



# **A New Bus Network Plan**

**JULY 2021**

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# Introduction

The DARTzoom New Bus Network is completely redesigning the bus network in all 13 of the DART cities. This bus network redesign has been a collaborative effort to decide where bus lines will go, when they will run, and how frequent the service will be, starting from a clean slate.

## Why redesign the bus network?

Nearly every city in the world with a high-rider-ship rail network also has a high-rider-ship bus network. People who use DART are more likely to use a bus than light rail. As of 2014, 71% of transit trips included at least one bus ride.

### An outdated system

Some DART bus routes have been running the same paths since World War II, and most of the network was designed in the 1980s. Since then, the urban area has grown enormously and the places people go for work, recreation, socializing, and other purposes have changed. The rail and bus network was originally designed to focus on downtown Dallas,

but more of the region's activity happens far outside of that center today than in the past.

### Declining ridership

In the past twenty years, DART's transit rider-ship grew and then declined. Most U.S. transit agencies have seen declining transit ridership over the past decade. The exceptions are those cities where transit service has been increased or redesigned.

One of the biggest drivers of ridership gains or losses is how much service is provided. But even considering the amount of service provided, DART ridership relative to service has slowly declined for buses since 1994 and for light rail since 2009.

### Time to reevaluate goals

High ridership is just one goal that a transit network can achieve. Transit serves other values besides high ridership which can lead to economic, environmental, social, health and personal liberty goals.

This blank-slate redesign has allowed DART to ask the public: *How can the transit network*

*best serve peoples' values today?*

The New Bus Network documented in this report spends a greater share of the budget on high-rider-ship services, to make the network more useful to a larger number of people.

## How is the New Bus Network different?

The New Network is different from the existing network in many big and small ways. Nearly every route is changed.

### A blank slate, but a limited budget

The New Bus Network was drawn from a blank slate. Some routes are similar to the routes running today, but there are proposed changes to nearly every single route in the system.

The New Bus Network uses nearly the same budget the existing bus network.

**The new network focuses more service in the places and the routes where the most people ride.**

### Less spent on coverage, more spent on ridership

The biggest difference, and the change that drives all of the other differences, is that the new network focuses more of DART's bus service in the places and the routes where the most people ride.

Within a limited budget for transit service, any transit agency must balance these competing goals: focusing service into frequent routes that serve more riders, or spreading service out so that minimal service covers a large area. For more about this trade-off, see the [DART Network Choices Report](#).

Whether DART should make that trade-off differently in the future was one question posed

## PHASE 1

### Network Concepts

#### Spring and Summer 2020

After evaluating the existing transit network, DART staff, municipal partners, and the consulting team designed a pair of contrasting Network Concepts to illustrate key choices.

Transit riders, stakeholders, employers, workers and community leaders were consulted on how DART should make major choices in the redesign of the network.

## PHASE 2

### Draft New Bus Network

#### Winter and Spring 2021

The Draft New Bus Network Plan has been designed by DART staff, municipal partners, and the consulting team, according to Board direction and with consideration of public input from Phase 1.

Public input was gathered on the Draft Network from March to June, 2021.

## PHASE 3

### Final New Bus Network

#### Summer 2021

This Final New Bus Network Plan was created using input from the public in Phases 1 and 2, and Board direction.

If the Board decides to adopt and implement the New Bus Network Plan, the service changes will be made in January 2022.

to the public in 2020. In consideration of public input, the DART Board decided to make a modest shift to a higher ridership network.

In the existing bus network, about 55% of the budget is spent on routes that attract high ridership relative to cost; the other 45% is spent on routes with low ridership relative to cost. The DART Board directed staff to spend 70-75% of the bus budget on high ridership services, reducing spending on low ridership services.

### **Better frequencies and longer hours**

Shifting budget away from covering small numbers of people, and towards higher ridership, means most existing riders would get better service. The New Bus Network includes better frequencies, longer hours of service, and more weekend service, in the places where many people live and work, and where many people already ride today.

### **More direct routes**

Routes designed for high ridership go straight, rather than deviating or wiggling, because the majority of riders want to go straight to major destinations. In the New Bus Network, routes are straighter, only deviating if there is someplace off the main road that large numbers of people travel to.

**All routes in the New Network have new numbers!**

### **Go to**

<https://dart-new-bus-network-viewer.s3.amazonaws.com/index.html>

**for an online, searchable map of the New Network.**

### **More coverage provided with GoLink**

To cover places where ridership is low, DART can use a flexible service rather than a scheduled transit route. This service is called "GoLink." Because of its low cost to provide in low-ridership areas, it is a useful coverage tool. The New Network includes more GoLink zones, and in some places it adds GoLink on weekends as well.

### **Timed connections for better crosstown trips**

Today DART carefully times some routes so that people can make a quicker transfer among buses and trains without a long wait. In the New Bus Network there are several locations with major timed-connections, including Addison, Downtown Irving, and South Garland transit centers.

In these three centers, nearly every route connects with every other route, so people can make a quick transfer *in either direction*.

The result is good for many other cities, like Plano, Carrollton, Farmers Branch, and Richardson, because it means people can travel through major transit centers, to jobs beyond, with less waiting.

# Routes in the New Bus Network

The map at right shows the New Bus Network.

To look closely at the network, and to compare its routes to existing routes, you can:

- Open the [interactive map](#). You can search for an address and look at the area more closely.
  - You can also see how many jobs will be reachable by transit from every place in the service area, and how it compares to job access from the existing network.
- Go to page 11, where maps and charts show how many people will be near service at different times of the day and week.
- Go to page 16, to look at each quarter of the map more closely.

**The vast majority of riders will have better or similar service nearby. 99.8% of 2019 boardings will be within 1/2 mile of transit, and 98.2% will be within 1/4 mile of transit.**

## Better frequency

In all of these maps, each route is color-coded based on its frequency and times of service. Brighter colors mean better frequency.

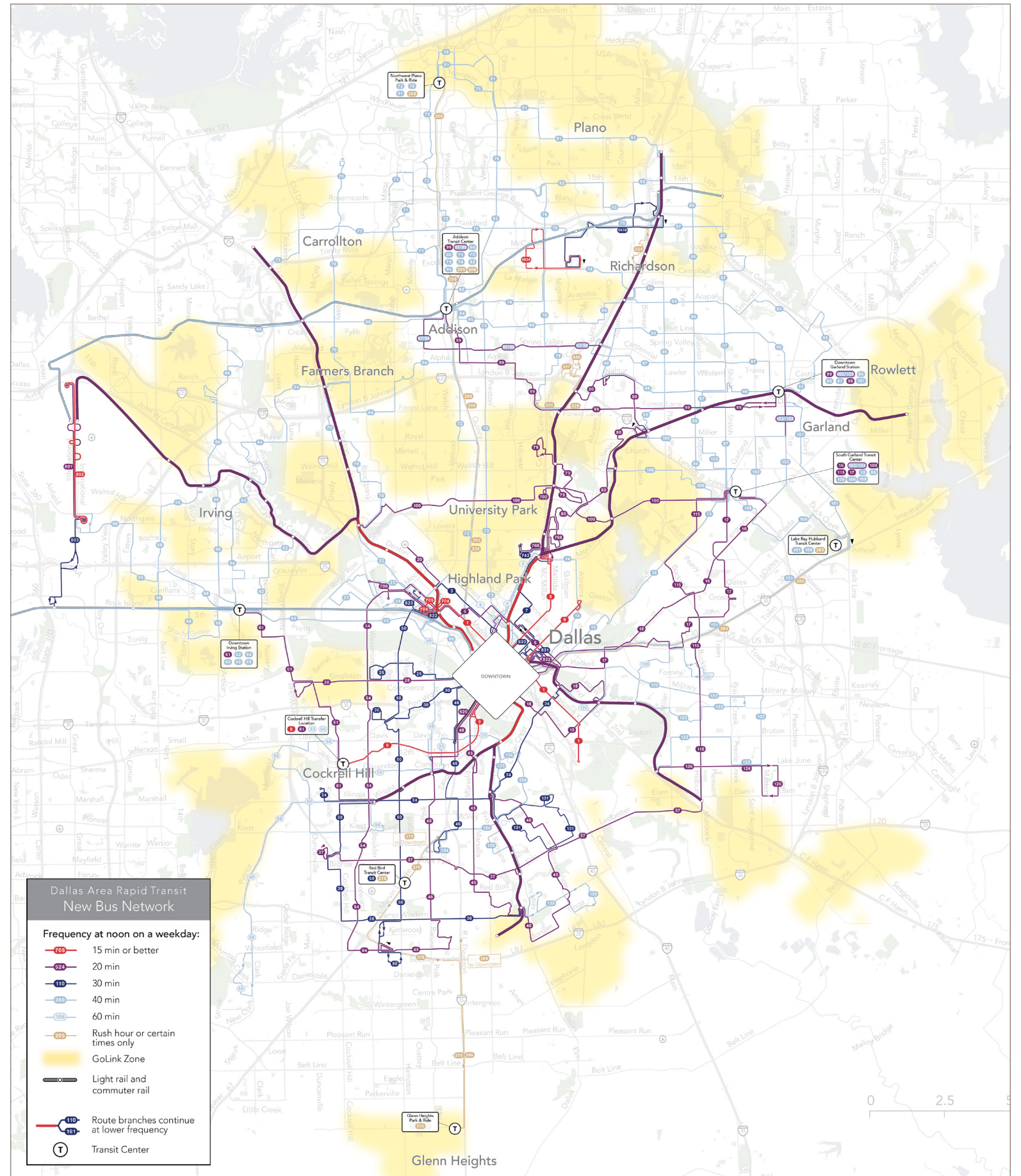
In the map at right, routes are colored according to their midday frequency.

## More hours and days of service

Brighter colors on these maps also generally mean long hours of service each day and good service on weekends. The New Network offers better weekend service on the routes that the most riders use.

## More GoLink zones

In places where ridership is very low, DART can provide a flexible service called GoLink instead of a scheduled bus. GoLink will pick people up within 30 minutes of a request. In the New Network some of the lowest-ridership routes are replaced by GoLink zones, shown in yellow.



# What Would the New Network Mean in Your Area?

You can find out how the New Network would affect travel time in your area, or to and from any place you care about.

Four examples are provided below, for four major destinations:

- Baylor Medical Center in central Dallas
- Estelle Village Apartments, near the intersection of Bonnie View and Simpson Stuart Roads
- Northlake College in Irving
- Parker Road Station in downtown Plano.

On each of the maps below,



- The light blue areas are the places that the New Network would make accessible from that major destination, in an hour, by transit.
- The grey areas are places that are reachable today that would not longer be reachable in the New Network.
- Where the two colors overlap, access wouldn't change.

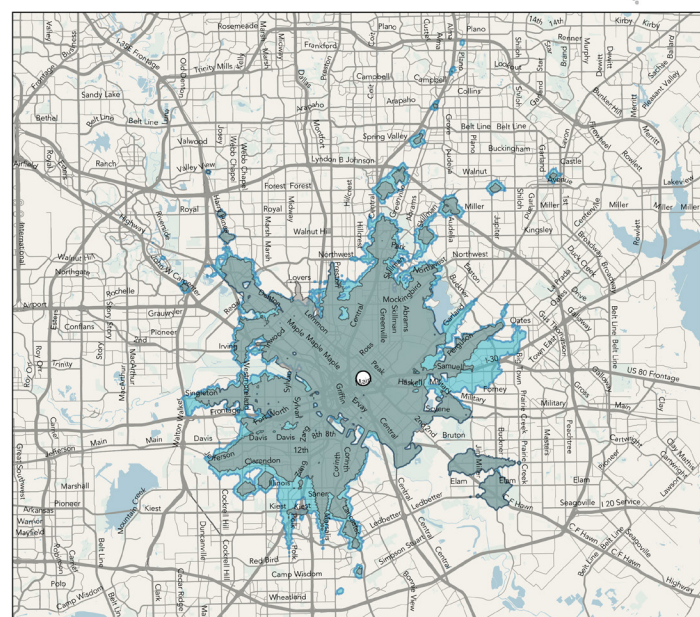
When access to major destinations like these improves, it means that more people could apply for jobs there (as at Baylor), or enroll in school there (as at Northlake campus), or run errands there (as in downtown Plano), or visit friends and family there (as at the Estelle Village Apartments).

You can make maps like this for yourself, for any place in the DART service area, in the [interactive online map](#). Select "60 Min Travel" and click on a place on the map to see the area and the number of jobs that are within an hour's transit commute of that place.

**Expanding where people can go, in a reasonable amount of time, expands their access to opportunity.**

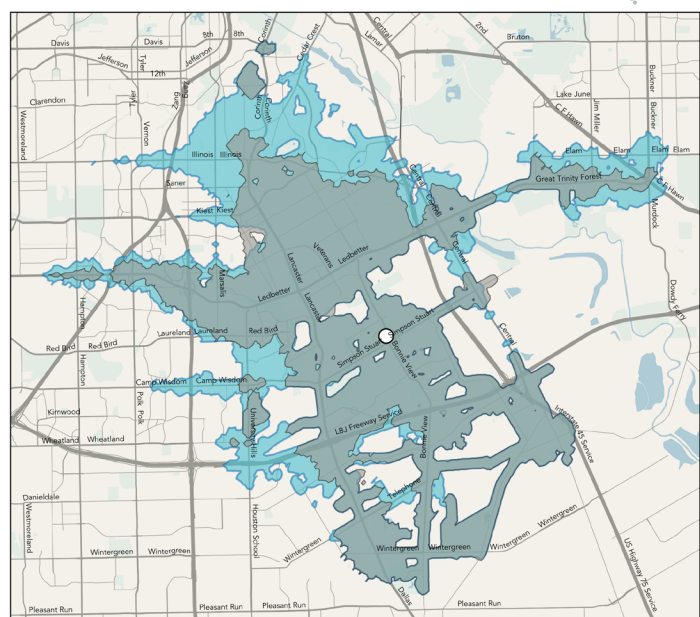
**[Click here to map out your transit access on the New Network.](#)**

How far can I travel in 60 minutes from Baylor University Medical Center at 12 pm on a Weekday?



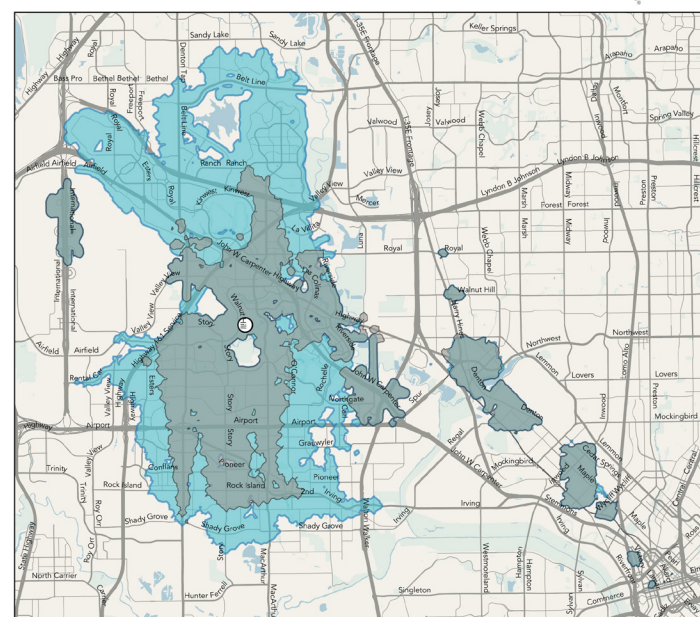
Change in jobs reachable +47,100 (+10.0%)  
Change in residents reachable +116,700 (+29.0%)

How far can I travel in 60 minutes from Estelle Village Apartments at 12 pm on a Weekday?



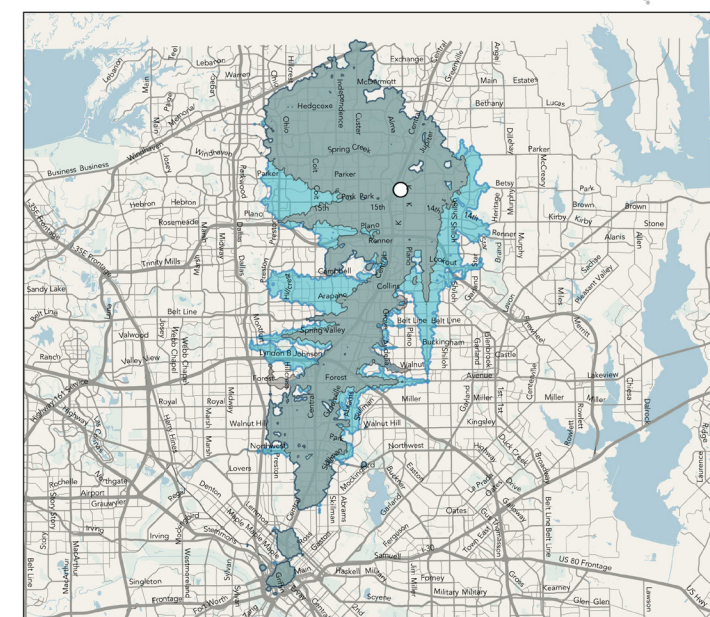
Change in jobs reachable +3,300 (+48.5%)  
Change in residents reachable +33,100 (+54.0%)

How far can I travel in 60 minutes from Northlake College at 12 pm on a Weekday?



Change in jobs reachable +112,100 (+86.5%)  
Change in residents reachable +103,500 (+88.0%)

How far can I travel in 60 minutes from Parker Road Station at 12 pm on a Weekday?



Change in jobs reachable +68,200 (+17.5%)  
Change in residents reachable +120,400 (+29.5%)

# Improved Access to Jobs

Compared to the existing network, the New Network would increase by 34% the jobs that the average resident of the DART service area could reach in one hour.

It would deliver bigger increases in job access to non-white residents than to white residents, and to lower-income residents than to high-income residents.

The map at right shows how residents' job access would change.

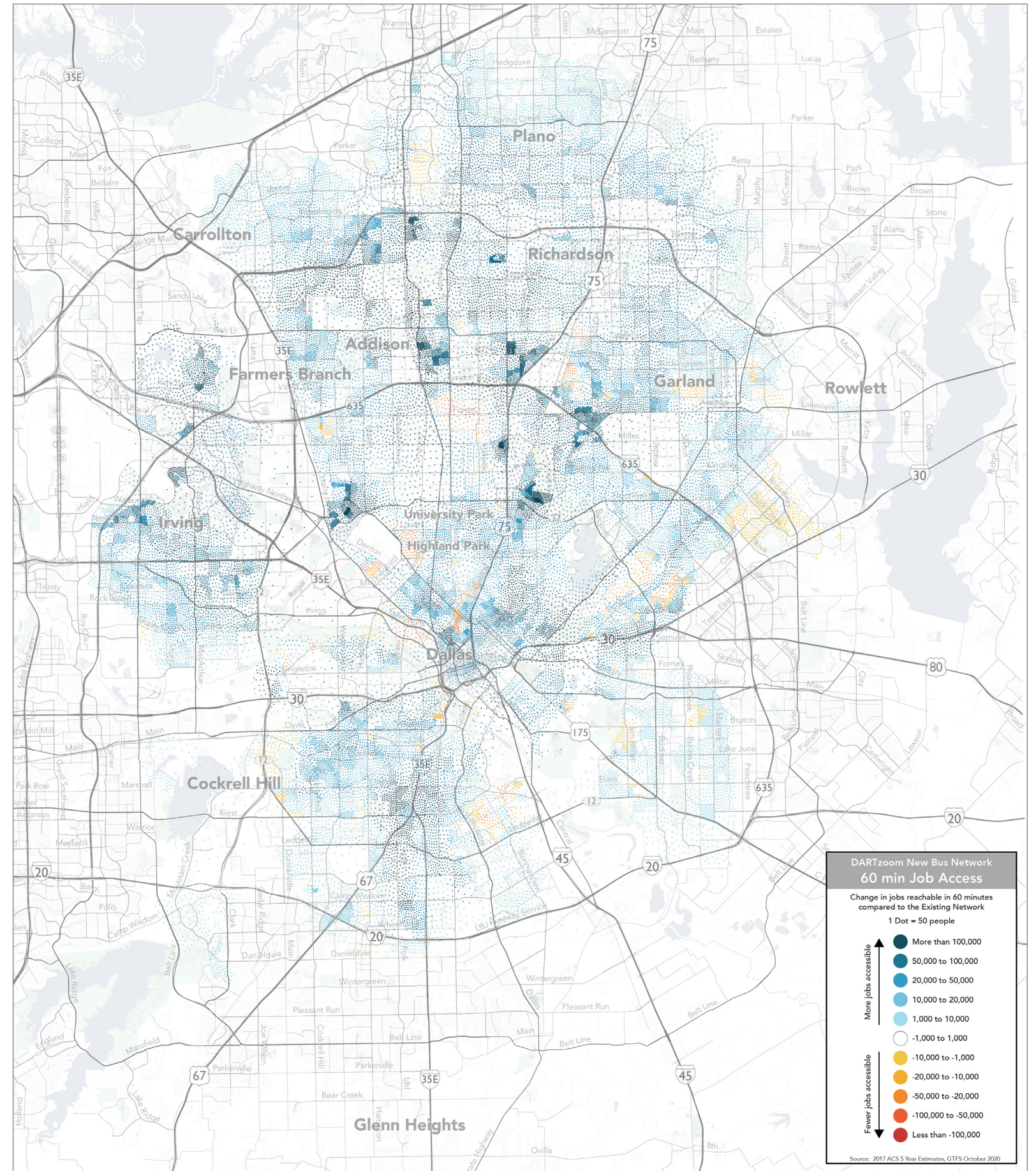
- In most places, and for the great majority of residents, more jobs would be reachable; they are shown in shades of **blue**.
- In a few places, fewer jobs would be reachable; they are shown in shades of **orange**.
- On this map, more dots mean more people, so the more intense the color the more people experience that gain or loss.

On this map, the vast majority of dots are blue, and in some zones there are so many blue dots that they appear as a solid block of color. These are places that are dense with residents, and the network is designed to be particularly useful where so many people live.

To look closely at how job access would change for a place you care about, visit the [interactive map](#).

**Increasing average access to jobs for the people who need it the most.**

**Jobs aren't all that matters – access to services, education, and other opportunities would increase too.**



# Job Access Improvement by Demographic Group

The table at right reports how average job access within 60 minutes of transit travel would change for different demographic groups.

The graphs below show the same information, as well as the change in access for 45- and 75-minute commutes, for four specific demographic groups: minority and white residents (at left), and lower- and higher-income residents (at right).

These graphs illustrate that the gains in job access are particularly good for minority residents (top left graph); for lower income residents (top right graph); and for seniors (bottom right graph). The percentage increase on each graph describes the gains in job access for commutes of 75 minutes or less.

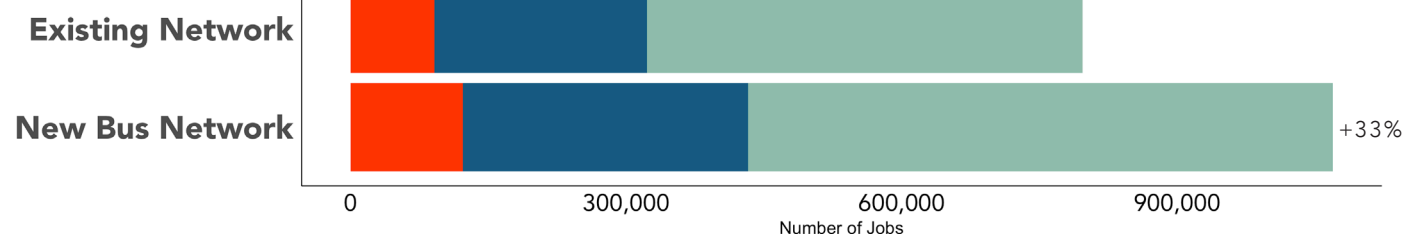
Residents, by demographic	Additional jobs reachable by transit in 60 minutes (incl. waiting time)
All	+34%
Non-white <sup>1</sup>	+35%
Black	+34%
White	+32%
Hispanic	+33%
Lower income (earning < 150% of the fed. poverty level)	+32%
Medium- and higher-income (earning > 150% of the fed. poverty level)	+34%
Higher-income (earning > 200% of the fed. poverty level)	+13%
Over the age of 65	+36%

<sup>1</sup> Non-white residents include people of Black, Hispanic, Asian, and other races and ethnicities.

How many jobs can the average racial minority resident reach in...

45 min 60 min 75 min

by transit and walking during weekday midday?

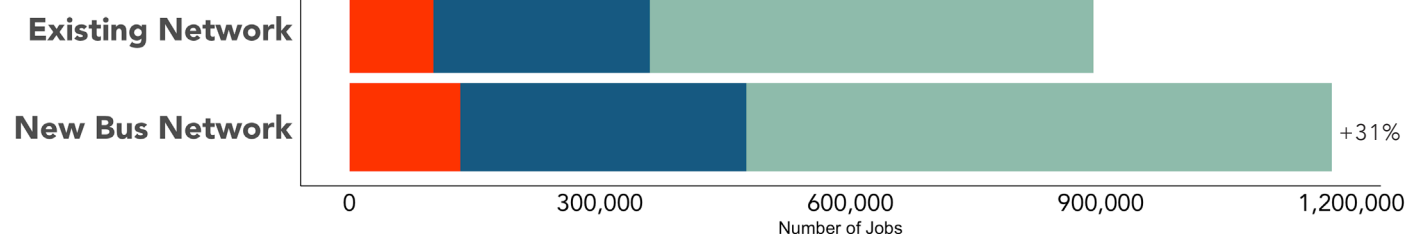


Note: A person of color is based on Census categories of race and ethnicity and includes anyone who identifies as Non-White or Hispanic.

How many jobs can the average person in poverty reach in...

45 min 60 min 75 min

by transit and walking during weekday midday?

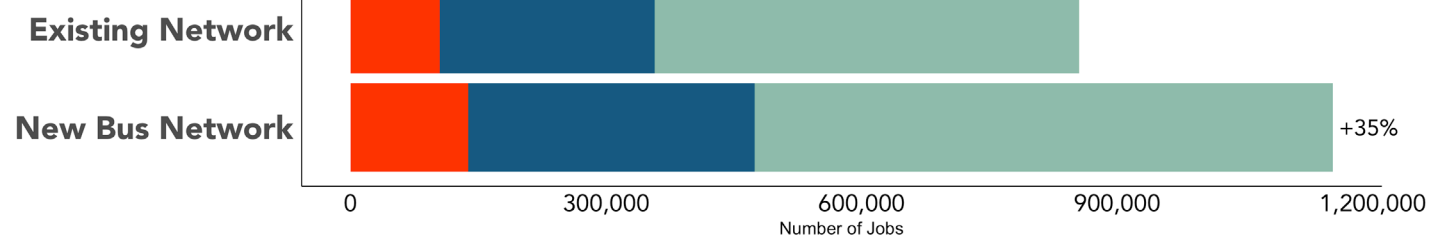


Note: A person in poverty is defined as someone earning 150% or less of the federal poverty threshold.

How many jobs can the average white resident reach in...

45 min 60 min 75 min

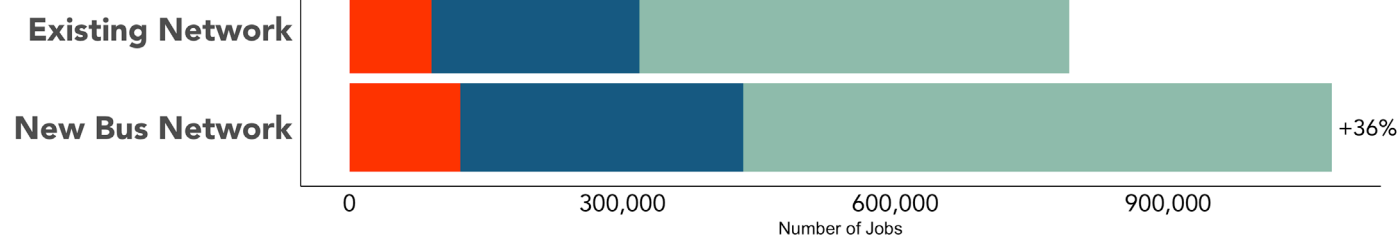
by transit and walking during weekday midday?



How many jobs can the average senior resident reach in...

45 min 60 min 75 min

by transit and walking during weekday midday?





# Increases in Job Access for 45-, 60- and 75-minute Commutes

Residents, by demographic	Average additional jobs reachable by transit in the New Network, compared to the existing network					
	in 45 minutes or less		in 60 minutes or less		in 75 minutes or less	
All	16,452	35%	41,826	34%	88,495	34%
Non-white <sup>21</sup>	16,099	37%	41,183	35%	85,995	33%
Black	15,344	33%	39,905	34%	81,113	31%
White	17,096	32%	42,998	32%	93,053	35%
Hispanic	16,676	39%	42,292	33%	88,491	32%
Lower income (earning < 150% of the fed. poverty level)	16,614	35%	43,411	32%	90,649	31%
Medium- and higher-income (earning > 150% of the fed. poverty level)	16,390	35%	41,220	34%	87,670	35%
Higher-income (earning > 200% of the fed. poverty level)	14,201	11%	32,284	13%	68,204	17%
Over the age of 65	16,889	37%	42,675	36%	90,977	36%

<sup>1</sup> Non-white residents include people of Black, Hispanic, Asian and other races and ethnicities.

The table above reports how many additional jobs the average members of each demographic group could reach in the New Network.

These job access estimates include:

- The use of bus, rail, GoLink and walking.
- Transfers, if they make the trip to reach the jobs faster.
- Waiting time.

Data on job and resident location is from the U.S. Census Bureau’s 2017 ACS 5-Year Estimate. Transit travel times for the new network were compared to travel times on DART’s October 2020 transit network.

To calculate the number of jobs reachable for

residents in 45-, 60- or 75-minutes, we counted all of the transit travel time, including:

- Waiting for the first bus or train of the trip.
- Riding the bus or train.
- Waiting again for a second bus or train, if the trip involves a transfer.
- Riding that second bus or train.
- Additional waiting and riding time, if the trip involves a third vehicle.
- Waiting at the destination, if necessary.<sup>2</sup>

<sup>2</sup> When comparing transit commute times to commutes by car, by bike or by walking, it is important to remember waiting time. A commute that takes a total of 60 minutes, for example, might involve 40 minutes of riding and 20 minutes of waiting. Bus and train

The New Bus Network can increase job access, or shorten commutes, for most residents and riders, by offering better frequencies and shorter waits in the places where the most people live and work.

schedules don’t get workers to their jobs at precisely the time they would want to arrive, which means people may wait at the start of their trip or upon arrival at their destination. The more frequent the service, the less waiting contributes to travel time.

# Improved Access to Workers and Customers

The previous map showed where and by how much residents' access to jobs would change with the New Bus Network.

This map shows the opposite: how much job locations' access to potential workers, clients, and customers, would change.<sup>1</sup>

From each location on this map, the change in the number of residents who could reach that location within 60 minutes is color-coded.

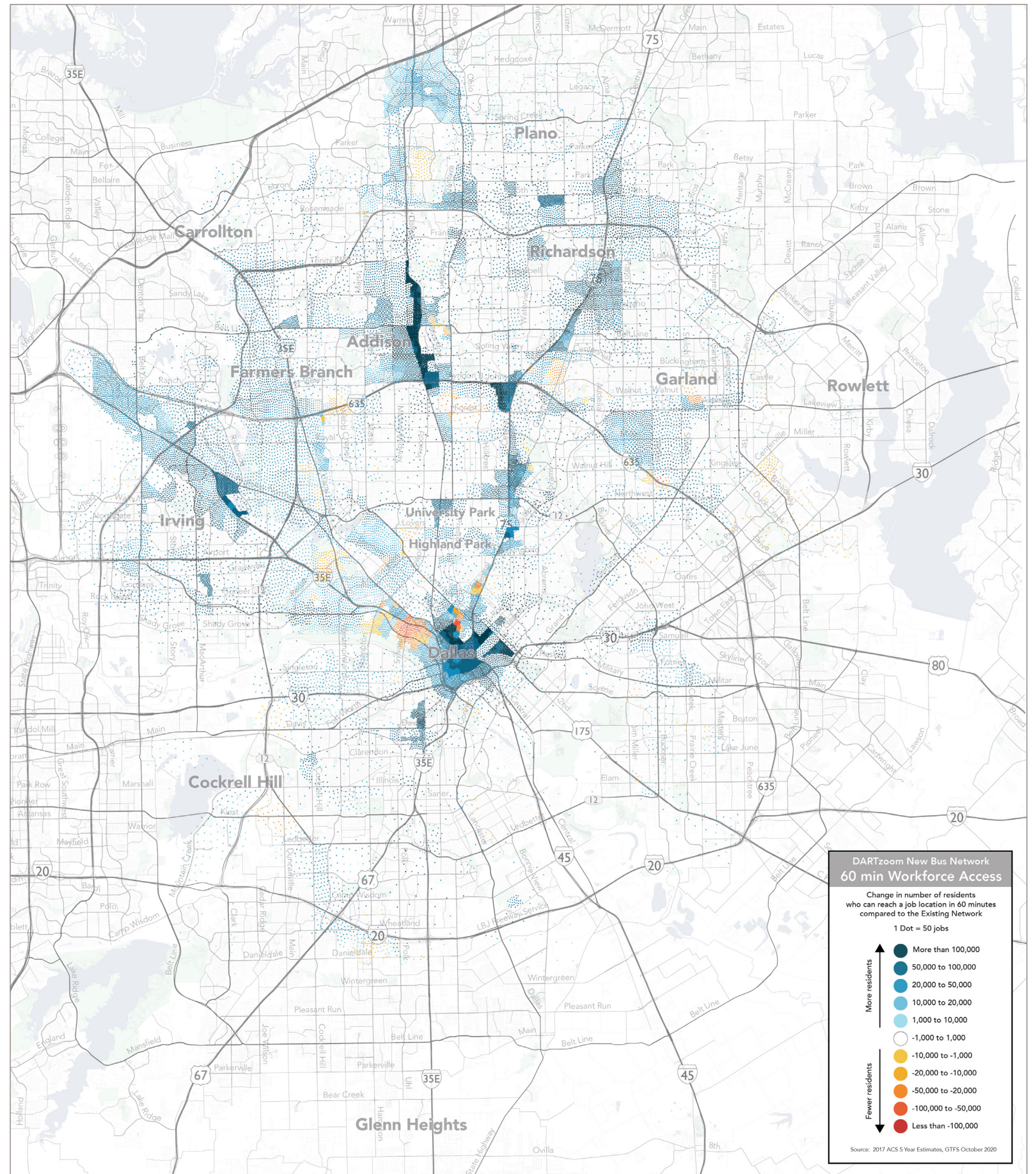
**Most commercial, industrial, and service areas would be easier to reach by transit in a reasonable amount of time.**

- Jobs (or other destinations) that could be reached by more residents are shown in shades of **blue**.
- Jobs (or other destinations) that could be reached by fewer residents in 60 minutes are shown in shades of **orange**.
- On this map, more dots mean more jobs, so the more intense the color the more each employment destination would experience the gain or loss.

Transit is important not just for getting workers to work, but also for getting customers and clients to the many businesses and services that want to attract them. This map shows how the value of a location might be affected by the New Network, if the business or organization located there wants to be easy-to-reach by workers, customers or clients.

On the map, the vast majority of dots are blue, indicating an increase in the number of people who could reach those job locations. This is another way to show how overall job access would increase by 34% for all residents.

<sup>1</sup> The degree of change visible on this map appears much smaller than on the map on page 7 because while residents are spread out all over the service area, jobs are much more concentrated in certain places.



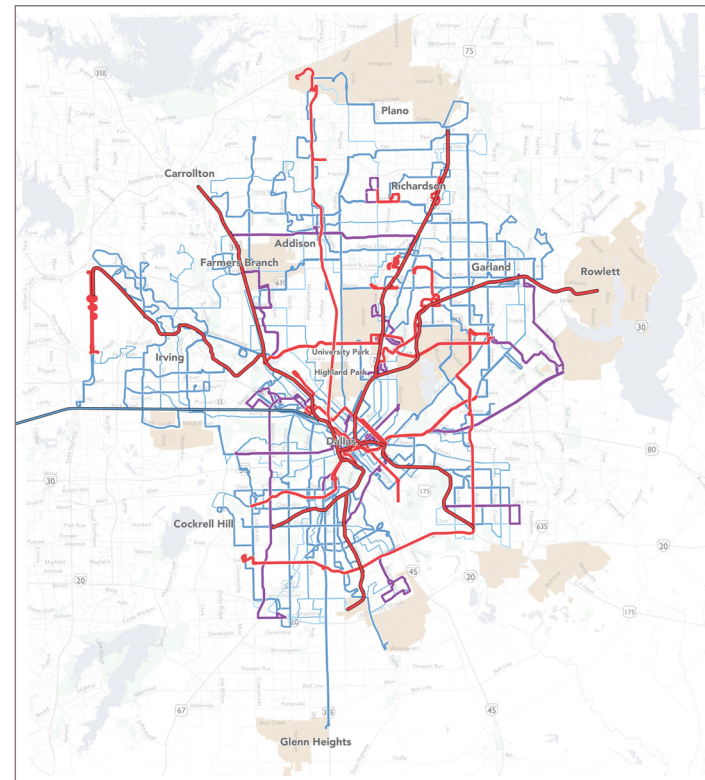
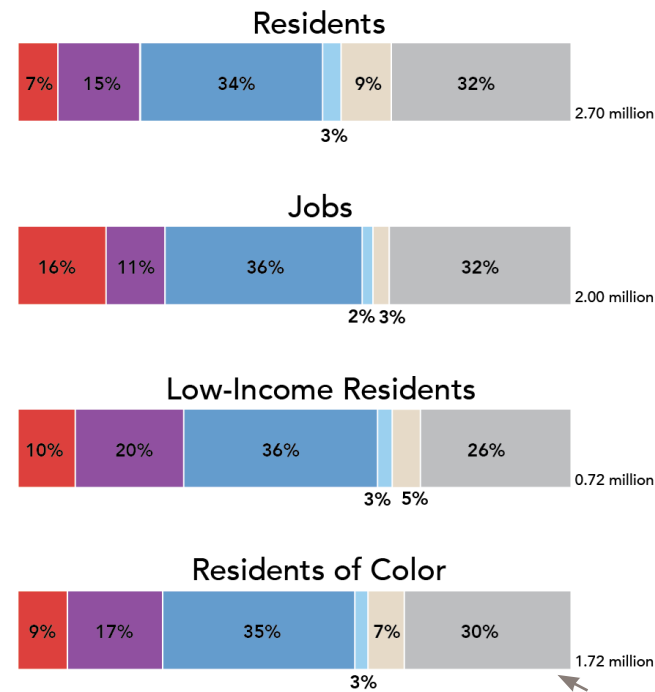
# Weekday Rush Hour



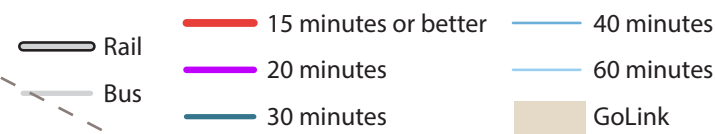
The graphs below show how many residents and jobs would be close to service of various frequencies during morning and evening rush hours.

## Existing Network

How many people and jobs would be within 1/2 mile of transit, and what kind of transit?



Map legend:



## New Bus Network

How many people and jobs are today within 1/2 mile of transit, and what kind of transit?

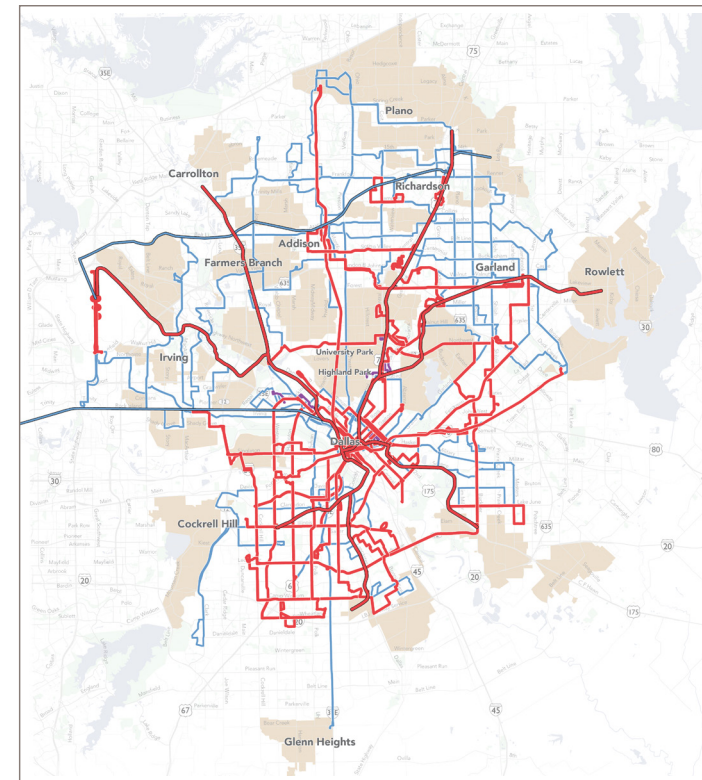
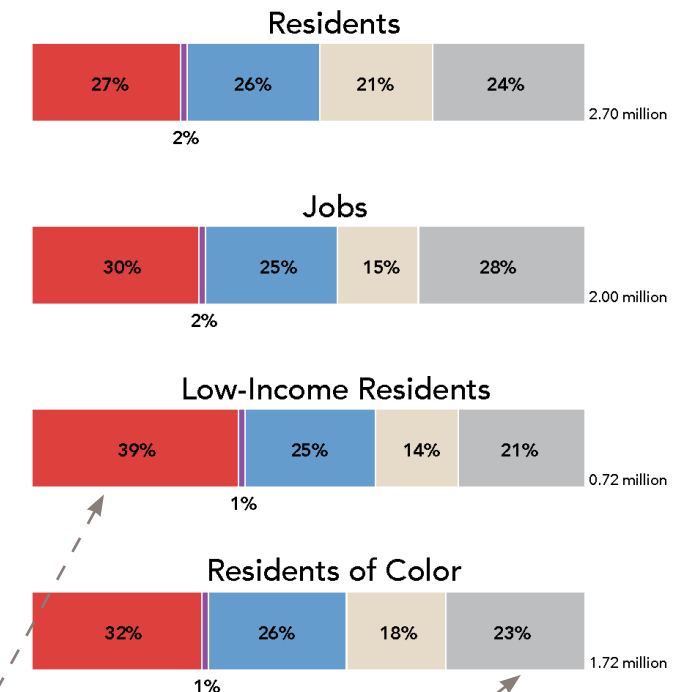
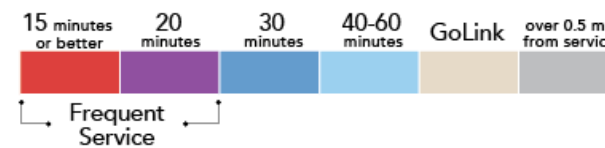


Chart legend:



With the New Bus Network, nearly four times more low-income residents would be near frequent service at rush hours.

The percentage of low-income and minority residents with access to *no service at all* would decrease.

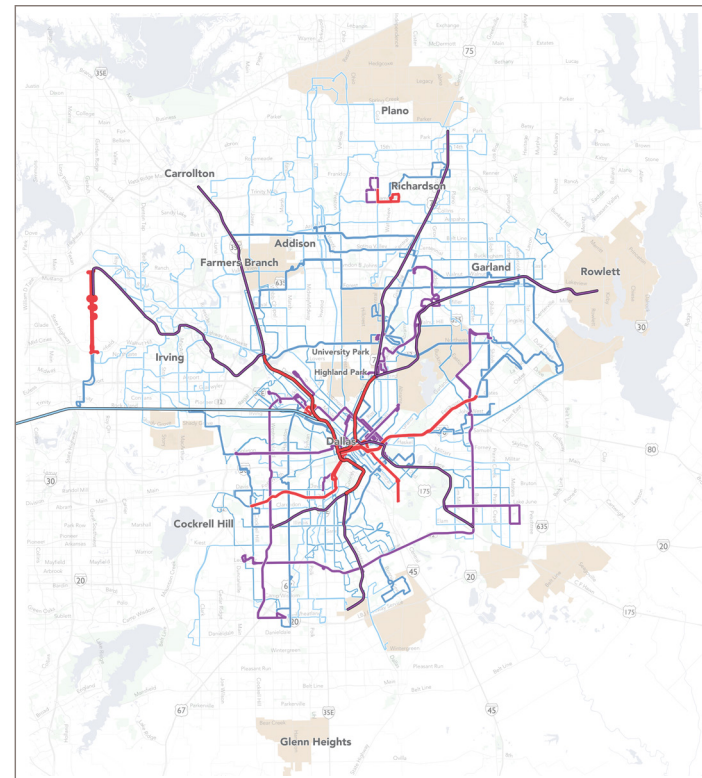
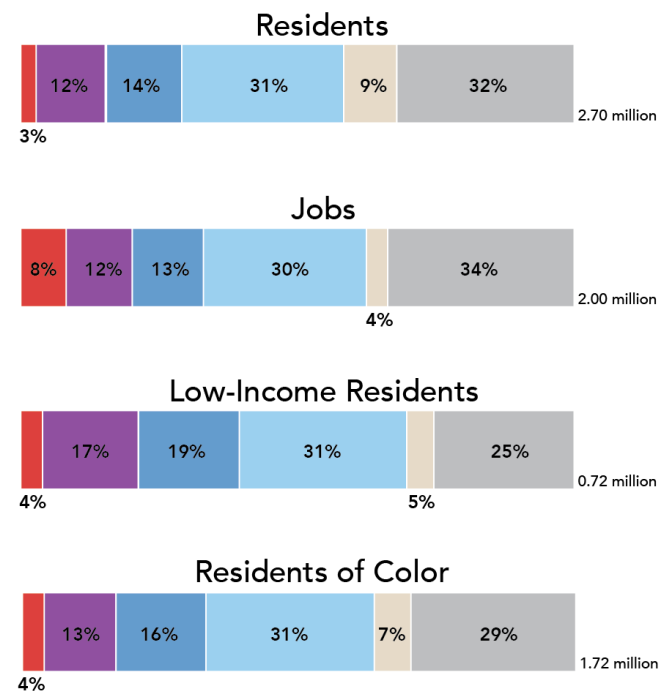
# Weekday Midday



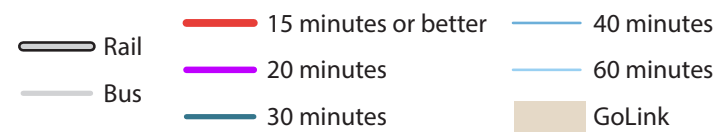
Middays are an important time for many non-office commutes as well as for shopping, medical, and school trips.

## Existing Network

How many people and jobs would be within 1/2 mile of transit, and what kind of transit?



Map legend:



## New Bus Network

How many people and jobs are today within 1/2 mile of transit, and what kind of transit?

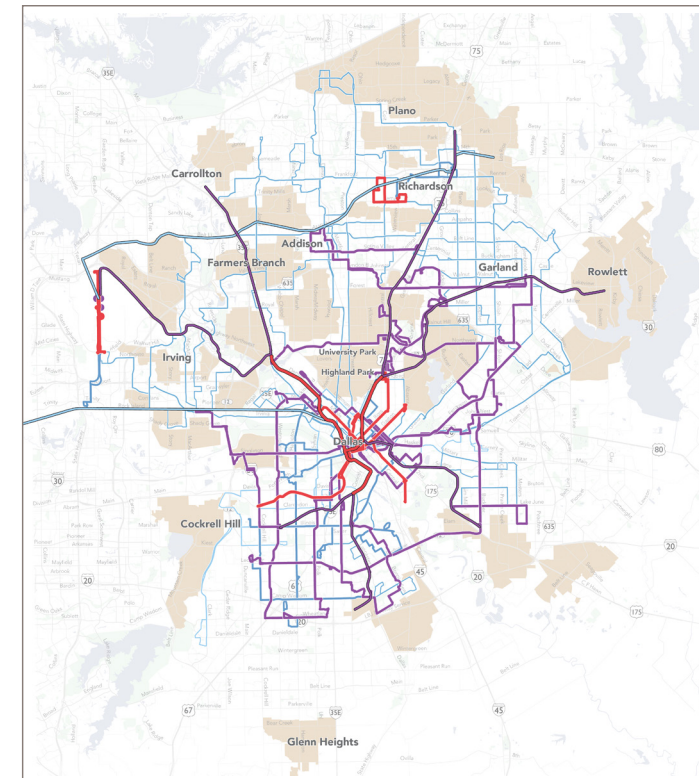
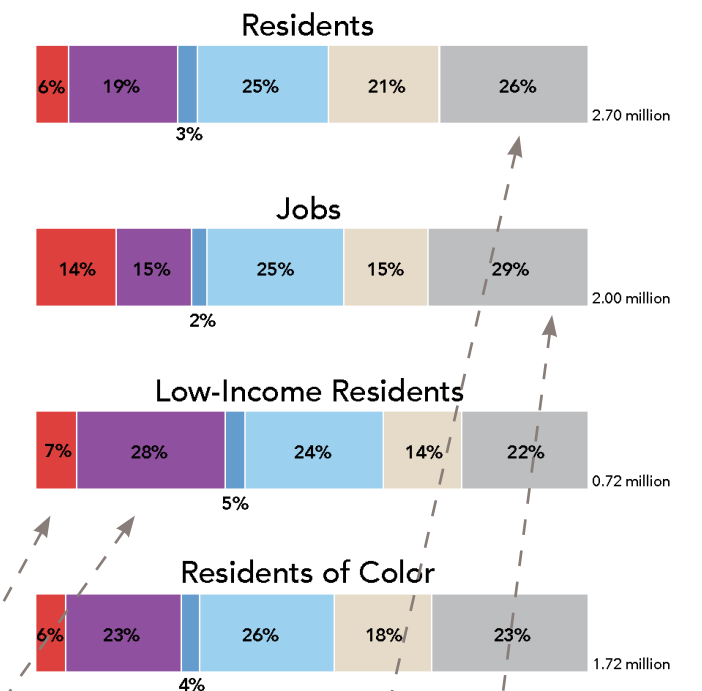
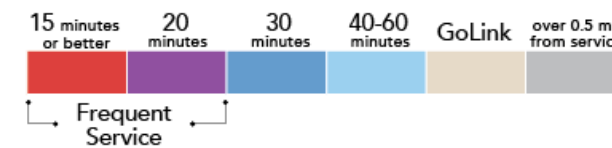


Chart legend:



Many routes that today run every 30 minutes would be improved to every 15 or 20 minutes.

The number of residents and jobs without access to service at all during the midday would decrease slightly, thanks to new GoLink zones.

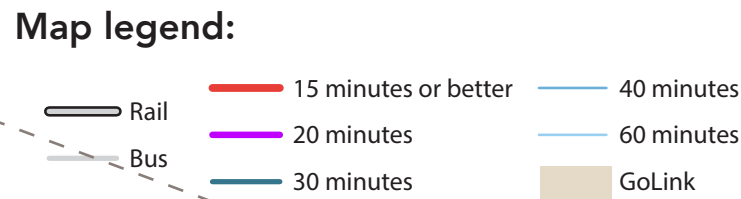
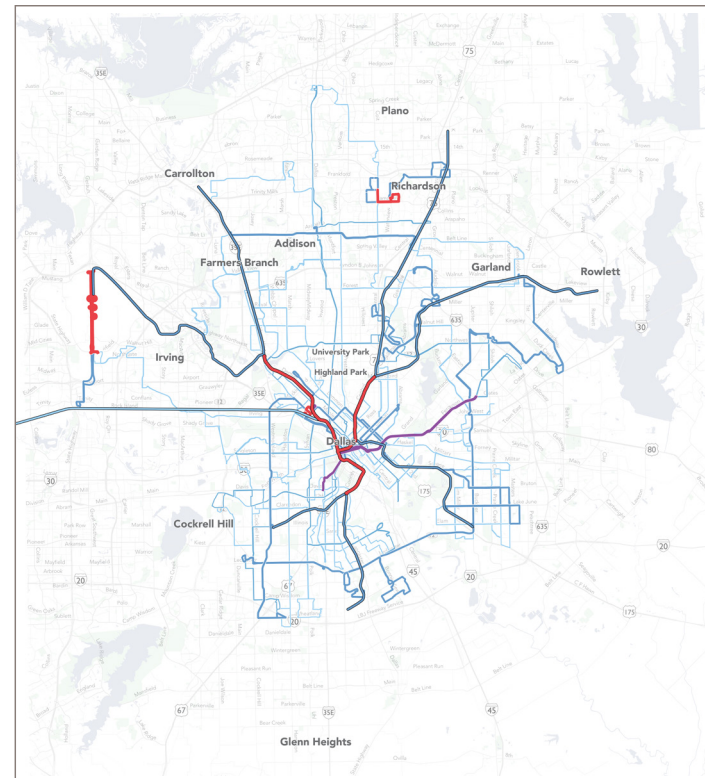
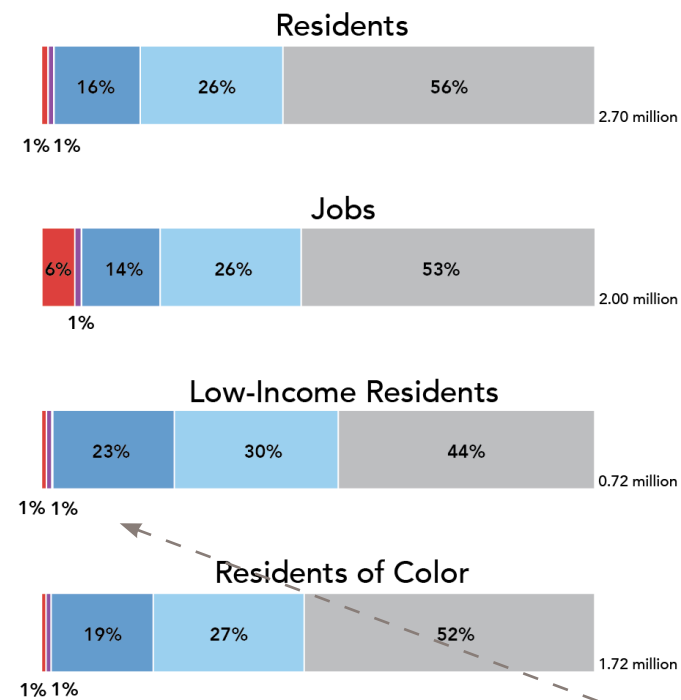
# Weekday Late



Night service rarely gets as many riders as daytime service, but it is an important part of a high-ridership network because it allows so many people to rely on transit. This page shows who is near service at 11 pm on weekdays.

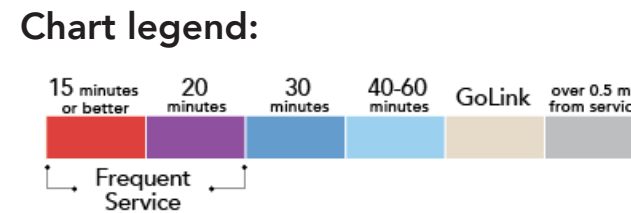
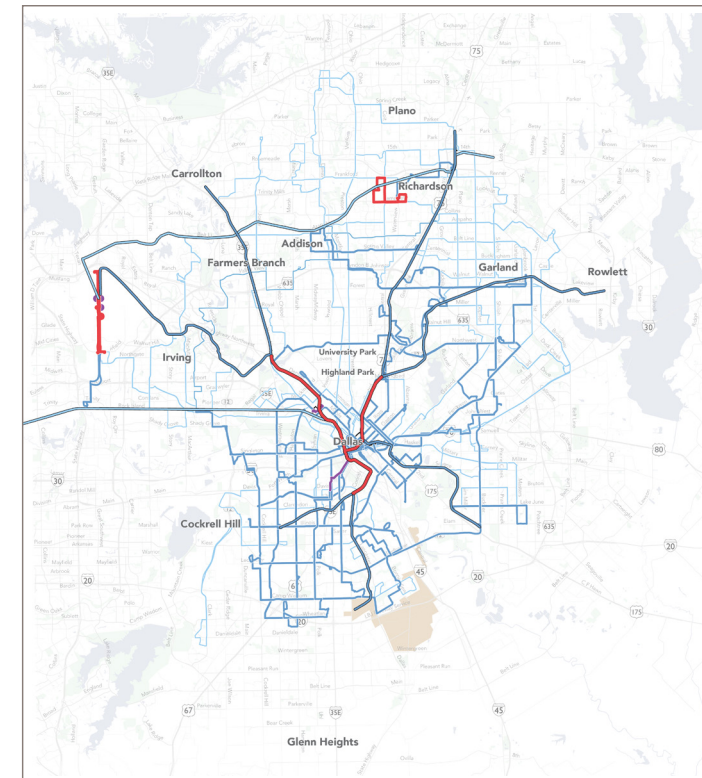
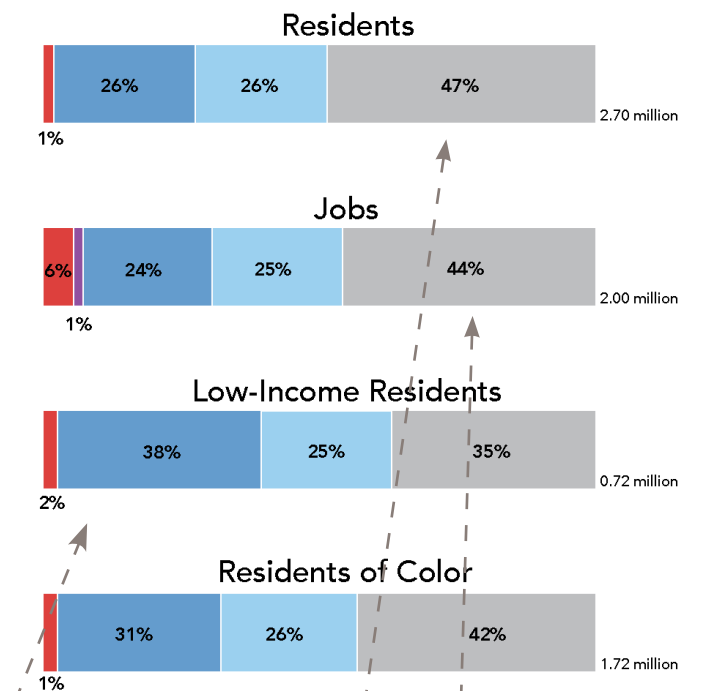
## Existing Network

How many people and jobs would be within 1/2 mile of transit, and what kind of transit?



## New Bus Network

How many people and jobs are today within 1/2 mile of transit, and what kind of transit?



The number of residents, especially low-income residents, who are near transit coming every 30 minutes or better at night would grow.

The number of residents and jobs that are more than 1/2 mile from any transit at night would go down.

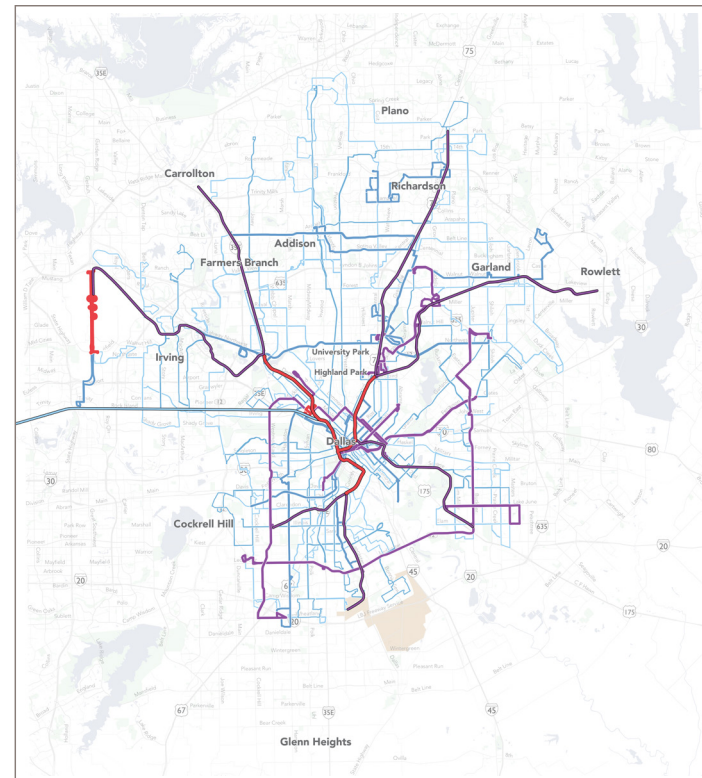
# Weekend Midday



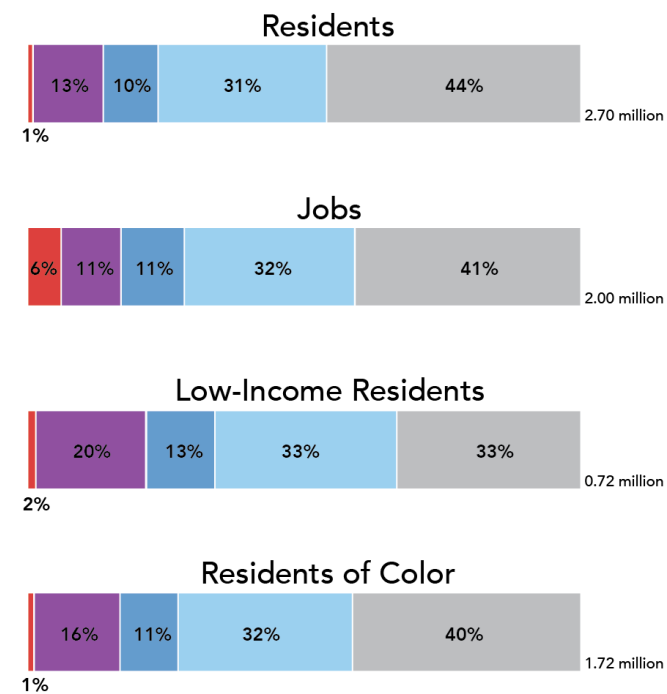
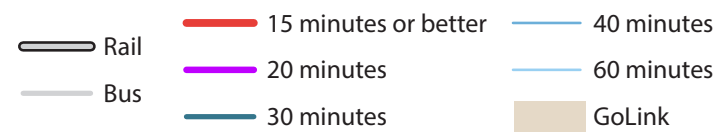
Weekend travel has grown over the past 50 years, as the U.S. economy has shifted towards consumption and services. Most retail and service workers are required to take at least one weekend shift per week, so weekend transit service is essential for their commutes.

## Existing Network

How many people and jobs would be within 1/2 mile of transit, and what kind of transit?



Map legend:



## New Bus Network

How many people and jobs are today within 1/2 mile of transit, and what kind of transit?

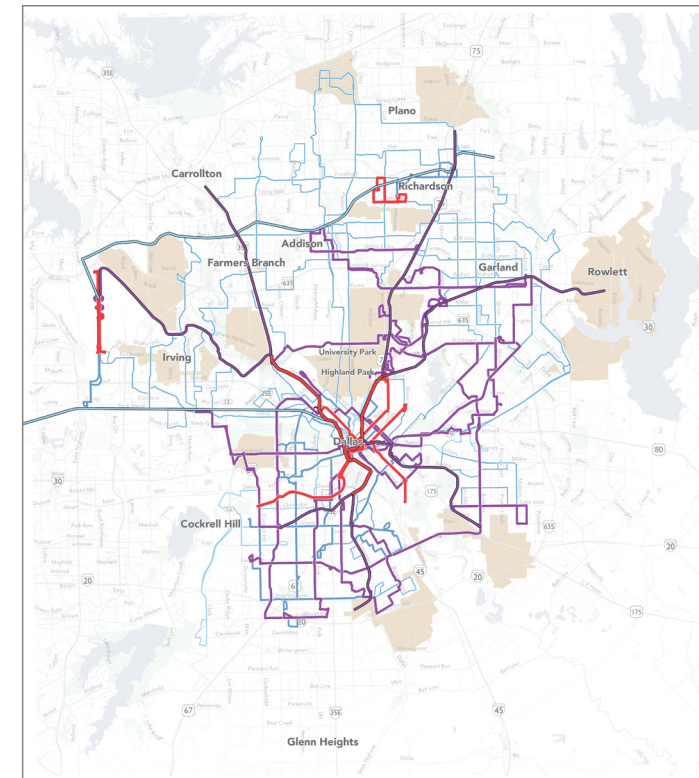
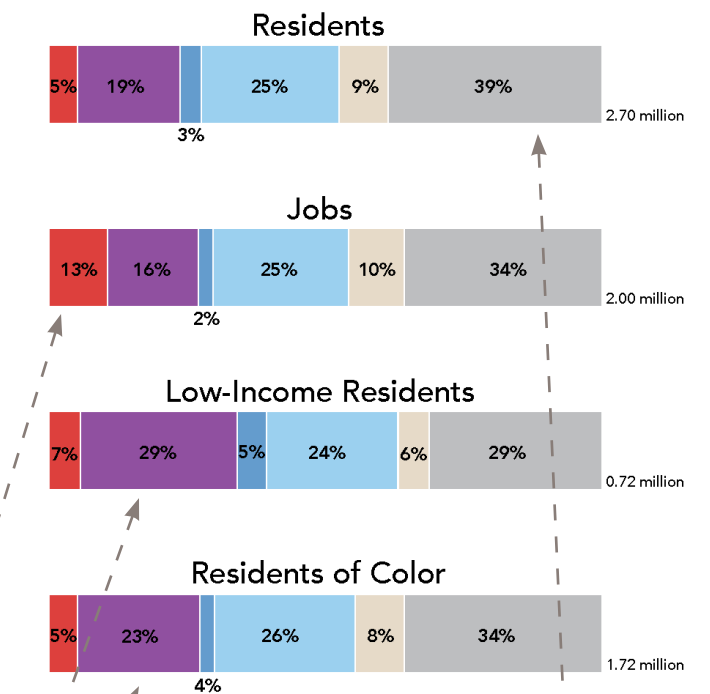
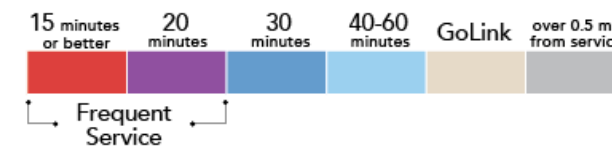


Chart legend:



Many more jobs would be close to frequent service on weekends.

Lower-income residents and residents of color would have more access to frequent service on weekends.

The number of residents with no access to any service on weekends would go down.

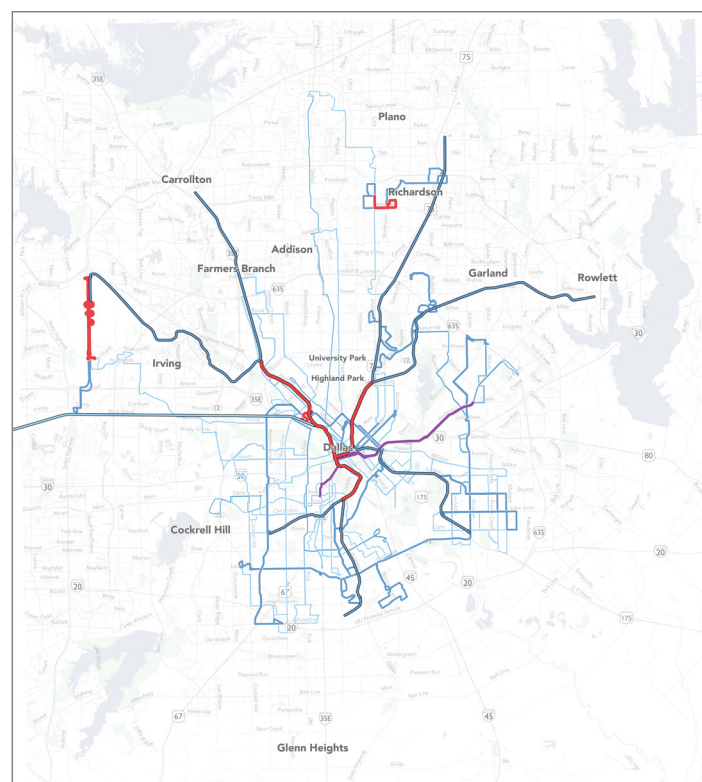
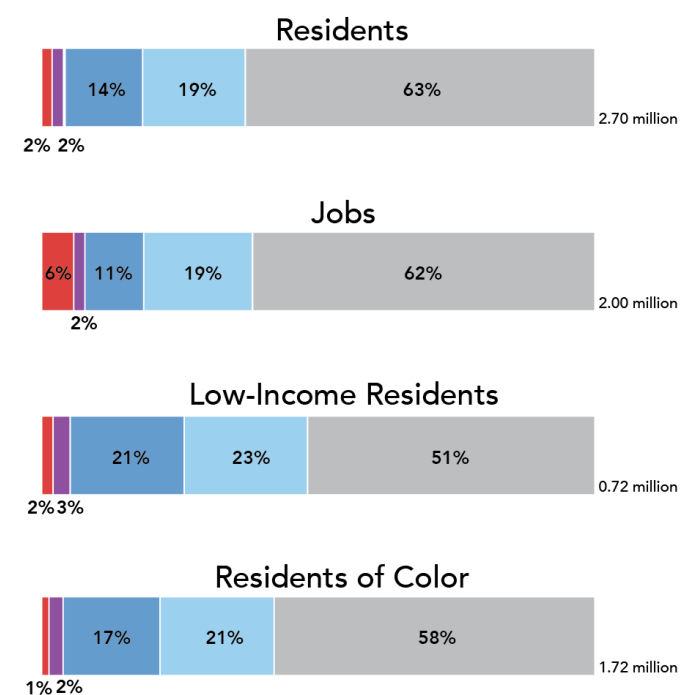
# Weekend Late



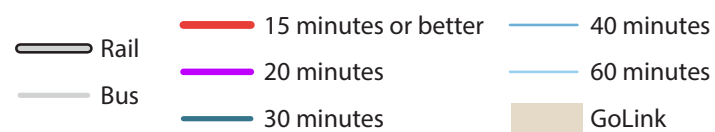
Night service rarely carries as many riders as daytime service, but it allows people to build their lives around transit. Weekend night service is also critical for bar, restaurant, and airport workers. This page shows who is near service at 11 pm on weekends.

## Existing Network

How many people and jobs would be within 1/2 mile of transit, and what kind of transit?



Map legend:



## New Bus Network

How many people and jobs are today within 1/2 mile of transit, and what kind of transit?

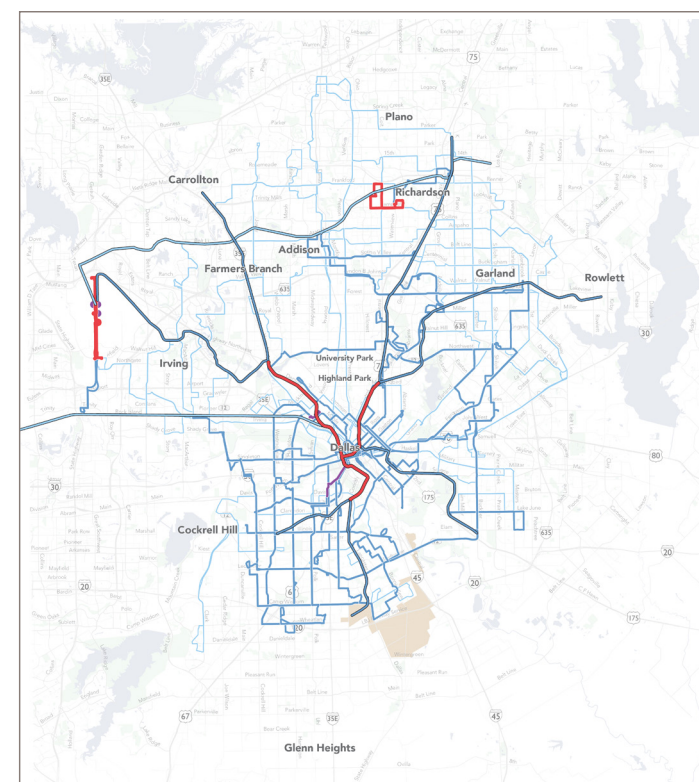
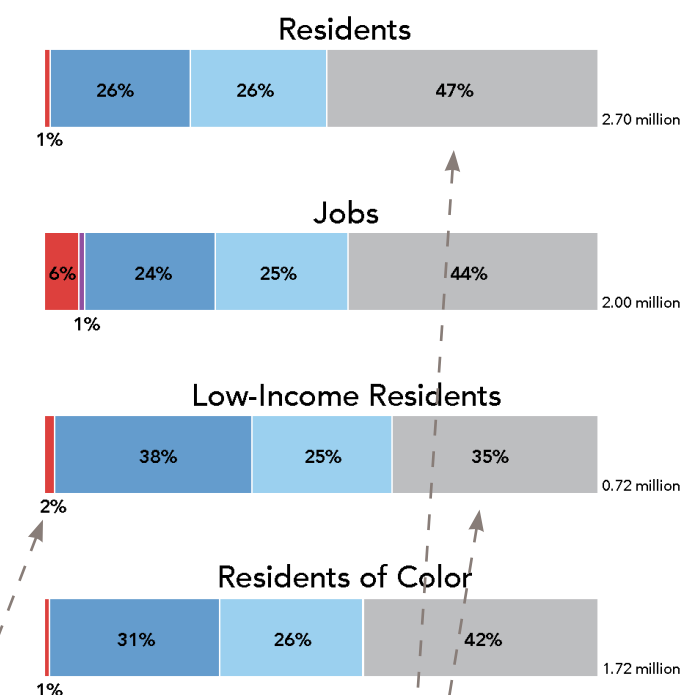
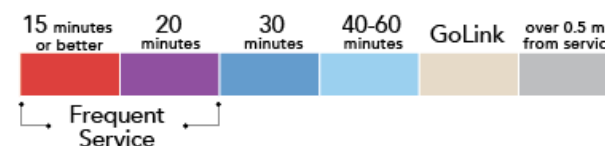


Chart legend:

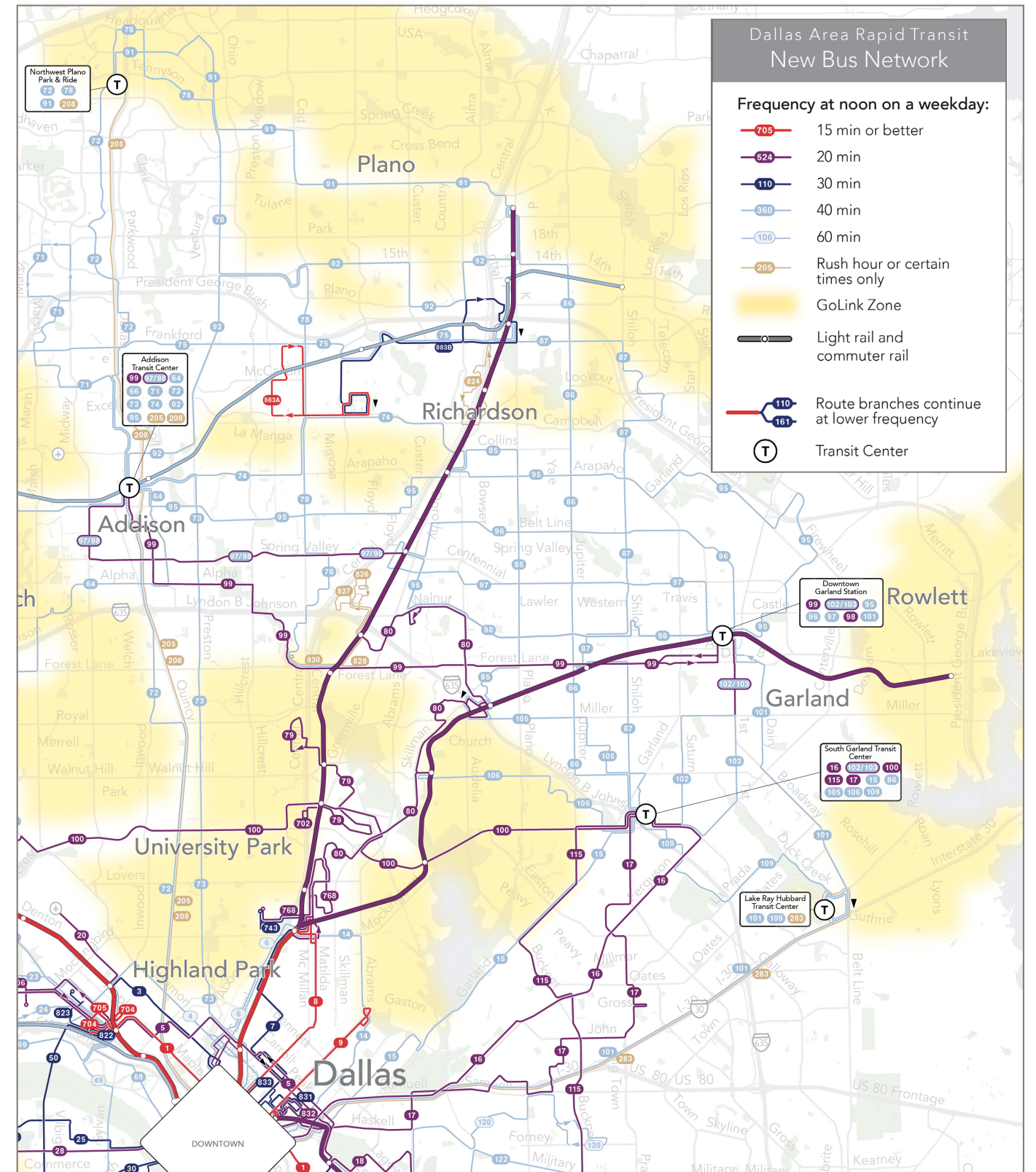
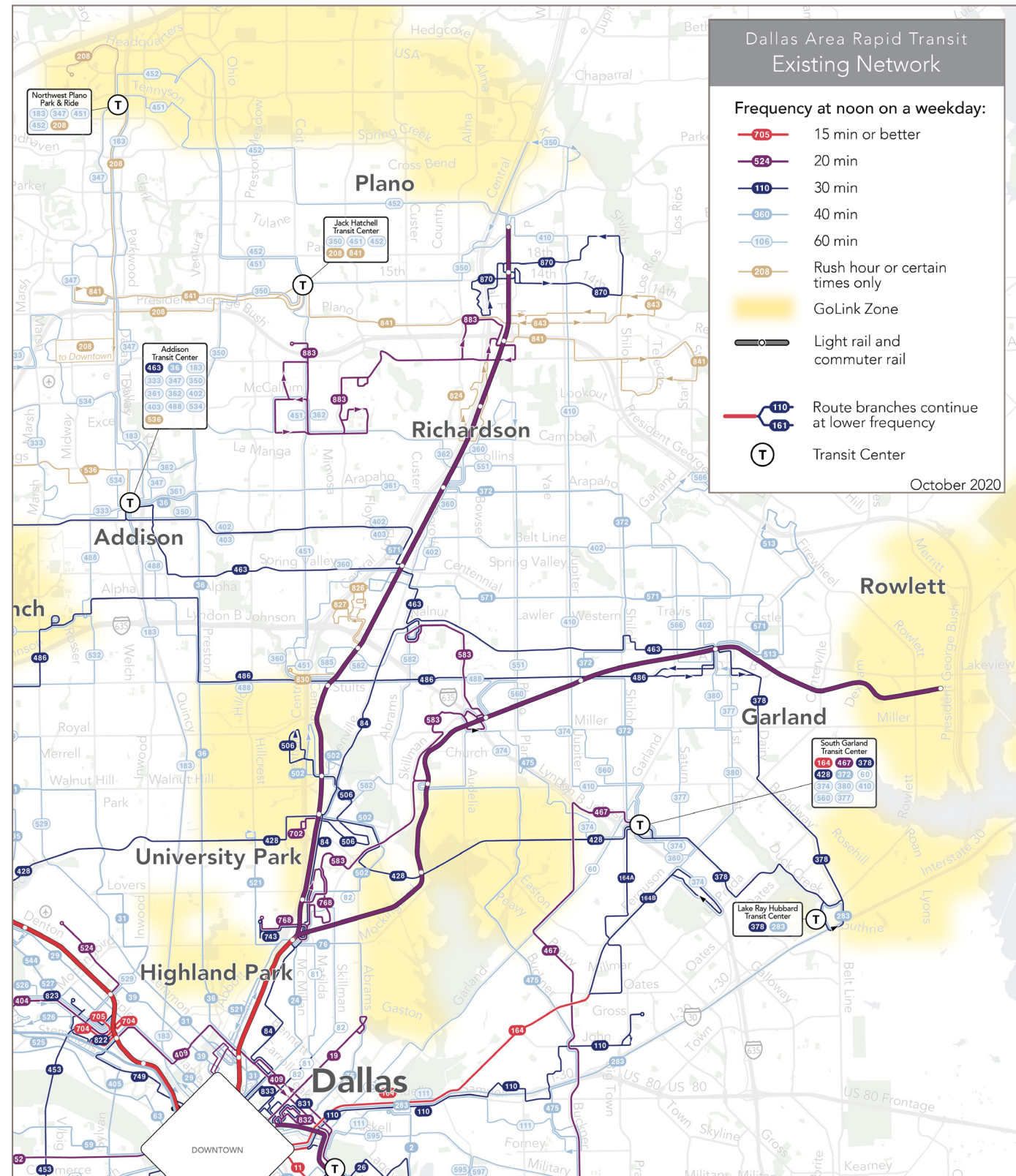


A few routes would offer 30- instead of 20-minute frequencies at night in the New Bus Network, so fewer people would be near frequent service late at night...but the network of 30-, 40- and 60-minute routes would expand a great deal at night.

Many fewer people would find themselves stuck with no way home at night. This would especially improve for low-income residents and residents of color.

# Zoom in on the Northeast Quadrant

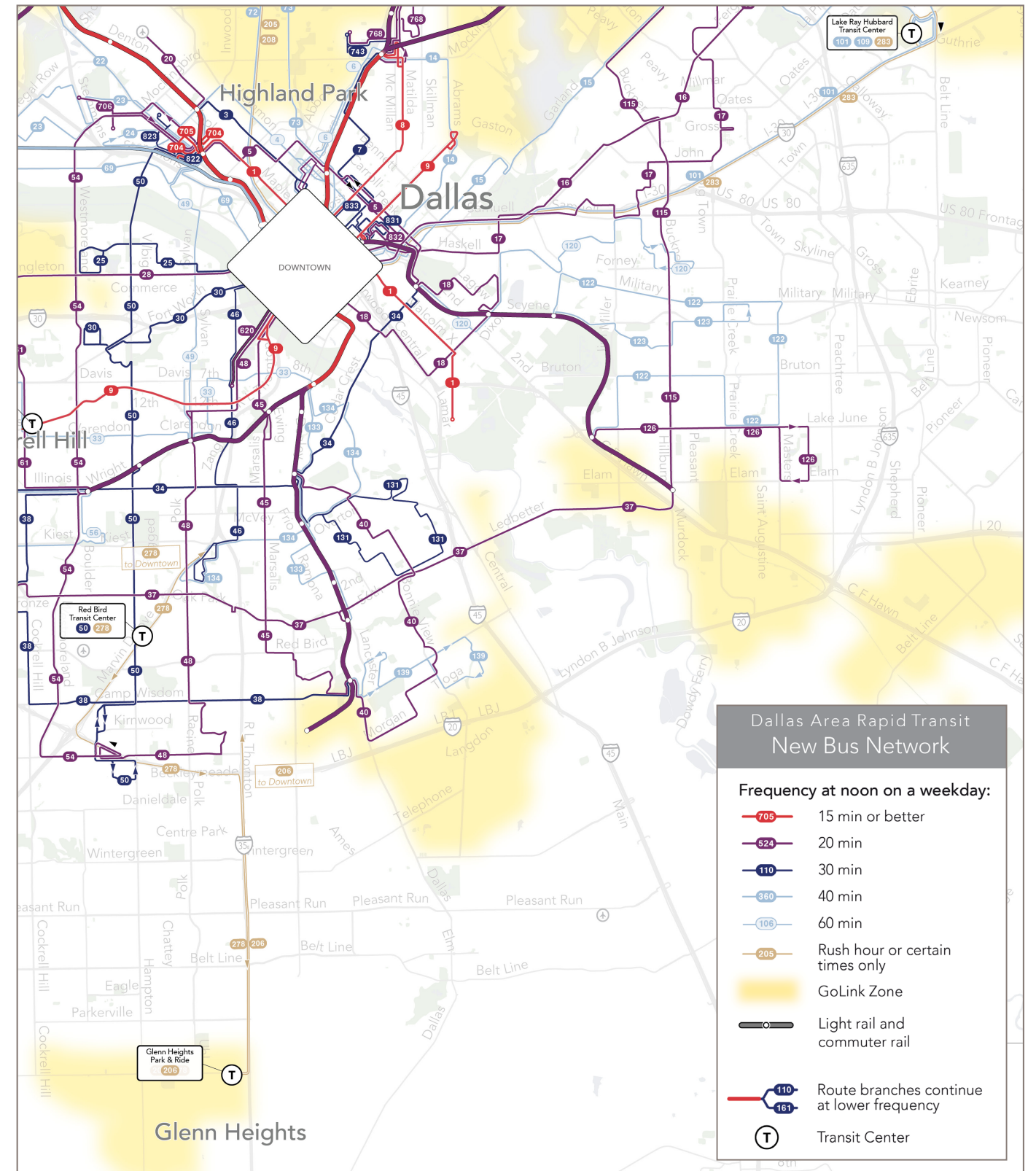
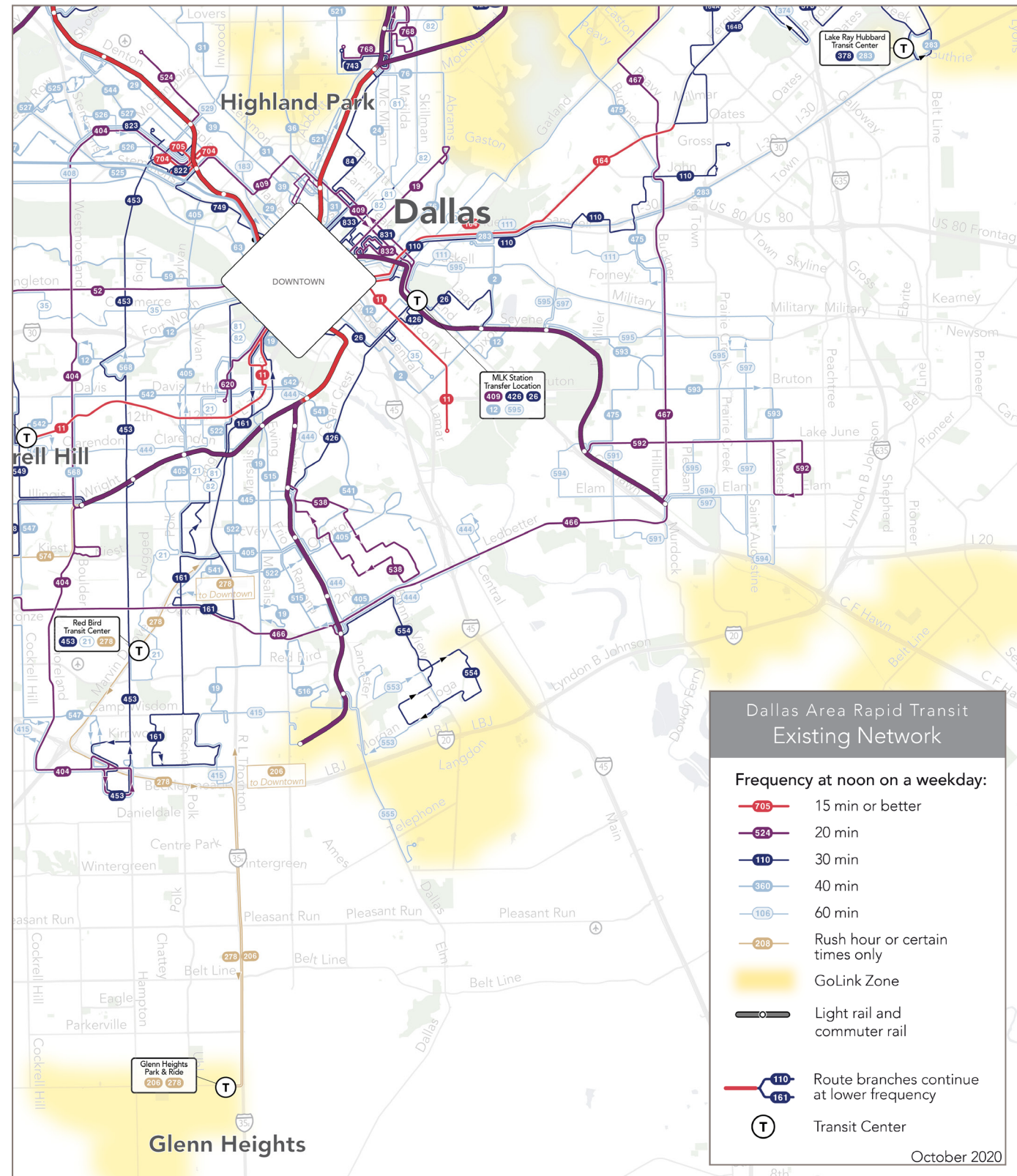
The best way to look closely and compare the New Network to the existing network is by using the interactive map at <https://dart-new-bus-network-viewer.s3.amazonaws.com/index.html>.





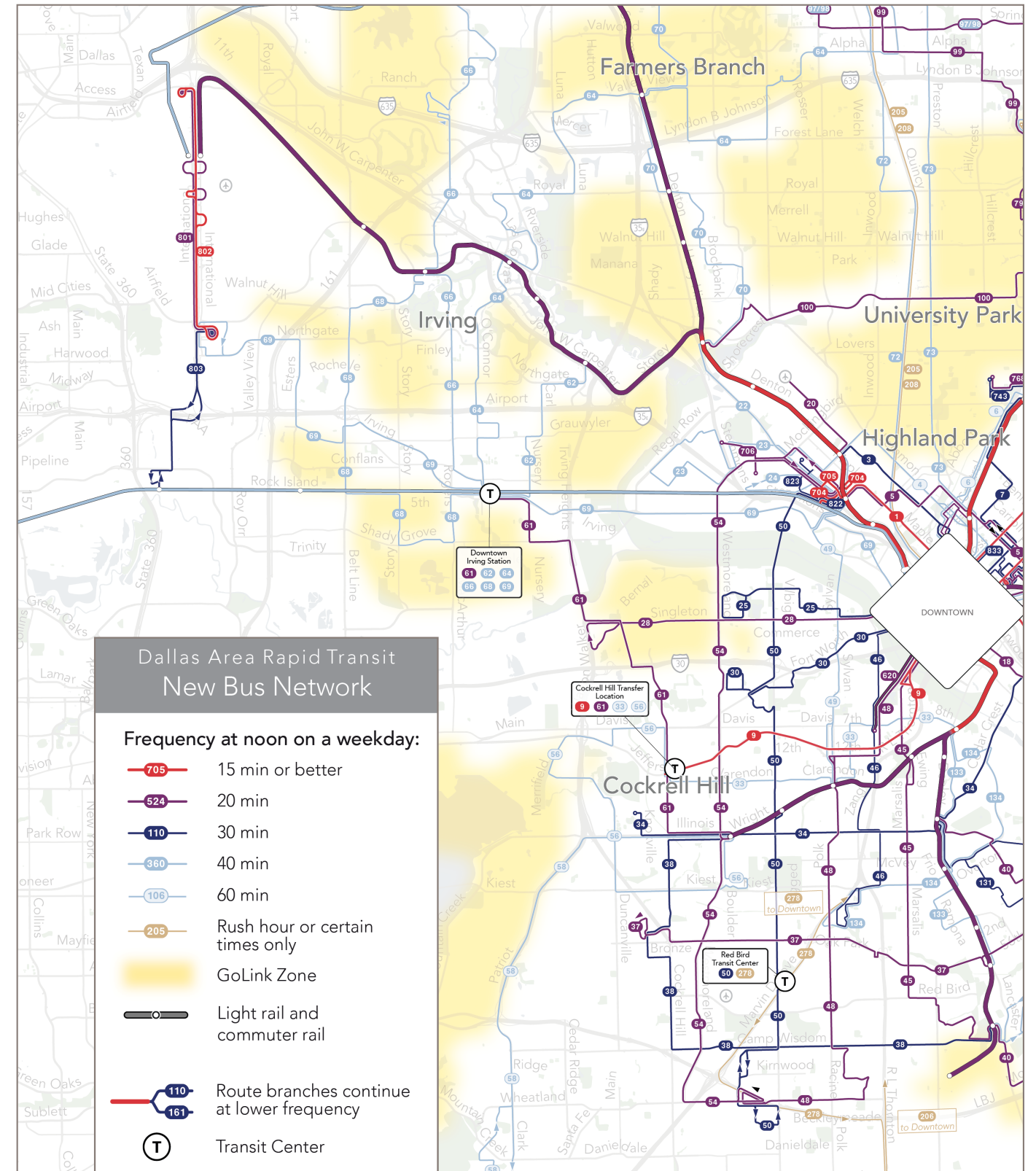
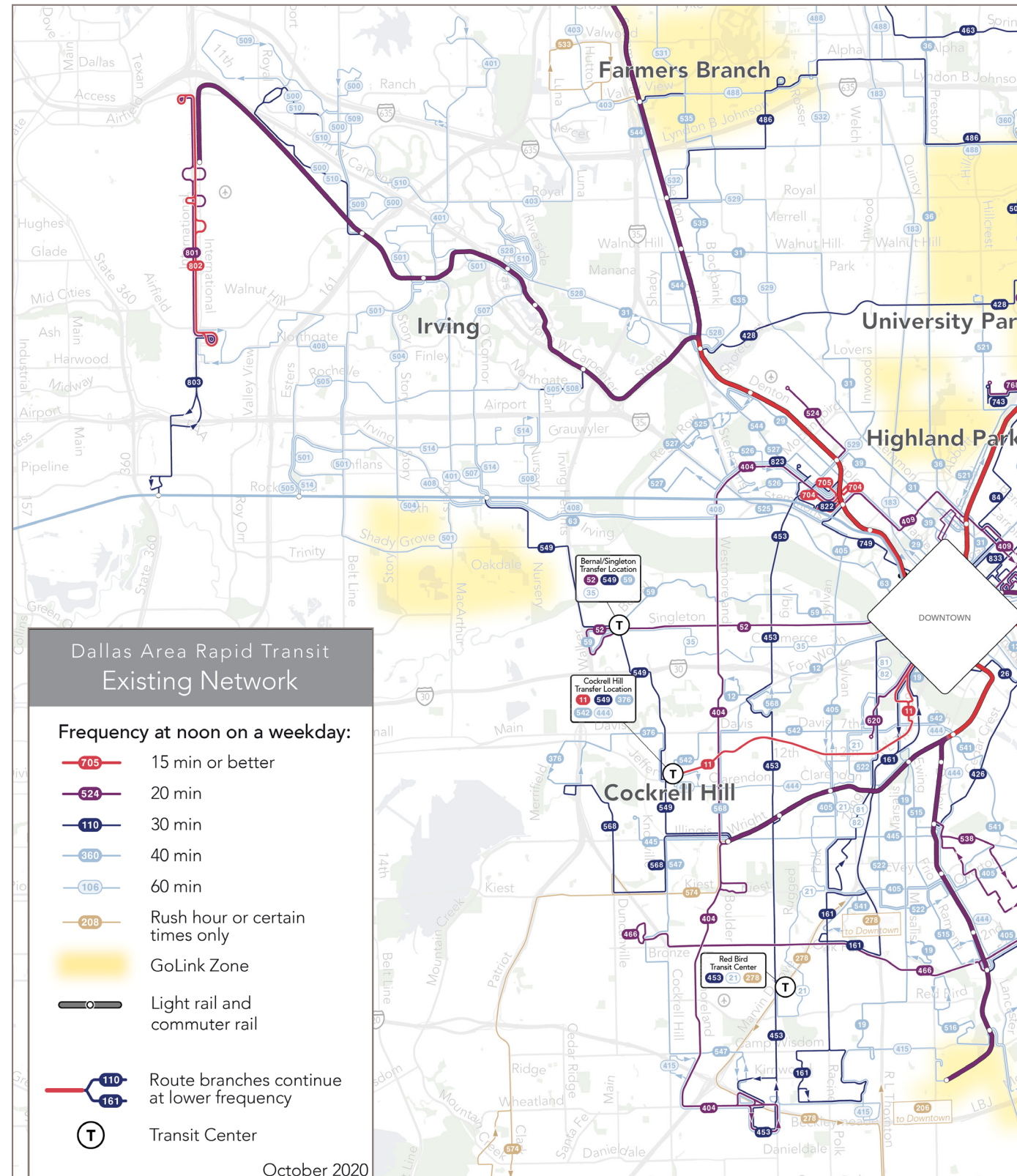
# Zoom in on the Southeast Quadrant

The best way to look closely and compare the New Network to the existing network is by using the interactive map at <https://dart-new-bus-network-viewer.s3.amazonaws.com/index.html>.



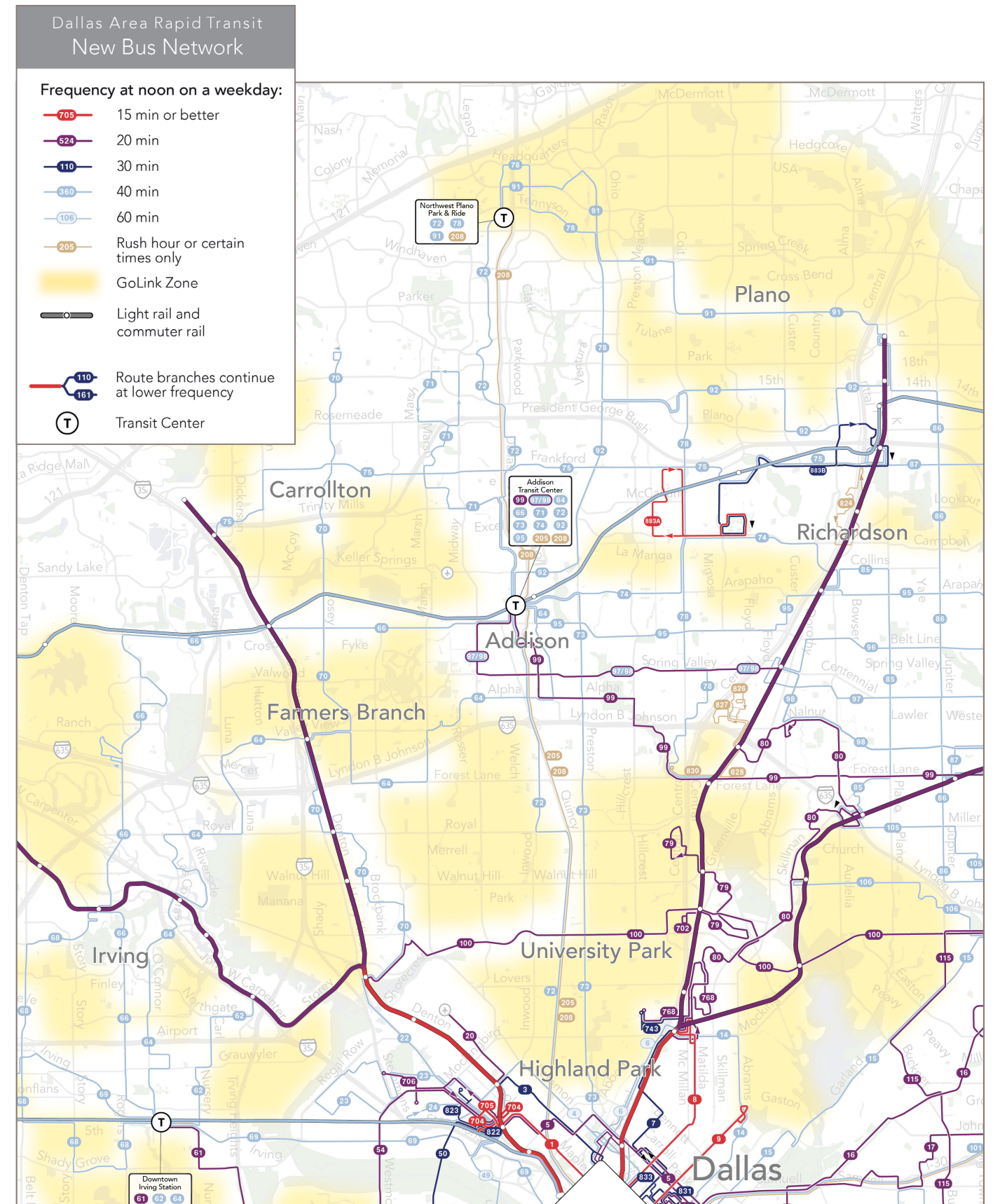
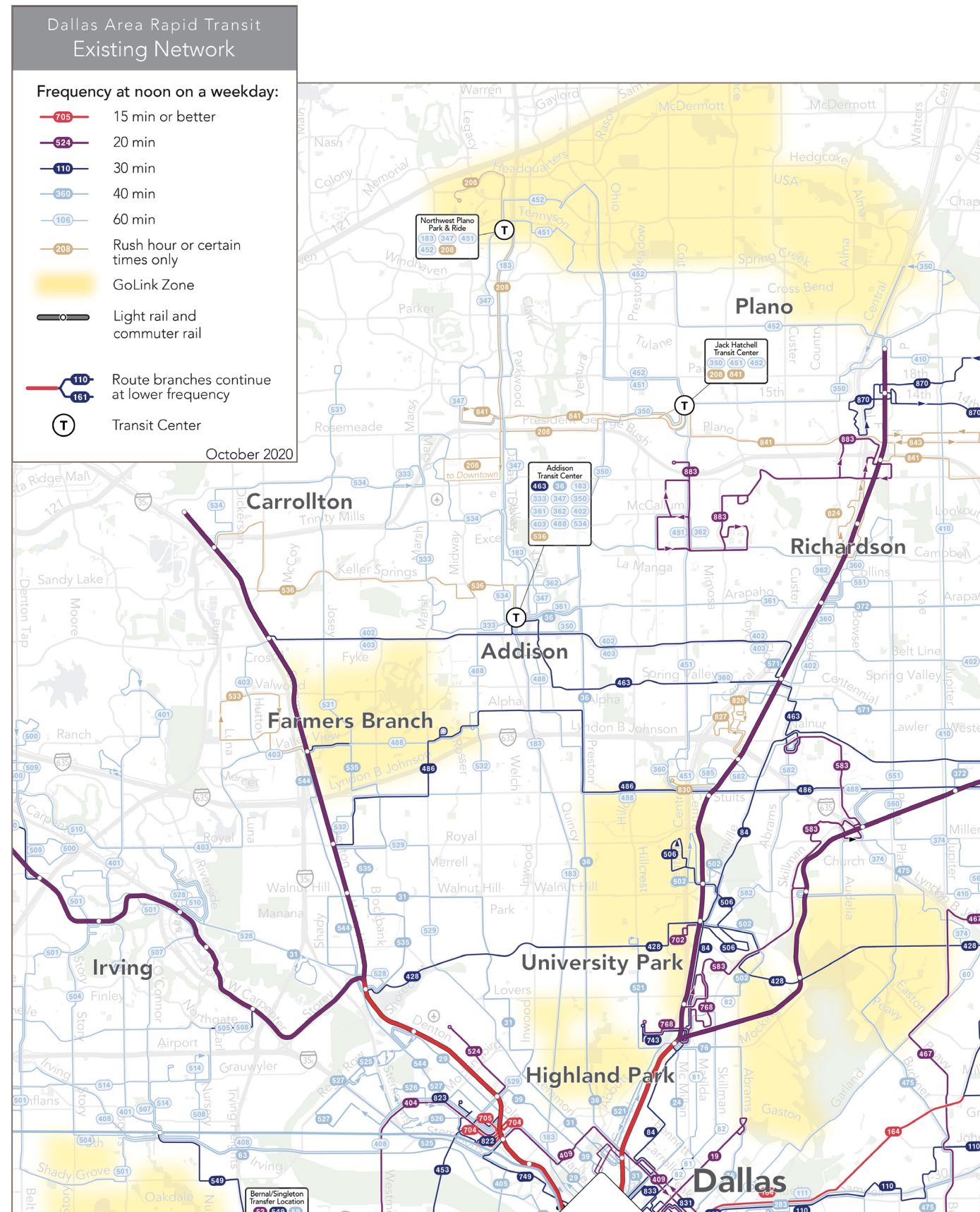
# Zoom in on the Southwest Quadrant

The best way to look closely and compare the New Network to the existing network is by using the interactive map at <https://dart-new-bus-network-viewer.s3.amazonaws.com/index.html>.



# Zoom in on the Northwest Quadrant

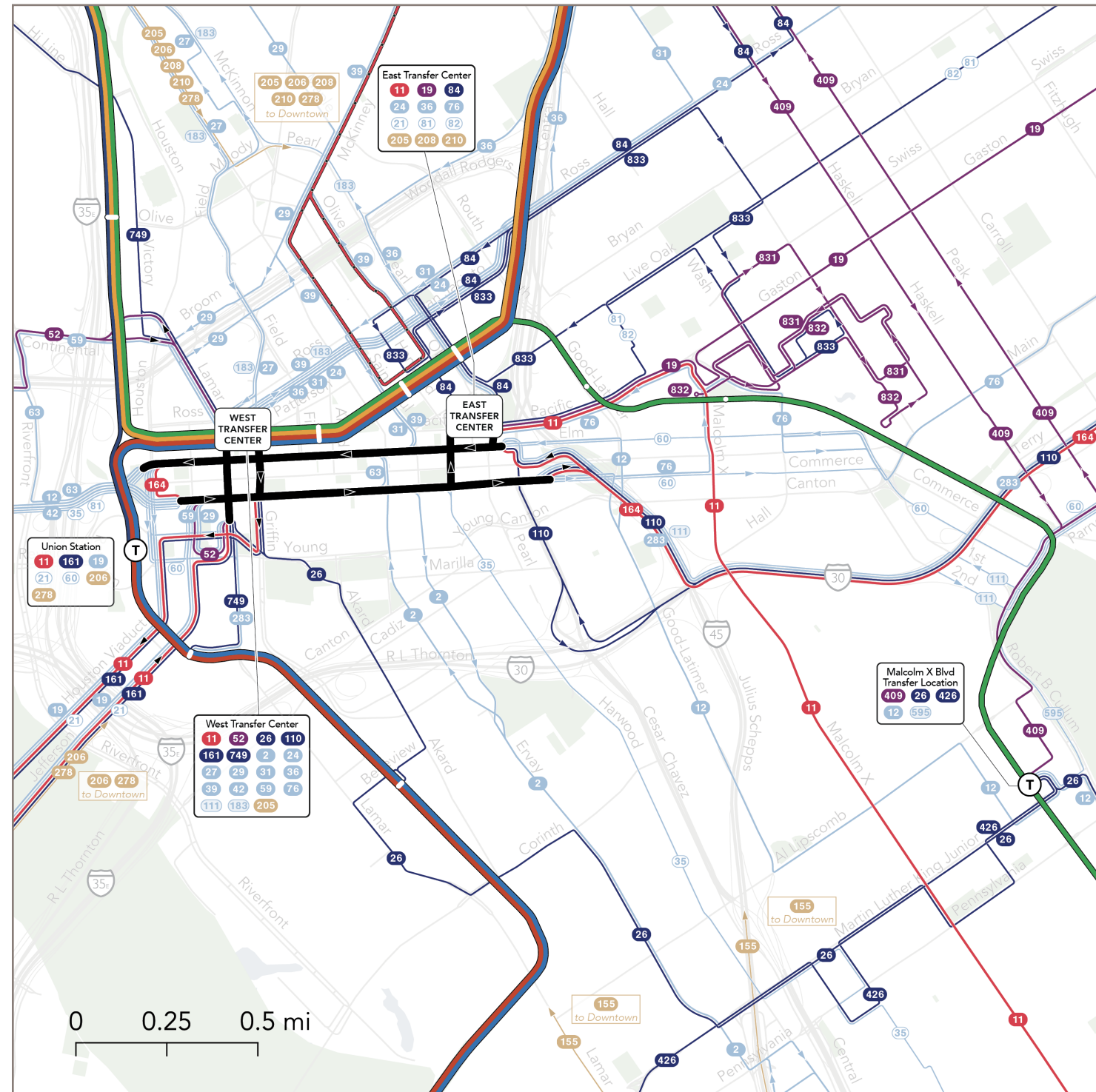
The best way to look closely and compare the New Network to the existing network is by using the interactive map at <https://dart-new-bus-network-viewer.s3.amazonaws.com/index.html>.



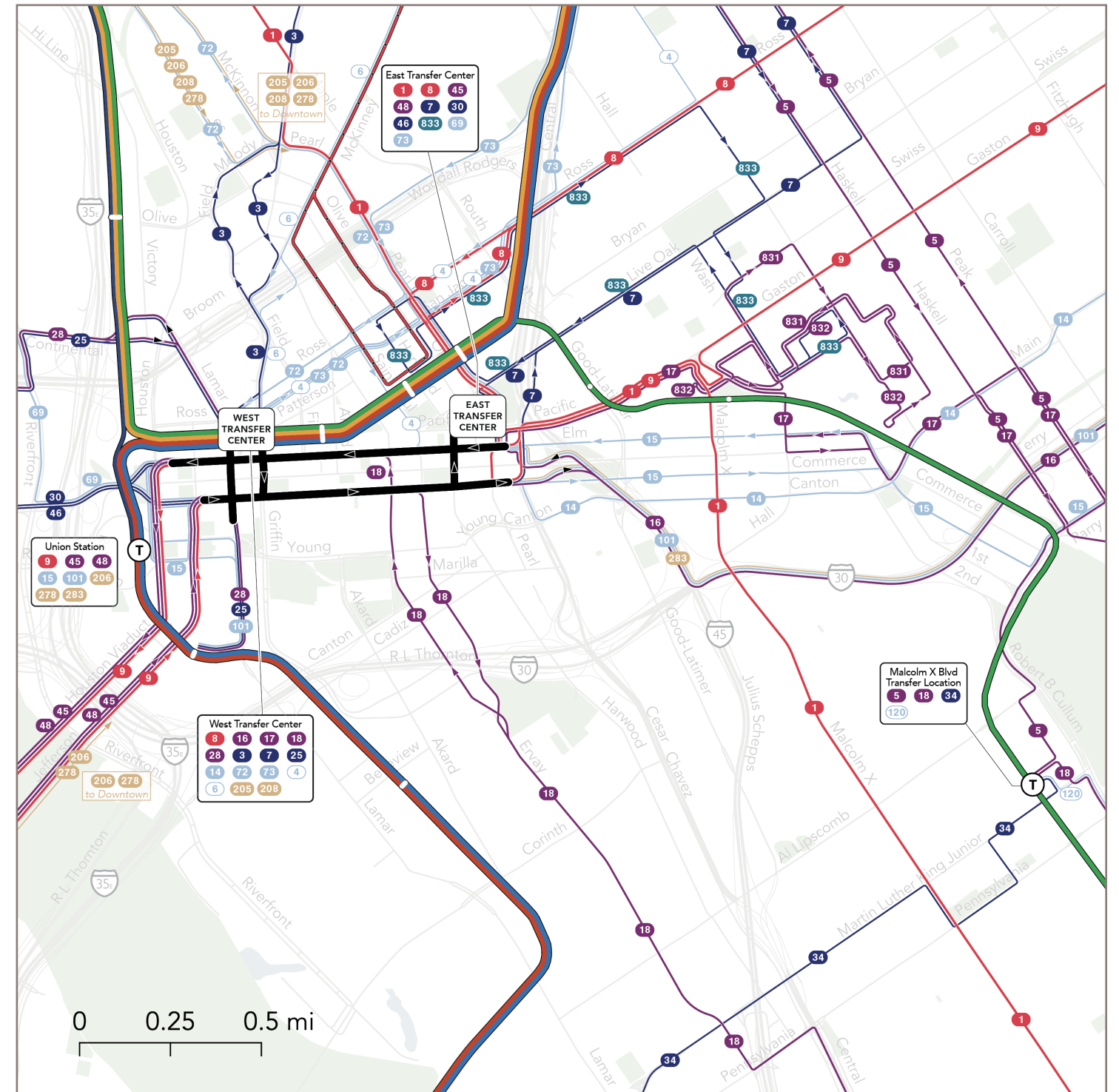
# Zoom in on Downtown Dallas

The best way to look closely and compare the New Network to the existing network is by using the interactive map at <https://dart-new-bus-network-viewer.s3.amazonaws.com/index.html>.

## Existing Network



## New Network



### Legend

- | Midday Frequency |                              |
|------------------|------------------------------|
|                  | 15 min or better             |
|                  | 20 min                       |
|                  | 30 min                       |
|                  | 40 min                       |
|                  | 60 min                       |
|                  | Peak only or limited service |
- Multiple lines & frequencies
  - Light rail
  - Trinity Railway Express (TRE)
  - M-Line Trolley + station
  - Route branches continue at lower frequency
  - Transit Center

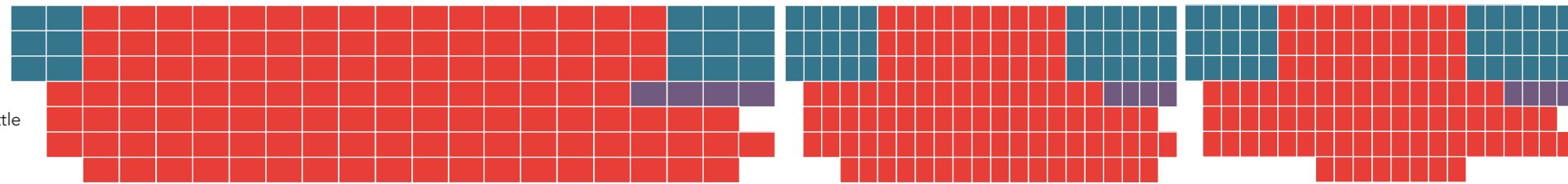
# Frequencies and Hours of Service for Each New Route

A transit vehicle comes every ■ 7 - 15 min ■ 20 min ■ 30 min ■ 40 min ■ 60 min ■ GoLINK



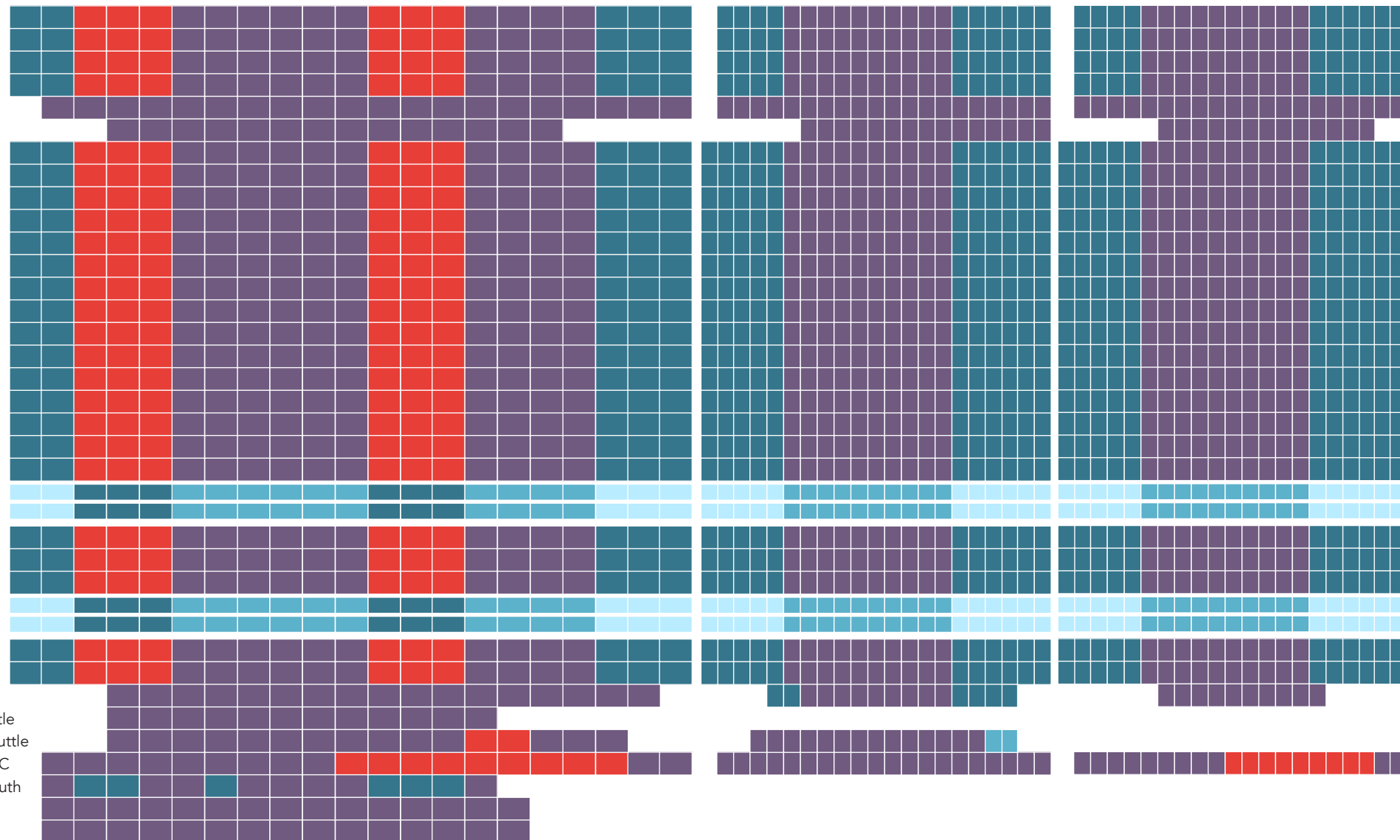
## 15 Minutes or Better Midday

- 1 - Malcom X / Maple
- 8 - Ross
- 9 - Jefferson / Gaston
- 704 - Harry Hines Shuttle
- 705 - Medical Market Shuttle
- 802 - Airport Parking D/E
- 883A - UTD West Loop



## 20 Minutes Midday

- Green Line
- Blue Line
- Orange Line
- Red Line
- Dallas Streetcar
- McKinney Ave Trolley
- 5 - Haskell
- 16 - Ferguson
- 17 - Samuell
- 18 - Ervay
- 20 - Love Field Shuttle
- 28 - Singleton
- 37 - Ledbetter
- 40 - Bonnie View
- 45 - Marsalis
- 48 - Polk
- 54 - Westmoreland
- 61 - Cockrell Hill North
- 79 - Ridgcrest
- 80 - Skillman
- 97/98 - Spring Valley
- 97 - Buckingham
- 98 - Walnut
- 99 - Forest Lane
- 100 - Northwest Highway
- 102/103 - 1st / Northwest
- 102 - Saturn
- 103 - Centerville
- 115 - Buckner
- 126 - Lake June
- 702 - North Park Shuttle
- 706 - Empire Central Shuttle
- 768 - Mustang Express Shuttle
- 801 - Airport Parking A/B/C
- 822 - UT Southwestern South
- 831 - Baylor North
- 832 - Baylor South



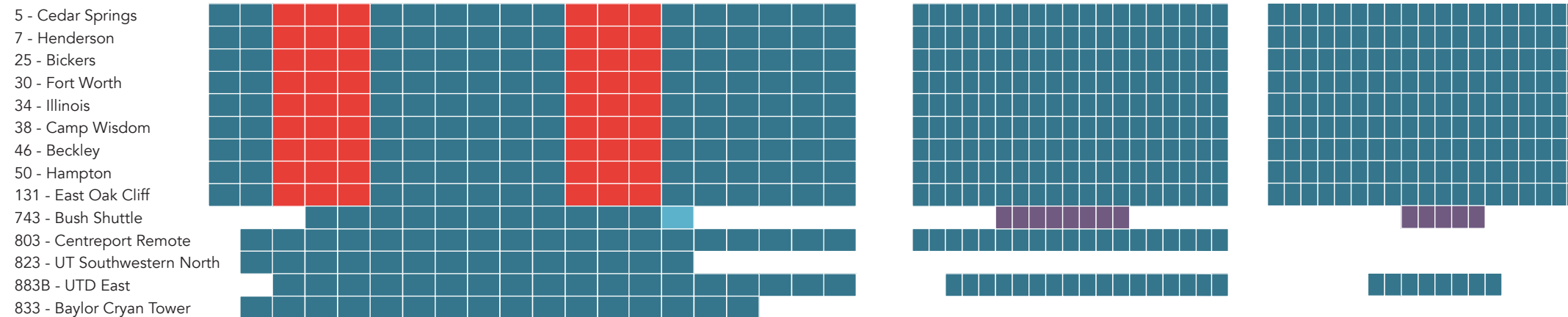
**Nearly all routes will have new numbers! Check the maps to find the route numbers near you.**

**Tip: To quickly find a route in the table at left, search this document for its number or name.**

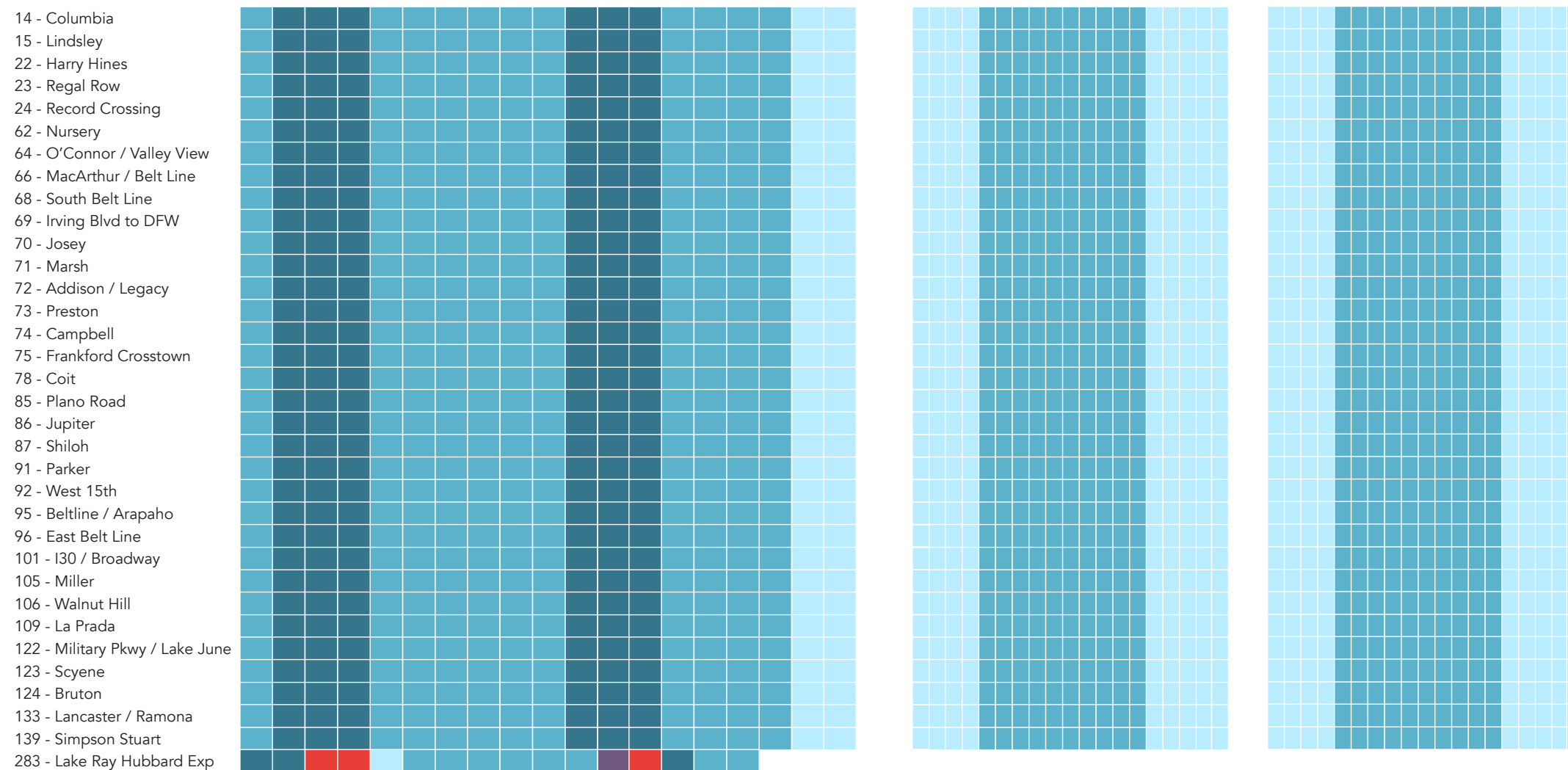
A transit vehicle comes every ■ 7 - 15 min ■ 20 min ■ 30 min ■ 40 min ■ 60 min ■ GoLINK



**30 Minutes Midday**



**40 Minutes Midday**



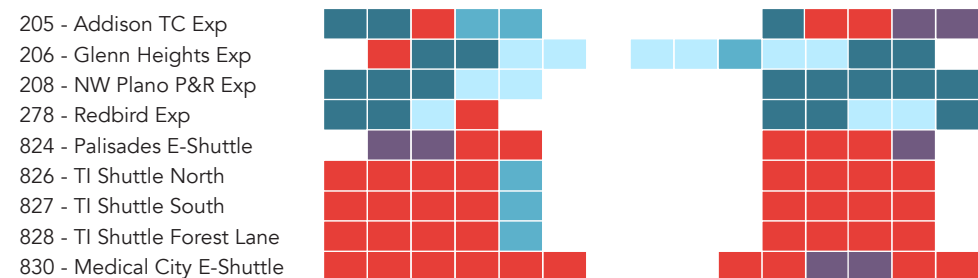
A transit vehicle comes every ■ 7 - 15 min ■ 20 min ■ 30 min ■ 40 min ■ 60 min ■ GoLINK



**60 Minutes Midday**



**Express and Shuttle Services**



**GoLINK Service Areas**

