ridership - 2007 to 2019

Source: Chicago Transit Authority; NTD 2018.

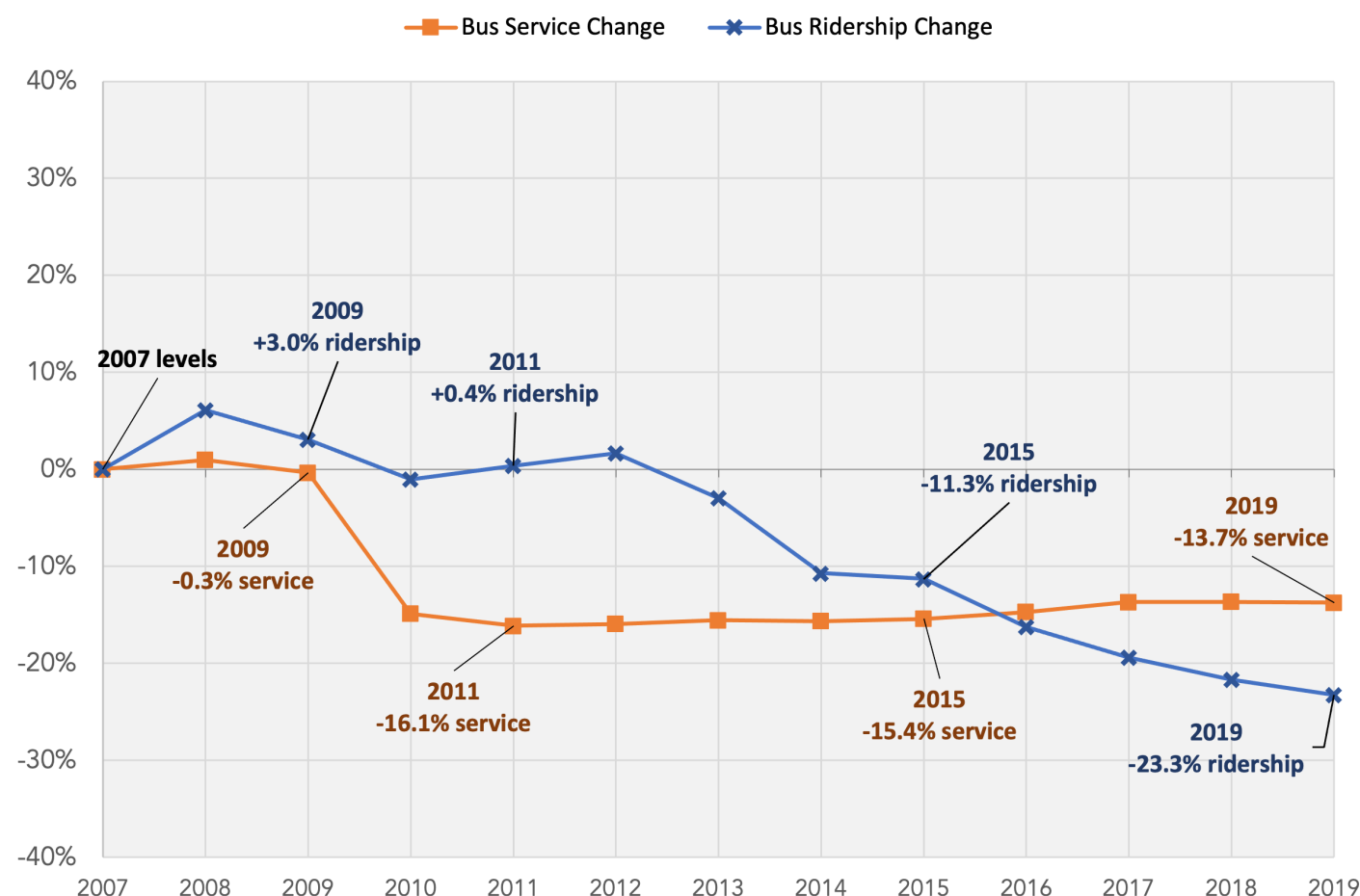


Figure 9: Comparing changes in the amount of CTA bus service to changes in ridership. Service is calculated as annualized in-service hours based on CTA weekly schedule data in each year. Ridership is calculated from Unlinked Passenger Trips reported in the National Transit Database (NTD).

## CTA Bus and Rail Service by Hour - 2007 vs. 2019

Source: Chicago Transit Authority

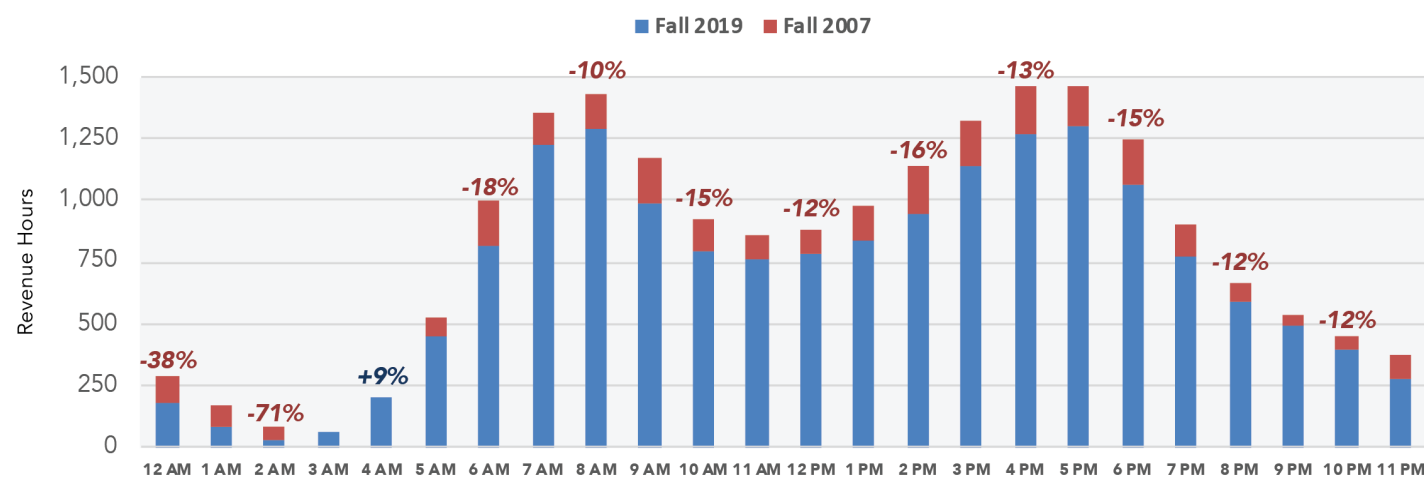


Figure 10: The total amount of CTA bus service available on weekdays, by hour of the day, in 2007 and 2019, based on published weekly schedules. The amount of bus service provided has declined at nearly all times of day and night. The only exception is between 3 and 5 AM, when service was very low to begin with.



# The COVID-19 pandemic had a major impact on ridership.

The conditions experienced during the pandemic have evolved over time. But ridership patterns observed in 2020 do lay bare the unequal level of need experienced by different types of riders.

## Ridership collapsed in 2020, and has not fully recovered.

**In the early pandemic with strict stay-at-home orders, bus and rail ridership collapsed.** In April 2020, bus ridership declined by 71% and rail ridership declined by 88% compared to 2019.

**As reopenings have proceeded, some riders have returned, but ridership remains far below pre-COVID levels.**

As of June 2023, ridership was still down by 33% on buses and 45% on rail compared to 2019.

There are many reasons for this slow recovery. One of the most impactful ones may be the slow recovery of Downtown activity. Cell phone activity in Spring 2023 remains at just 52% of pre-pandemic levels<sup>1</sup>, suggesting far fewer people are travelling to the single largest destination for the CTA network.

## Pandemic-era riders were essential and disadvantaged.

According to the results of CTA's 2020 Ridership Survey, pandemic-era transit riders:

- **Ride often.** 52% rode at least 4 days a week, 23% rode 6 or 7 days per week.
- **Lack alternatives.** 73% were from households with more drivers than vehicles. Only 7% of commuters said they could have driven a car for the last trip they took by transit.
- **Hold jobs that can't be done remotely.** 84% of commuters reported an occupation that requires being on site.
- **Have lower incomes.** Median respondent incomes were \$40,000 per year, compared to \$60,000 in a comparable 2018 survey.
- **Were more likely to be Black.** The share of Black respondents increased by nearly 70% since a comparable 2018 survey.

## CTA - COVID Impacts on Monthly Bus and Rail Ridership

Source: CTA. Data available through 6/30/2023.

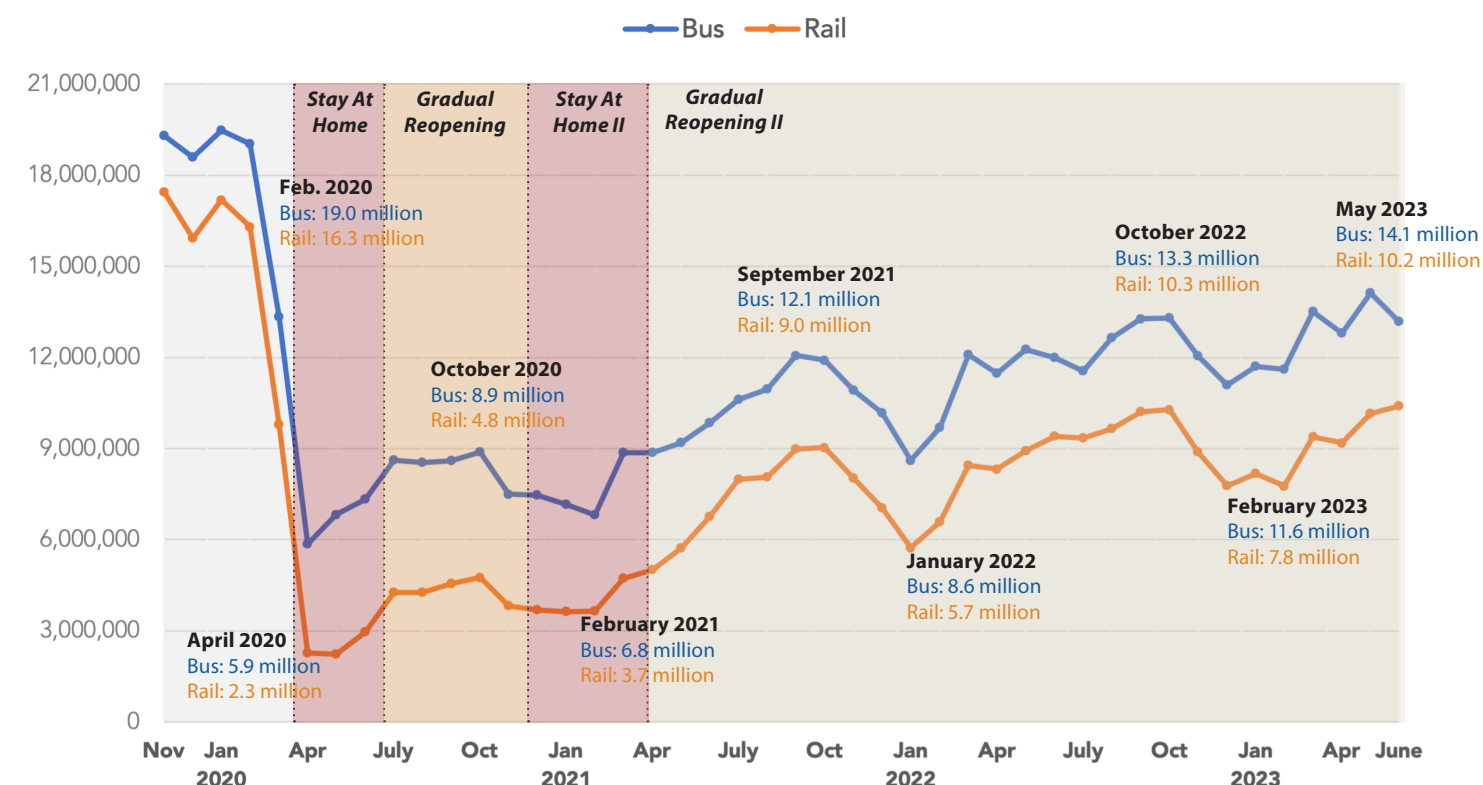


Figure 11: Chart showing change in monthly CTA bus and rail ridership from November 2019 to June 2023.

<sup>1</sup> According to the University of Toronto's Downtown Recovery Index. Available at: <https://downtownrecovery.com/charts/rankings>



# Peak ridership fell sharply in 2020, but the peaks have since returned.

## Peak ridership has returned gradually.

The chart in Figure 12 (top right) shows how ridership levels varied throughout the day on weekdays, as of April 2022, compared to April in 2019, 2020 and 2021. This chart shows that:

- Ridership demand flattened out across the day at the start of the pandemic, with little additional demand in the peak periods. In 2020, the peak hours accounted for only 37% of weekday boardings on CTA buses.
- Since 2020, peak hour ridership has reemerged. As of May 2023, the peak hours account for 47% of weekday boardings - nearly as much as in May 2019 (48%).
- Ridership remains lower than in 2019 at all time periods.

As of April 2022, weekday ridership was highest between 3 and 4 PM, suggesting that the types of trips being made in peak hours may have changed since 2019.

## People making essential trips are often riding at off-peak times.

As shown in Figure 13, off-peak ridership retention was much stronger in the early (2020) and middle (2021) stages of the pandemic. This highlights the importance of midday, evening and weekend service in providing for:

- People who are totally reliant on transit for trips that are essential to their lives.
- People who use transit to travel to essential jobs that cannot be done remotely and kept the region functioning during the pandemic.

Transit has always been essential for these purposes, but **the pandemic highlighted the importance of service at off-peak times to ensuring vital needs and the basic functioning of essential services.**

## Proportions of peak and off-peak service are similar to 2019.

The January 2023 service optimization made changes to both peak and off-peak service, but did not fundamentally rebalance service by time of day. 42% of weekday CTA service is still provided in peak hours, compared to 43% in 2019.

CTA Bus Ridership by Hour on Weekdays - COVID impacts

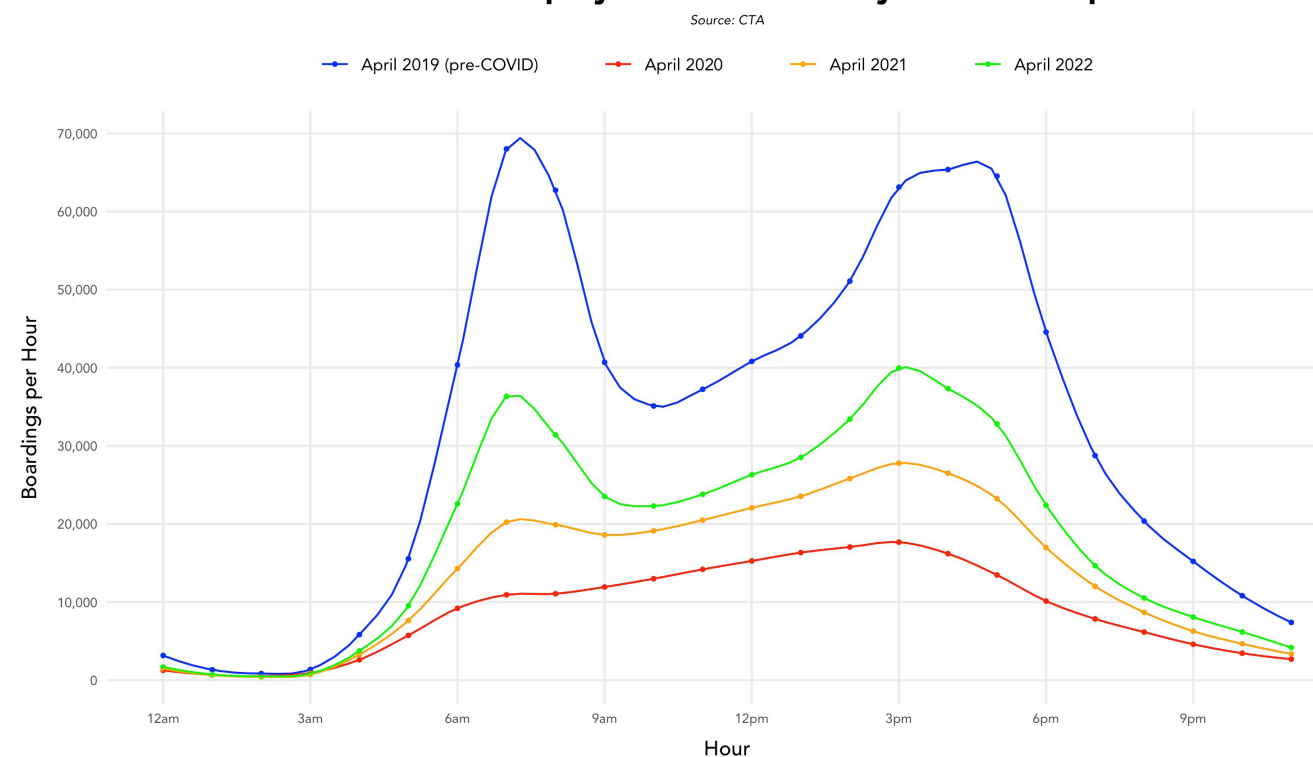


Figure 12: Chart of CTA weekday bus ridership by hour, April 2019 (pre-COVID) vs. April 2020, April 2021 and April 2022.

CTA Ridership Retention by Weekday Peak and Off-Peak

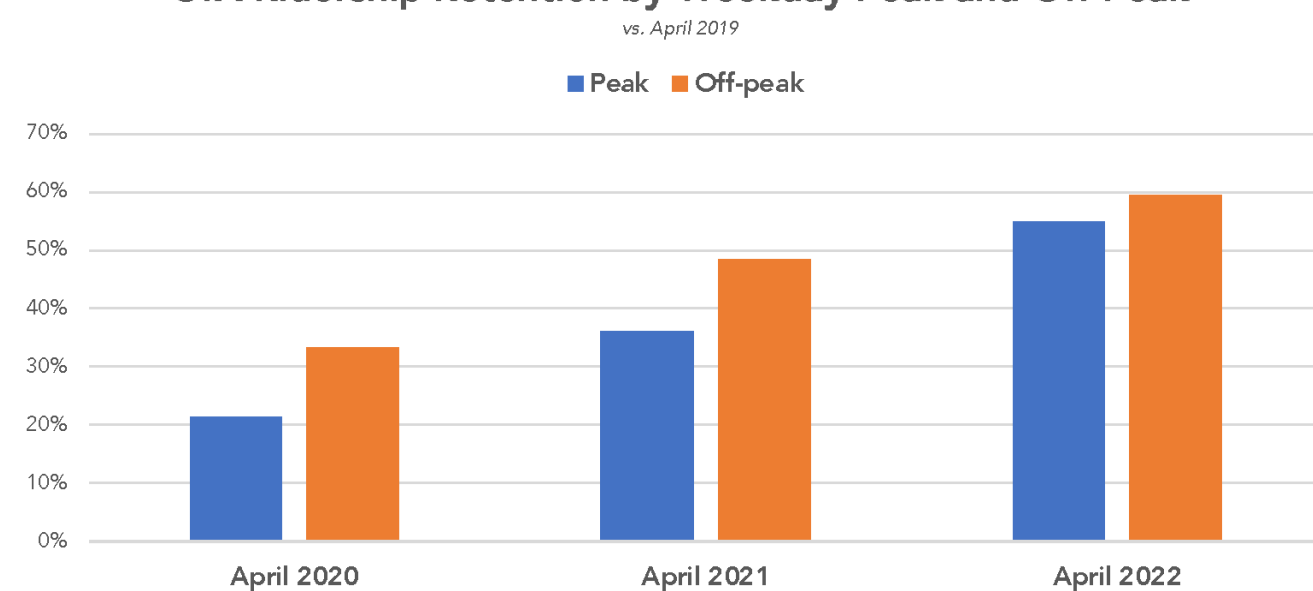


Figure 13: Chart comparing peak and off-peak ridership in April 2020, April 2021 and April 2022, to peak and off-peak ridership in April 2019.



# Low-income residents tend to be located farther from jobs and services.

Many low-income, Black and Latino people live on the periphery of the city, far from jobs and services.

The maps on this page compare the number of jobs available nearby in all parts of the CTA service area (Figure 14), to average personal incomes (Figure 15).

These maps show that **residents of the West and South sides have fewer jobs available nearby**, compared to people on the North Side. They also show that incomes are much lower on the West and South sides than on the North Side.

**Being far from jobs means being far from most other services**, because most of the places people need to go regularly (e.g. retail, schools, medical etc.) are also places of employment.

The vast majority of people living in the areas with the lowest incomes and fewest jobs nearby are Black. Majority-Latino neighborhoods also tend to have lower average incomes and to be farther from jobs than majority-White neighborhoods.

### Why focus on jobs?

Access to jobs is linked to access to many kinds of opportunity. Most of the places people go to regularly are places of employment.

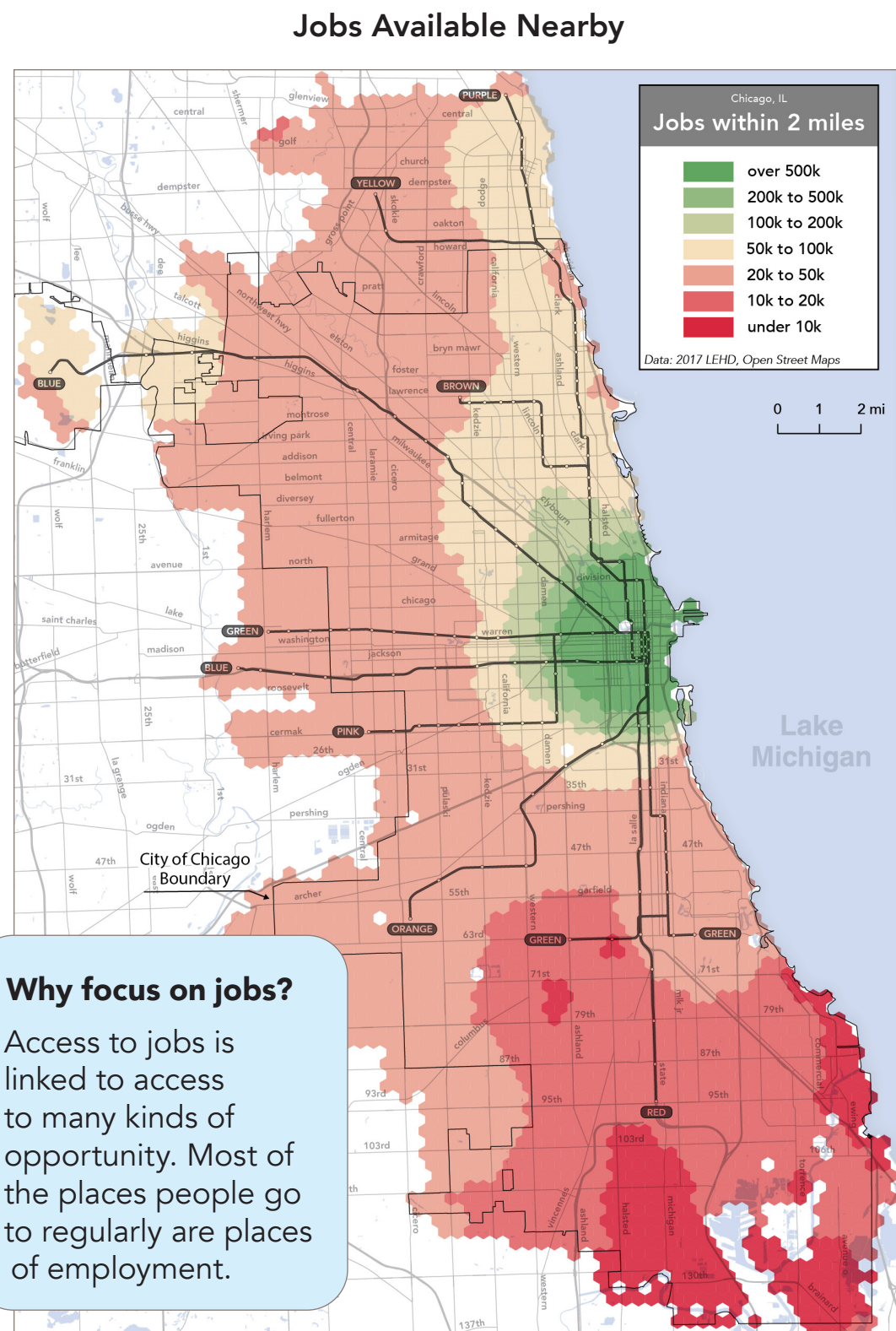


Figure 14: Map of jobs reachable within 2 miles, from anywhere in the City of Chicago.

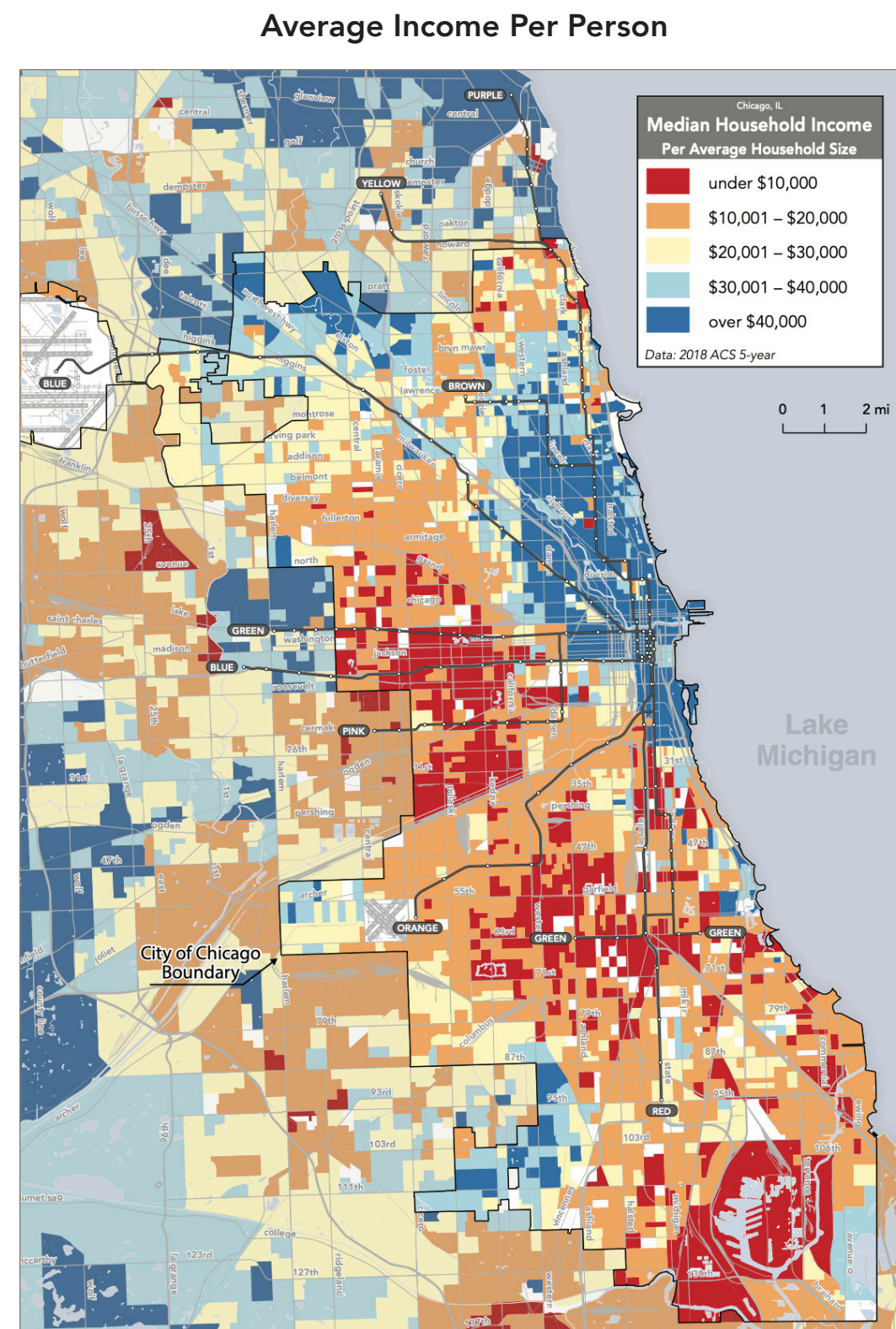


Figure 15: Map of median household income, divided by household size, in Chicago and environs.



# Nevertheless, transit does a lot to counter unequal opportunity.

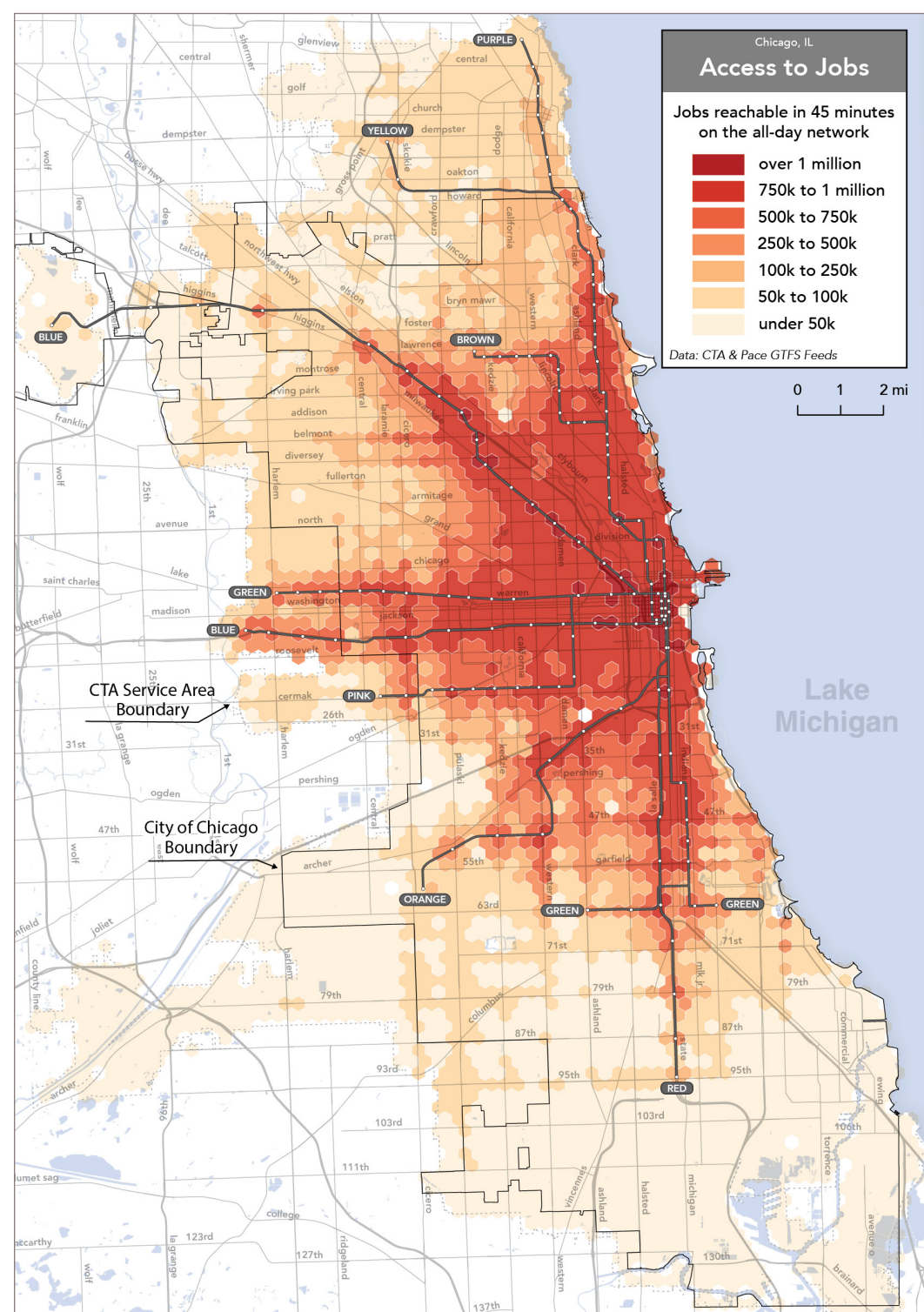
The positive impacts of CTA service are clearest in areas where people have the lowest incomes. However, no level of service can overcome the inequality built into Chicago's geography.

Figure 16 (center) shows how many jobs can be reached in 45 minutes by transit and walking in all parts of the CTA service area. Because jobs and services are concentrated in the Loop and inner North Side, **transit can't provide the same access to opportunity on the North and South sides**, even with similar service.

Figure 17 (right) compares job access by transit to jobs located within two miles. In other words, this map represents how much opportunity transit opens up outside people's immediate neighborhood.

Comparing this to Figure 15 on page 13 shows that **transit multiplies the opportunities accessible from low-income areas many times over**. In 2019, transit multiplied the number of jobs accessible in 45 minutes by a factor of 10 to 50 in Chicago's lowest-income neighborhoods.

Jobs Accessible by Transit within 45 Minutes



Expanded Access to Jobs within 45 Minutes

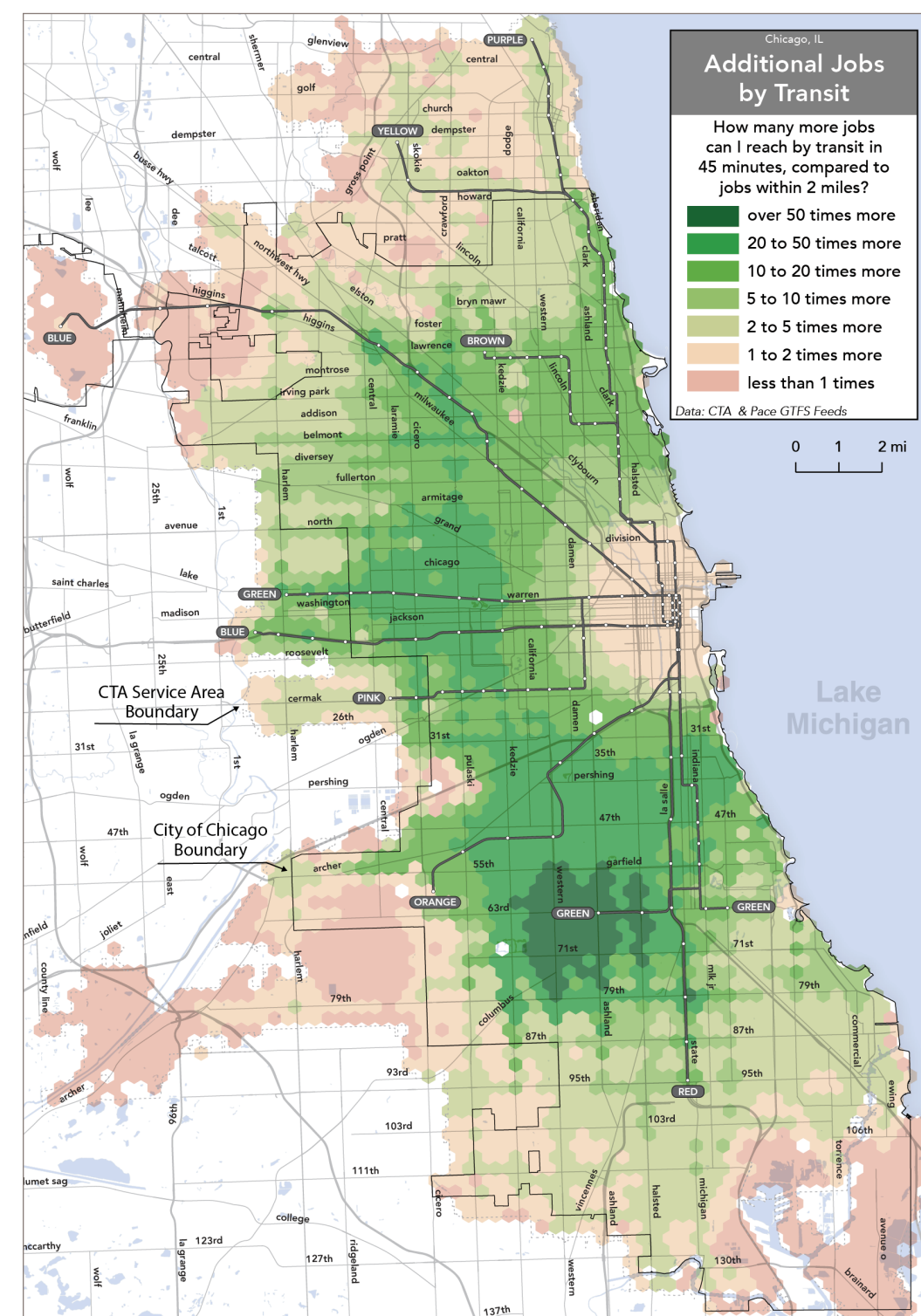


Figure 16: Access to jobs, in 45 minutes or less on transit (including time spent walking, riding, waiting and transferring) in 2019.

Figure 17: How many more jobs were reachable by transit within 45 minutes in 2019, compared to the number of jobs available within 2 miles, from anywhere in the service area.



# Slow speeds restrict expansion of the frequent grid.

## Buses have gotten slower over time.

Average CTA bus speeds declined about 8% during the 2010s. So far, they do not appear to have increased during the COVID-19 pandemic.

Slower buses have resulted in multiple negative impacts:

- Riders are spending a **longer time on the bus.**
- Buses take longer to complete their runs, which results in **lower frequency** and **less reliable service.**

## Long round-trip times make many bus lines challenging to operate.

Longer runtimes also means bus lines can't be extended to their logical north and south ends. As a result, outer parts of the CTA service area are "off the grid". They rely on shorter local lines that connect to rail, but not to the entire frequent grid.

**Unless measures are taken to increase bus speeds and reduce delays, expanding the frequent grid north or south of its current limits will be difficult.**

**Average Key Route Bus Speeds, 2008 to 2020**  
Weekdays, 6 AM to 8 PM. Monthly and 12-month rolling average. Source: CTA.

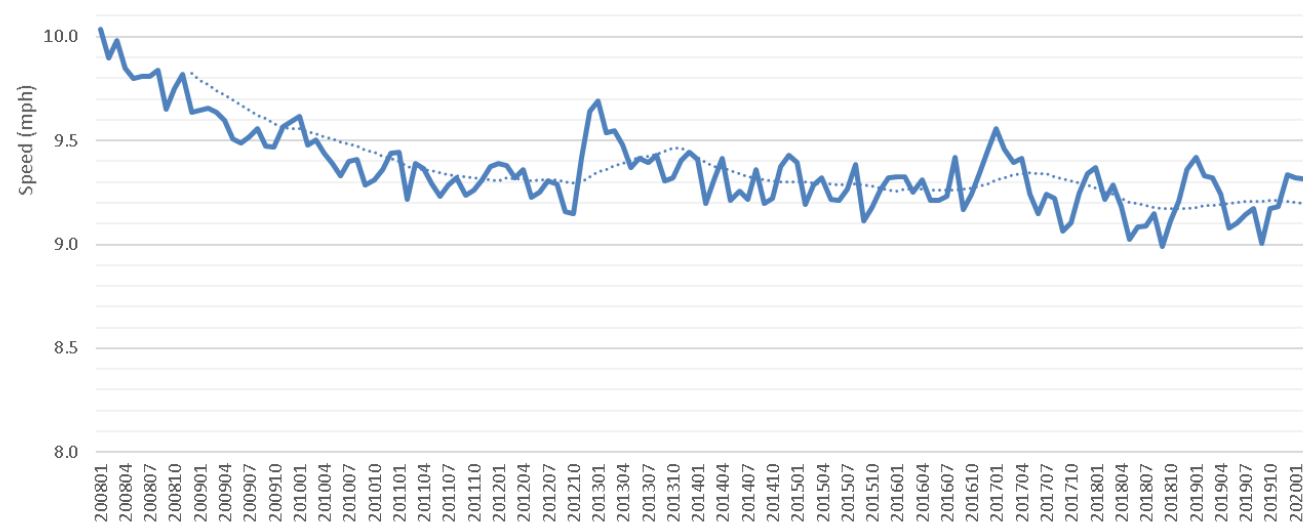


Figure 18: Chart showing the evolution of average daytime speeds (6 AM to 8 PM) on the CTA Key Route Bus Network, from January 2008 to January 2020.

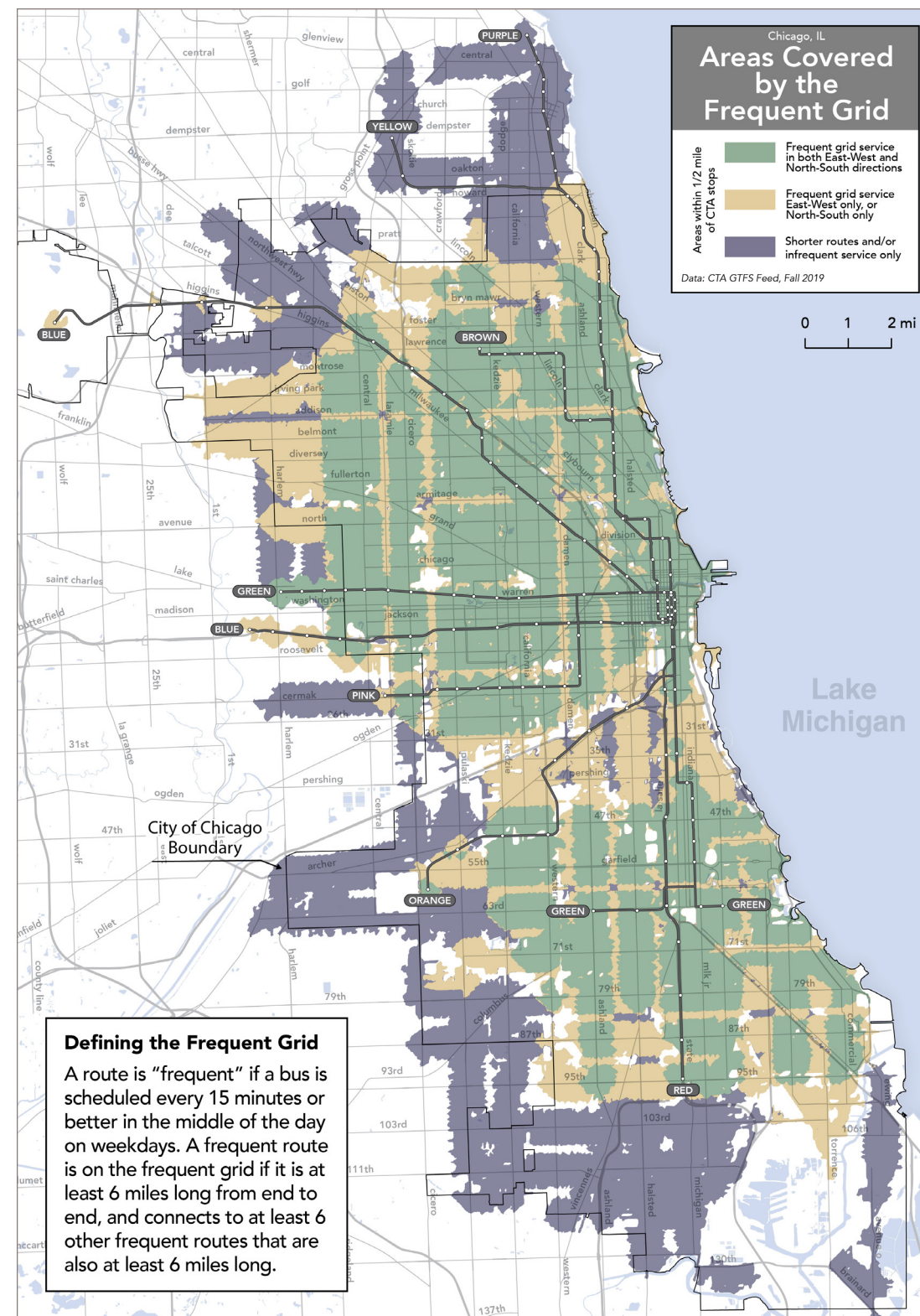


Figure 19: Map of areas that are within a half-mile walk of stops on bus and rail lines that form the frequent grid.



# To make the most out of the frequent grid, buses need to run faster.

Buses can run faster and more reliably if streets and stops are designed to minimize situations where buses are delayed.

## Slow operating speeds mean slower trips and lower frequency.

Buses often experience unpredictable delays because they share streets with cars, trucks and delivery vehicles making curbside stops along the way.

Slow bus speeds mean slow bus trips, and long runtimes mean that it's more expensive for CTA to provide frequent service. There are ways to speed up buses, but they often involve difficult trade-offs, and require collaboration between CTA, CDOT, city policy-makers and other stakeholders.

## Establishing bus priority

Across much of Chicago, car and truck traffic makes bus service slower and less reliable. This is because almost all streets are designed so that every vehicle in a traffic lane gets equal priority. This means that a car serving one person may delay a bus serving 30 people.

Better prioritizing buses means changing the way streets and signals are designed, to reduce the impacts of car and truck traffic on buses. This can include bus lanes, bus stop bump-outs, transit signal priority, and other measures to help buses go faster and stay on schedule.

To date, Chicago has seen two bus priority projects involving stretches of dedicated bus lane and other bus priority elements: Jeffery Jump on the South Side and Loop Link downtown.

There have also been smaller projects like Bus Priority Zones to address pinch points, primarily on Chicago Ave and 79th St, and transit signal priority (or TSP) installed on stretches of Ashland Ave and Western Ave.

Bus priority measures are popular with bus riders, but they can impact other street users, especially when designs repurpose space used for parking or general traffic, or restrict turns.

In Chicago, the Chicago Department of Transportation (CDOT) controls most street space.

CTA and CDOT have developed the Better Streets for Buses Plan. The Better Streets for Buses plan lays the groundwork for bus infrastructure improvements by establishing a network

of priority corridors and a toolbox of bus priority street treatments to consider as solutions. More information about this plan can be found at [www.betterstreetsforbuses.com](http://www.betterstreetsforbuses.com).

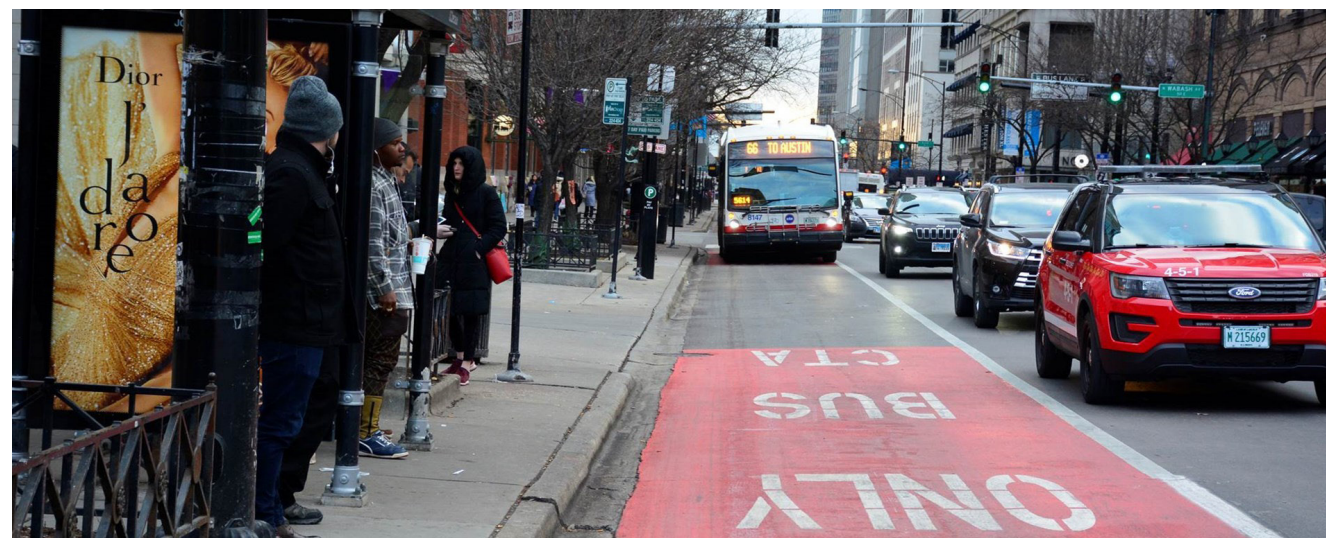
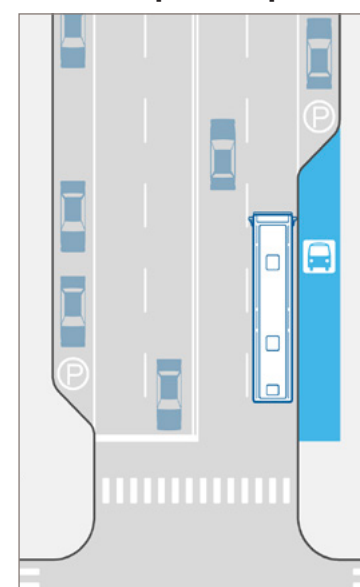


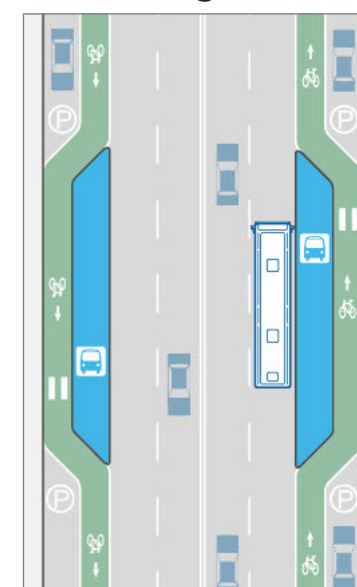
Figure 20: Example of a bus priority lane in use along Chicago Ave & Wabash as traffic is backed up beside it.

Source: CTA Bus Priority Zones web page

### Bus Stop Bump Out



### Boarding Islands



### Bus Stop Lengthening

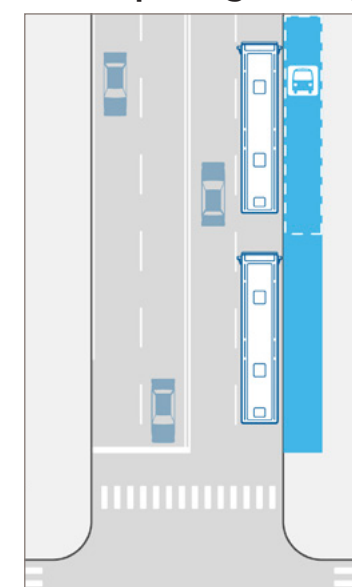


Figure 21: Conceptual illustrations of bus stop configurations that eliminate or minimize the hassle of pulling out of traffic.

Source: Better Streets for Buses Toolbox.

# Bus Vision will frame the choices CTA must make.

CTA will use this report to launch a conversation with riders, partner agencies and the general public about how to change and improve the bus network.

## CTA has a defined and limited operating budget.

CTA has a limited set of funding sources defined in state law. This structure leaves CTA largely dependent on fares and sales tax receipts.

Although sales tax receipts grew in the 2010s, fares and other revenue sources have been stable or declining. **Adjusted for inflation, CTA's operating revenues are largely unchanged since 2009 and declined in 2022<sup>1</sup>.**

**This means that CTA can't expand service at will.** In practice, if CTA wants to increase service in any place or at any time, it needs to reduce service at a different time or place.

<sup>1</sup> In 2009, CTA's total operating revenues were \$1.53 billion (all figures in this note adjusted to 2020 dollars). In 2021, CTA's total operating revenues were \$1.51 billion. In 2022, revenues held steady in nominal terms, but adjusted for inflation they actually decreased to \$1.40 billion.

## How does CTA choose which goals to pursue?

**CTA's choices about bus service reflect funding constraints, historic expectations, and compliance with the law.** For example:

- CTA must meet annual targets for system-generated revenue to receive RTA public funding<sup>2</sup>. This compels CTA to focus on high ridership to maintain fare revenue.
- CTA is also expected to maintain coverage throughout Chicago and its inner suburbs. This requires CTA to spend some of its budget on low-ridership bus lines.

These constraints and obligations are reflected in CTA's Service Standards and Policies<sup>3</sup>, which detail how CTA intends to distribute service generally, based on measures like ridership, coverage, on-time performance, and vehicle load.

## How could CTA make different choices?

The Service Standards and Policies are essential to CTA's ability to adjust service to changing conditions from one year to another. But service standards can't answer the question of what purpose the bus network serves, or what a successful CTA bus network would provide. That requires examining the values and priorities of Chicagoans.

<sup>2</sup> The Regional Transportation Authority (RTA) manages public funding for transit agencies in the Chicago area, per Illinois state law. Sales tax receipts collected for transit are administered by the RTA.

<sup>3</sup> Available at: [https://www.transitchicago.com/assets/1/6/Chicago\\_Transit\\_Authority\\_Service\\_Standards.pdf](https://www.transitchicago.com/assets/1/6/Chicago_Transit_Authority_Service_Standards.pdf)

To design a bus network that **meets the aspirations of Chicagoans**, CTA needs to **hear what outcomes people value.**



# Changes to bus service require trade-offs.

Even with no new funding to expand operations, CTA could increase service in some places and times. This would require reducing service in other places and times. Would the benefits be worth more than the negative impacts?

## Service decisions should reflect public goals.

Decisions about difficult trade-offs that impact many people's lives require a public conversation about which goals CTA should try to meet, and how to balance them. For example, a public conversation about re-evaluating service distribution should focus on questions like:

- Are equity goals better served by:
  - providing more service in peak periods when the highest numbers and broadest cross-section of people are riding, or
  - improving service on evenings and weekends when a higher share of riders have low incomes, hold essential jobs, and rely exclusively on transit?
- How do decisions about equity align or conflict with climate, congestion mitigation and other goals?
- How much (if any) disruption to existing customers is acceptable in service of these broader goals?

## Key questions to consider.

- 1 Is CTA providing the right levels of service at different places and times?**  
If CTA provided less peak service, would evening and weekend service increase enough to make it worth it?
- 2 How much should ridership matter as a metric of success?**  
CTA's funding structure requires pursuing the highest possible ridership in any given year. To what extent should CTA focus on other goals – such as equity, economic development, or sustainability – that may require different measures of success?
- 3 How should the bus network address inequality?**  
Many of the most deprived areas CTA serves are very far from concentrations of jobs and services. Residents of those areas inherently need more transportation, to the point that many continued riding CTA frequently even at the height of the COVID-19 pandemic. What changes should CTA make to address this?
- Is CTA providing enough bus service for the needs of Chicago?**
- 4** Chicago relies on transit to function, but CTA service was cut system-wide in the early 2010s recession. Bus service remains far below historic levels. Should CTA pursue attempts to increase funding levels to provide more service?



# A new vision for CTA's bus network requires addressing regional funding.

## State law limits CTA's ability to address equity issues or plan for growth.

CTA's operational budget, which determines how much service can be provided, depends largely on regional sales tax revenue for funding, which can fluctuate and leave CTA service vulnerable to economic downturns.

Overall funding levels and **state law requiring CTA to fund at least 50% of its operational expenses from system-generated revenue further limit CTA's ability to provide additional service.**

As an example of how this requirement shapes service decisions, any shift in service away from peak periods to other times of day could mean lower overall system ridership and fare revenue. In turn, this could cause a reduction to the size of CTA's overall operational budget.

Evidence from peer cities points to the benefits of an all-week, all-times of day high frequency network, and the broad, long-term ridership growth that could result from such a network, but limited funding and the requirement to meet the 50% threshold every year makes it difficult to wait for longer term results.

## What would help reduce CTA's funding challenges?

Pandemic related changes to ridership levels have impacted fare revenue greatly. Federal COVID relief funding has been allowed to help fill that gap. However, this funding is expected to run out in the coming years.

While post-pandemic ridership trends are still emerging, **fare and pass revenues are not anticipated to return to pre-COVID levels by the time federal relief funds run out.** If this is the case, and no further changes have been made to the regional transit funding mechanism, it will most likely cause a severe budget shortfall.

All of this suggests that CTA, working together with regional partners such as CMAP, RTA, Pace and Metra, should advocate for changes in state law that would:

- **Remove the implicit threat of defunding if fare revenue targets are not met;**
- **Establish funding mechanisms that are less vulnerable to year-to-year fluctuations; and**
- **Establish new sources of funding.**

## CTA Revenues by Funding Source - 2007 to 2022

Adjusted (CPI) to constant 2020 dollars (millions).

Sources: CTA Budget Recommendations Reports, 2008 to 2023; BLS CPI-U for All Items

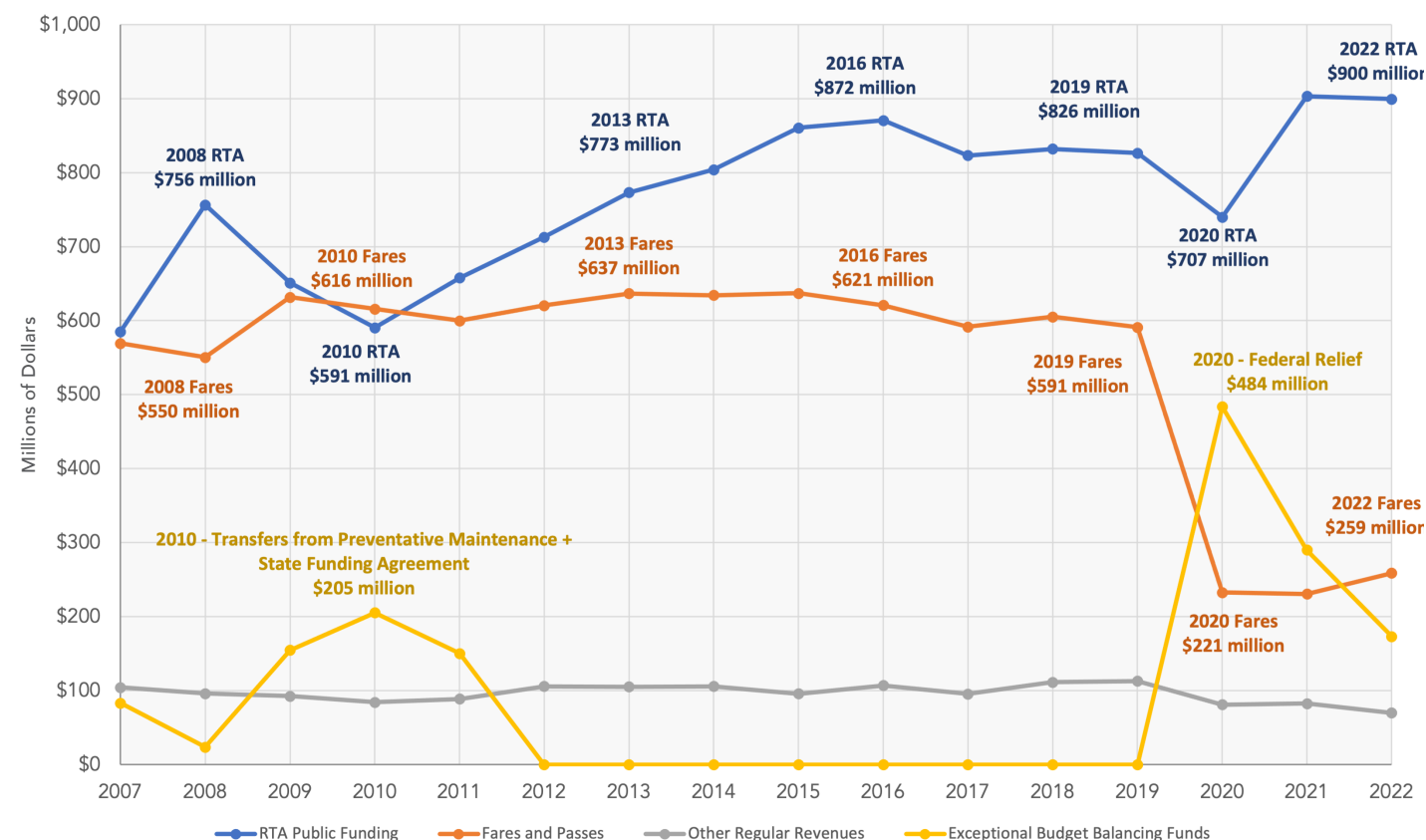


Figure 22: How CTA revenues evolved from 2007 to 2022.





cta bus stop  
74 Fullerton St



Chicago Transit Authority

JARRETT WALKER + ASSOCIATES