Reimagine The COMET

Final Recommended Network

For the Central Midlands Regional Transit Authority

JARRETT WALKER + ASSOCIATES

THE COMET
CENTRAL MIDLANDS TRANSIT

September 2022

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1 Introduction and Summary

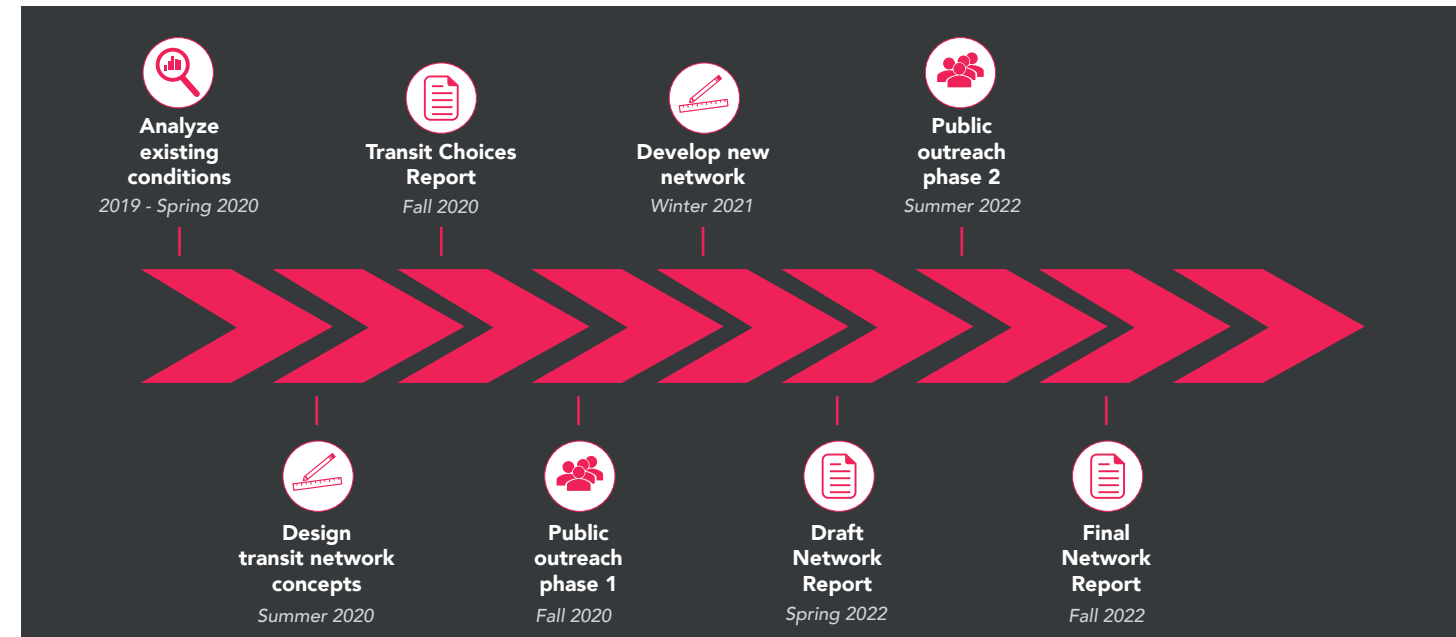# A Redesigned Network Through Community Conversation

What is Reimagine The COMET

Reimagine The COMET is a project to review the existing bus network in the Central Midlands region and recommend long-term changes to the system based on the goals and priorities of the community. This project is funded by the Central Midlands Council of Governments (CMCOG) and overseen by Central Midlands Regional Transit Authority the region's transit provider, better known as The COMET.

A bus network redesign is a collaborative planning effort to decide where today's bus service should go, when it should run, and how frequently it should operate, starting from a clean slate.

Redesigning The COMET's bus network is an opportunity to review existing and potential transit demand, and to design a network that meets those demands most efficiently. Redesign does not mean changing every bus route and stop. The key point is that thinking is not constrained by the existing network. Where the analysis suggests that existing service patterns make sense, those elements would be retained. Ultimately, the goal is a network designed for the city and region of today and tomorrow, not one based on the past.

Figure 1: The study process was a conversation between technical work and public input.

Analyze existing conditions
2019 - Spring 2020

Transit Choices Report
Fall 2020

Develop new network
Winter 2021

Public outreach phase 2
Summer 2022

Design transit network concepts
Summer 2020

Public outreach phase 1
Fall 2020

Draft Network Report
Spring 2022

Final Network Report
Fall 2022

The COMET and consultant staff held two rounds of engagement for Reimagine The COMET.

Buses Are Essential for the Region

Why Redesign the Bus Network?

The Central Midlands region has been growing consistently for more than a decade, with Richland county adding about 4,000 people per year over the last decade and Lexington County adding about 3,300 per year. More more people and jobs means more activity, more traffic, and often increasing density. That makes public transit essential because there is simply not room for everyone's car.

While not all of the Central Midlands region is dense, large parts of it are, and like all places with high density, inner parts of the region present features that make transit essential, and require that it be highly efficient:

- *Severe road space limitations.* Across many parts of Columbia, West Columbia, and inner parts of the region, the road width is fixed and will never be wider. Efforts at widening roads in built-up areas are extremely costly, frequently destructive, and actually counterproductive—research shows that widening roads does not reduce congestion, due to induced car demand. Curb space is also limited and cannot be readily expanded.

- *Intensification of land use.* In response to growing demands for housing and commercial space, both central and outlying areas are growing more dense. More and more people are living within the same limited area.

These two factors combined mean that more and more people are trying to use a fixed amount of road space. If they are all in cars, they simply will not fit in the space available. The result is congestion, which cuts people off from opportunity and strangles economic growth. Figure 2 shows how much space the same number of people take in cars, bikes, and buses. *In a growing city that is getting more dense, relying on bikes and transit as major modes of transportation is the only way to have room for everyone.*

The only alternative to congestion is for a larger share of the population to rely on public transit and other modes that carry many people in few vehicles, or that take far less space per person than cars (i.e. bicycles). This requires services that most efficiently respond to the city's changing needs, as well as corridor improvements to give buses a level of priority over cars that reflect the vastly larger numbers of people on each bus.

Figure 2: The road space required to move the same number of people using public transit, bicycles, and cars.
Photo copyright We Ride Australia
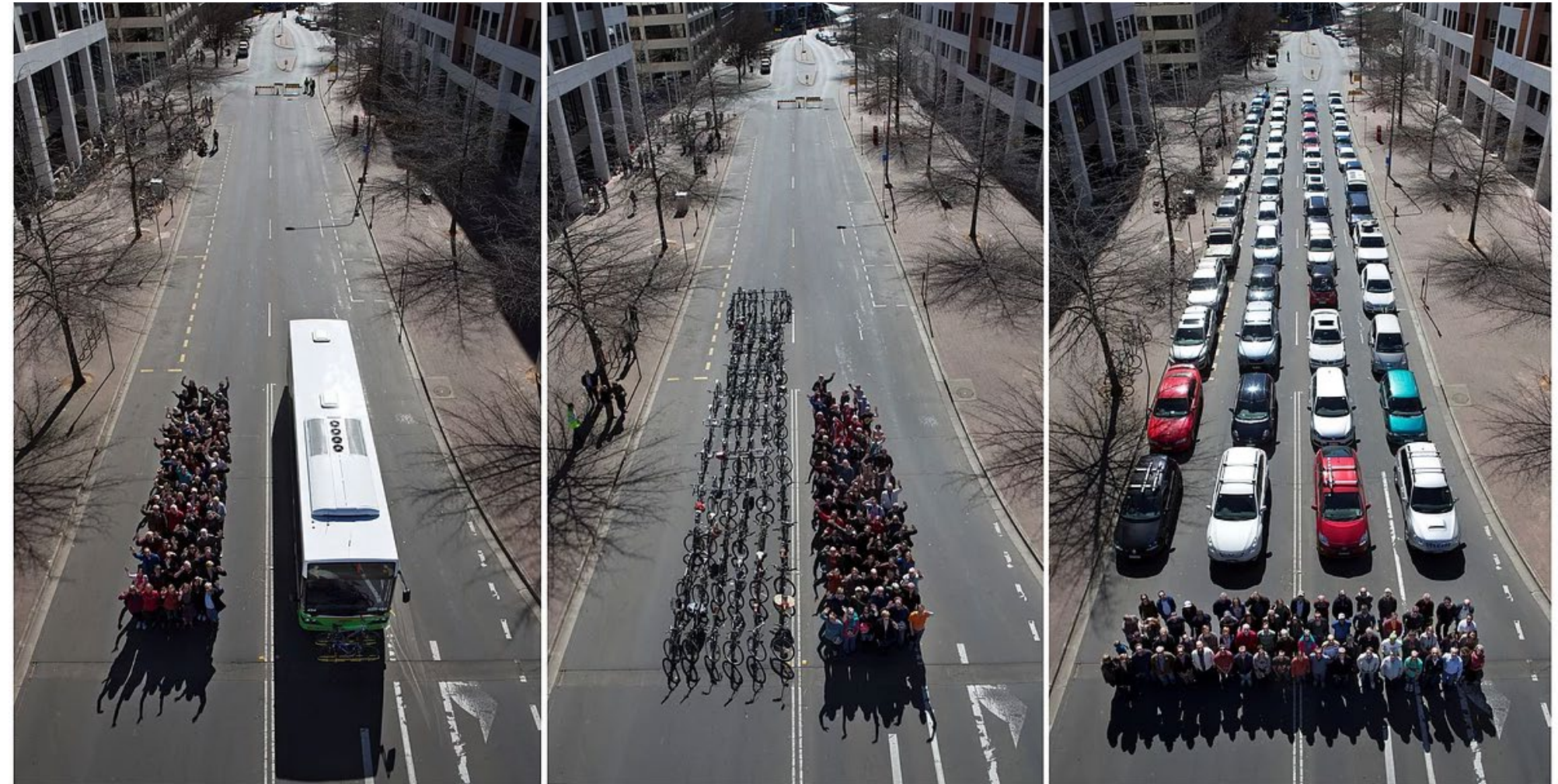
Transit and bikes are two of the most space-efficient modes and are essential in dense places, where there is very little road space per person.

Transit's Product Access to Opportunity

What is Access?

Based on public and stakeholder input, a core goal of the Final Recommended Network is to help more people get to more places, in the limited amount of time that they have. Figure 3 shows how we calculate this.

What Access Achieves

When we expand access for as many people as possible, we achieve many important things:

- We **make service more useful** for the trips people are already making and for many other trips that people might want to make by transit. When transit is more useful, more people use it.

- We **increase ridership potential**, as a result of service being more useful.

- We increase transit's potential to help with reducing **pollution** and **congestion**. Ridership is the key to how transit achieves these things, and improving access is the path to ridership.

- We **expand access to opportunity** (jobs, education, shopping, services) for people who need transit for that purpose.

- We **increase the economic attractiveness** of the urban area. Connecting people with opportunities is the whole point of cities, so improving those connections makes any city more effective.

The Final Recommended Network increases access to jobs and opportunities for most people and places in the Central Midlands region. It allows the average person to reach an additional 780 jobs within 45 minutes by walking and taking transit—**10% more jobs than are reachable with the Existing Network.**
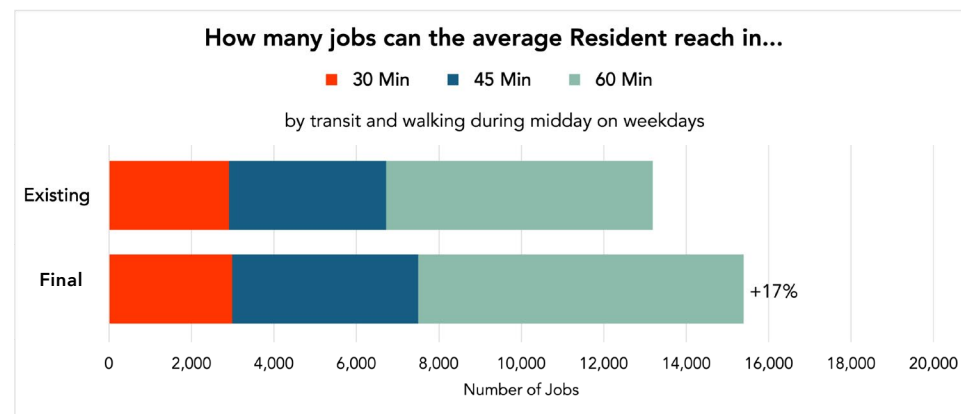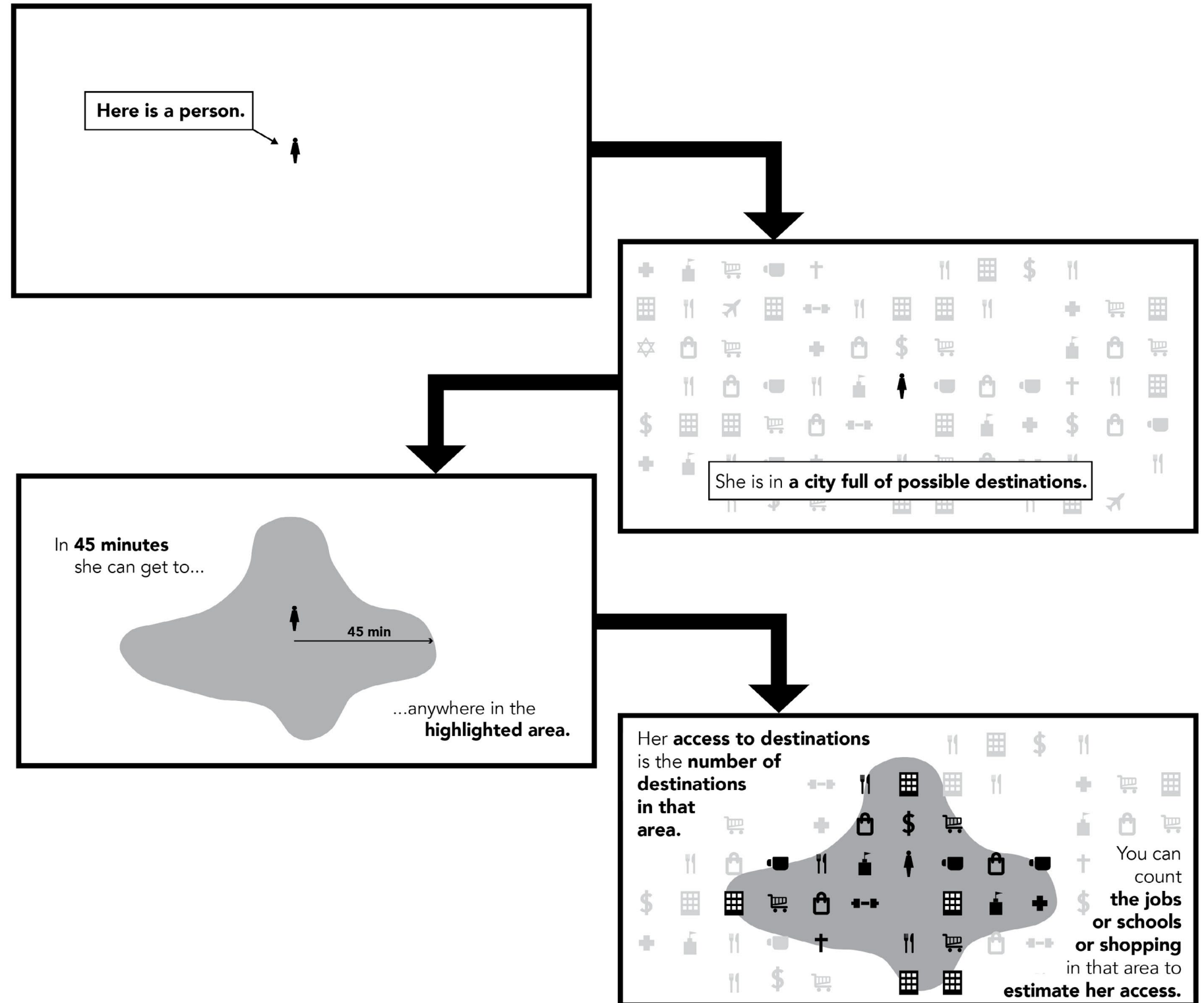
Figure 3: How transit service creates access to opportunity.

How many jobs can the average Resident reach in...

■ 30 Min ■ 45 Min ■ 60 Min

by transit and walking during midday on weekdays

The Ridership-Coverage Trade-off

Within a limited budget, The COMET must make difficult choices between competing goals that people care about. These kinds of decisions should not be the result of a consultant's recommendation. Instead, our role has been to lay out the choices and encourage public discussion of them. Figure 4 illustrates the problem.

A network designed to a goal of **ridership** will maximize access to destinations for the average resident, as this maximizes the chance that transit will be useful for any particular trips. It does this by providing high frequency service in areas where there are many people and jobs to benefit from it. But it does not go everywhere or serve everyone. Some people who need transit will not be served, because they live in places that are too hard for efficient transit to reach. These problems are typically:

- Low Density. There are few people to benefit from each transit stop.

- Low Walkability. It's too hard for many people to walk to the transit stop, which further limits who finds it useful.

- Poor Linearity. The street pattern doesn't let the bus run in an efficient straight line.

- Poor Proximity. Service must cross a large, low-demand gap to reach a destination.

So should transit go to those places anyway even though they are providing access to few people, and low ridership will be the result?

If so, you want a **coverage** goal. A coverage goal starts with a commitment to going almost everywhere, so that almost everyone has a little service.

Some transit goals are served by focusing on high ridership.
For example, the environmental benefits of transit only arise from many people riding the bus rather than driving. Subsidy per rider is lower when ridership is maximized. We call such goals "ridership goals" because they are achieved through high ridership.

Other goals are served by the mere presence of transit. A bus route may provide important lifeline service, even if few people ride it. A route may fulfill political or social obligations, for example by getting service close to every taxpayer or into every political district. We call these types of goals "coverage goals" because they are achieved by covering geographic areas with service, regardless of ridership.

How should we balance these competing goals? Which should be more important? That's the most important question we asked in our extensive public conversation.

Figure 4: Ridership and coverage goals, both laudable, are in direct conflict within a fixed budget.

Imagine you are the transit planner for this fictional neighborhood.

The dots scattered around the map are people and jobs.

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

Before you can plan transit routes, you must first decide: What is the purpose of your transit system?
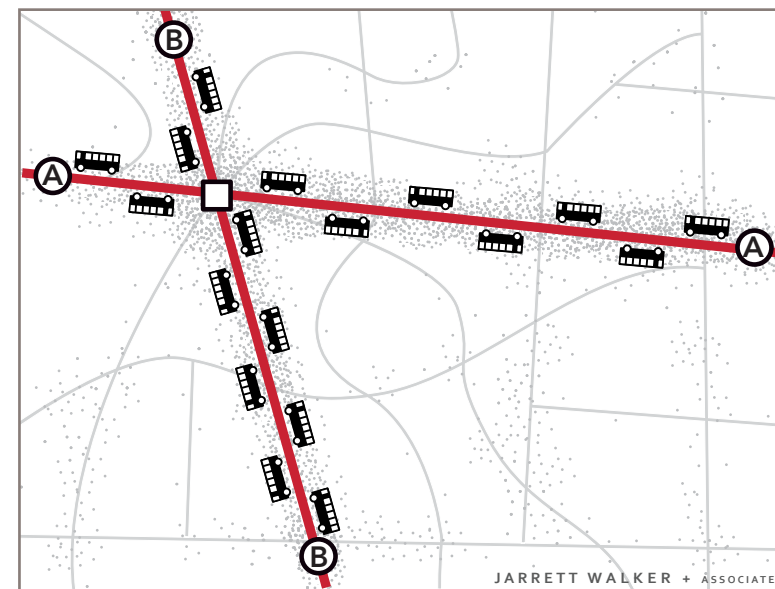
All 18 buses are focused on the busiest streets. Waits for service are short but walks to service are longer for people in less populated areas. Frequency and ridership are high but some places have no service.
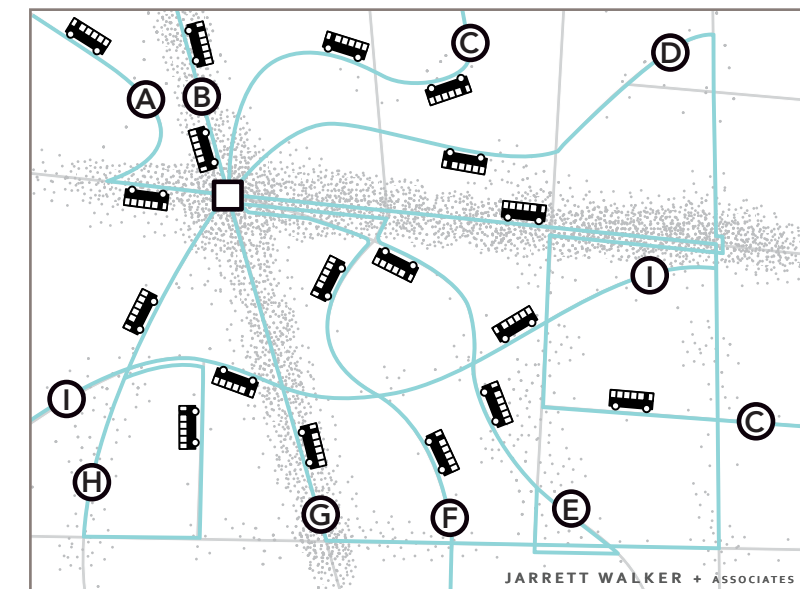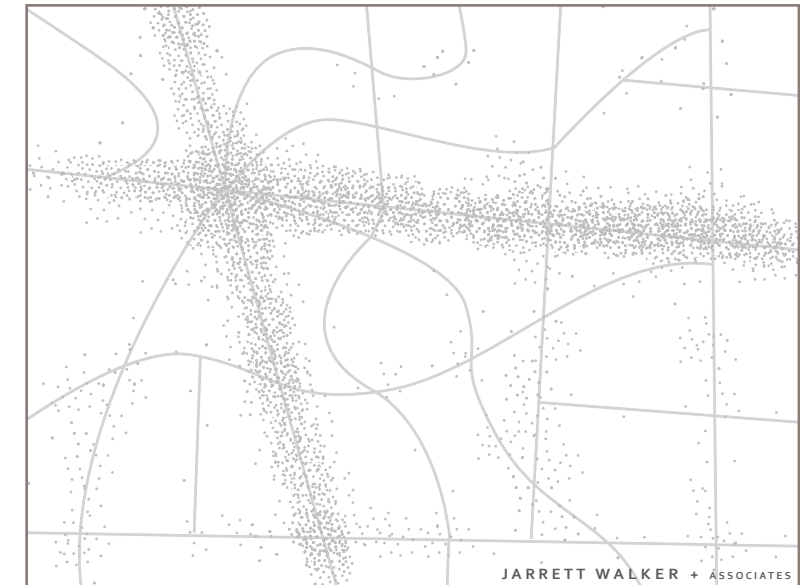
The 18 buses are spread around so that there is a route on every street. Everyone lives near a stop but every route is infrequent, so waits for service are long. Only a few people can bear to wait so long, so ridership is low.

Engagement on Concepts

Concepts to Clarify Trade-offs

To clarify the trade-off between Ridership goals and Coverage goals in the Central Midlands Region, two conceptual transit networks were developed. The maps of each network are shown below in Figure 5.

These networks were used to explain the tradeoffs between ridership and coverage goals and ask the public which one they prefer. The results of the outreach are in the following page.

The Coverage Network is similar to today's existing network, and prioritizes keeping service to everyone who has it today, but does reduce the overall coverage slightly.

The Ridership Concept on the right significantly improves frequency of service on major corridors, and expands the jobs reachable for the average resident. It does so, however, by reducing the coverage of service, so that some people would lose access to transit.
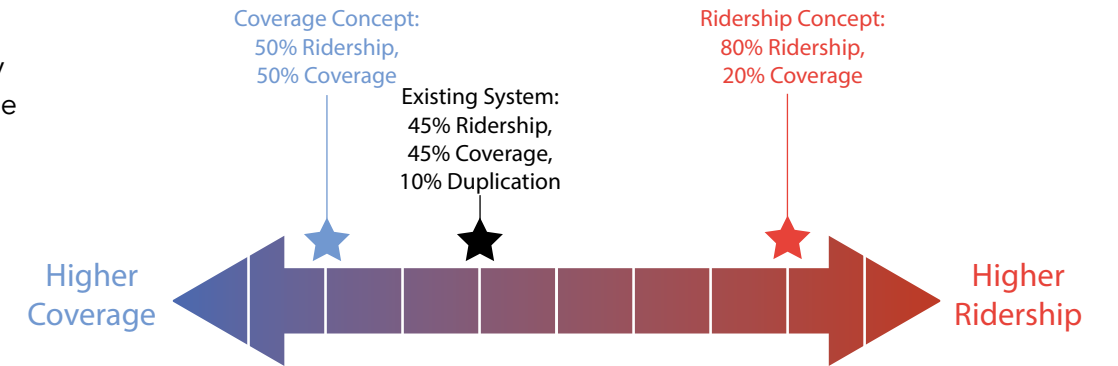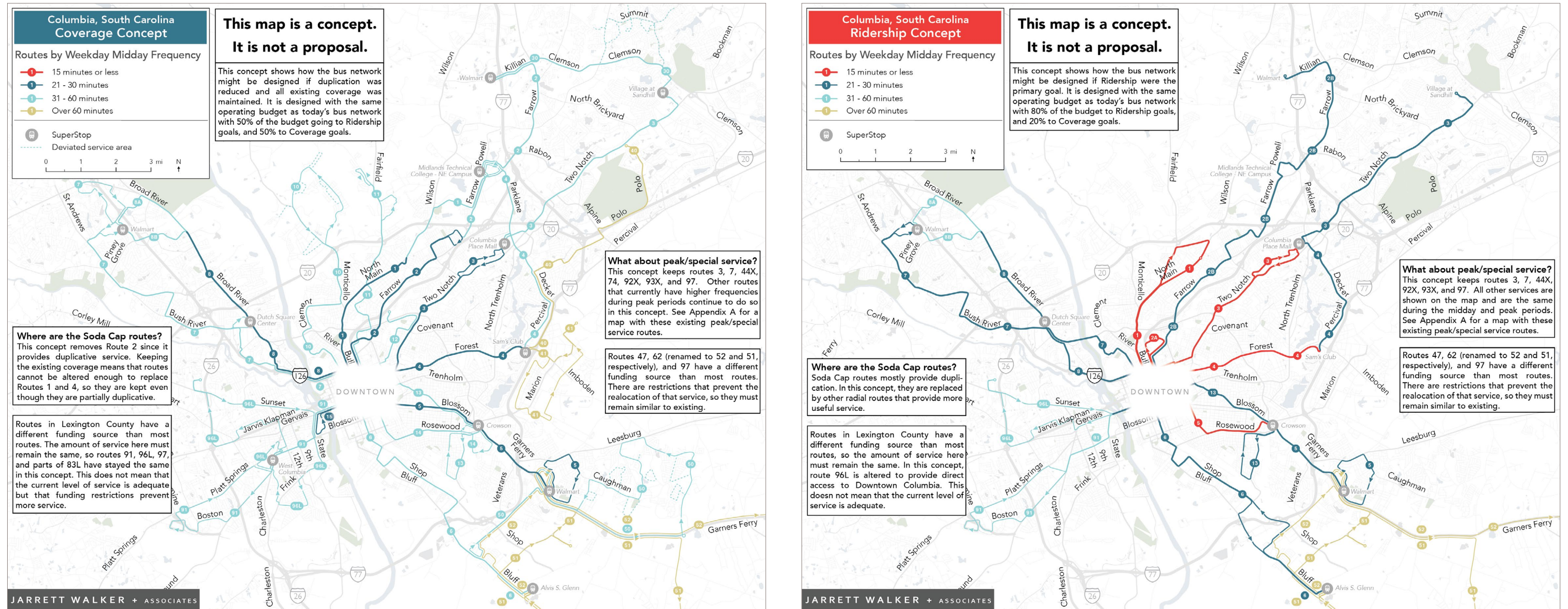
Coverage Concept:
50% Ridership,
50% Coverage

Existing System:
45% Ridership,
45% Coverage,
10% Duplication

Ridership Concept:
80% Ridership,
20% Coverage

Higher Coverage

Higher Ridership

Figure 5: The Coverage and Ridership Conceptual Networks show different ways to use the same dollars to provide transit service in the region.

Columbia, South Carolina — Coverage Concept

Routes by Weekday Midday Frequency
- 15 minutes or less
- 21 - 30 minutes
- 31 - 60 minutes
- Over 60 minutes

SuperStop
Deviated service area

This map is a concept. It is not a proposal.

This concept shows how the bus network might be designed if duplication was reduced and all existing coverage was maintained. It is designed with the same operating budget as today's bus network with 50% of the budget going to Ridership goals, and 50% to Coverage goals.

What about peak/special service?
This concept keeps routes 3, 7, 44X, 74, 92X, 93X, and 97. Other routes that currently have higher frequencies during peak periods continue to do so in this concept. See Appendix A for a map with these existing peak/special service routes.

Where are the Soda Cap routes?
This concept removes Route 2 since it provides duplicative service. Keeping the existing coverage means that routes cannot be altered enough to replace Routes 1 and 4, so they are kept even though they are partially duplicative.

Routes in Lexington County have a different funding source than most routes. The amount of service here must remain the same, so routes 91, 96L, 97, and parts of 83L have stayed the same in this concept. This does not mean that the current level of service is adequate but that funding restrictions prevent more service.

Routes 47, 62 (renamed to 52 and 51, respectively), and 97 have a different funding source than most routes. There are restrictions that prevent the realocation of that service, so they must remain similar to existing.

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Columbia, South Carolina — Ridership Concept

Routes by Weekday Midday Frequency
- 15 minutes or less
- 21 - 30 minutes
- 31 - 60 minutes
- Over 60 minutes

SuperStop

This map is a concept. It is not a proposal.

This concept shows how the bus network might be designed if Ridership were the primary goal. It is designed with the same operating budget as today's bus network with 80% of the budget to Ridership goals, and 20% to Coverage goals.

What about peak/special service?
This concept keeps routes 3, 7, 44X, 92X, 93X, and 97. All other services are shown on the map and are the same during the midday and peak periods. See Appendix A for a map with these existing peak/special service routes.

Where are the Soda Cap routes?
Soda Cap routes mostly provide duplication. In this concept, they are replaced by other radial routes that provide more useful service.

Routes in Lexington County have a different funding source than most routes, so the amount of service here must remain the same. In this concept, route 96L is altered to provide direct access to Downtown Columbia. This doesn't mean that the current level of service is adequate.

Routes 47, 62 (renamed to 52 and 51, respectively), and 97 have a different funding source than most routes. There are restrictions that prevent the realocation of that service, so they must remain similar to existing.

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A Slight Shift Towards Ridership

The first round of engagement was focused on getting riders and the public to respond to a survey about the two transit concepts described on the previous page. Through the online and paper surveying efforts, 352 total survey responses were collected. Paper surveying was done by project staff at COMET Central and other transit centers.

Two virtual public meeting were held to discuss the concepts along with 7 tabling events. The COMET and consultant also staff did interviews with local media to spread the word about the concepts and the project and ask people to take the online survey. Media coverage included

- Cola Today Online Publication,
- SCETV Public Radio,
- Onpoint! with Cynthia Hardy,
- WOLO,
- WIS News 10 Sunrise, and
- WLTX.

Response to Concepts

Respondents were asked to indicate their preference for the Ridership or Coverage Concepts. The respondents were split between the Ridership and Coverage Concepts. Since the Existing Network is closer to the Coverage Concept, this suggest that the public wants a slight shift towards Ridership.

Respondents were also asked to indicate their preference between walking or waiting. Over 55% of respondents said that they prefer having to walk longer to wait shorter for a bus. This also suggests that respondents want a slight shift towards Ridership.

Figure 6: Survey respondents were split between the two concepts. This suggests a slight shift towards ridership from the Existing Network

Q1 Which concept do you prefer?
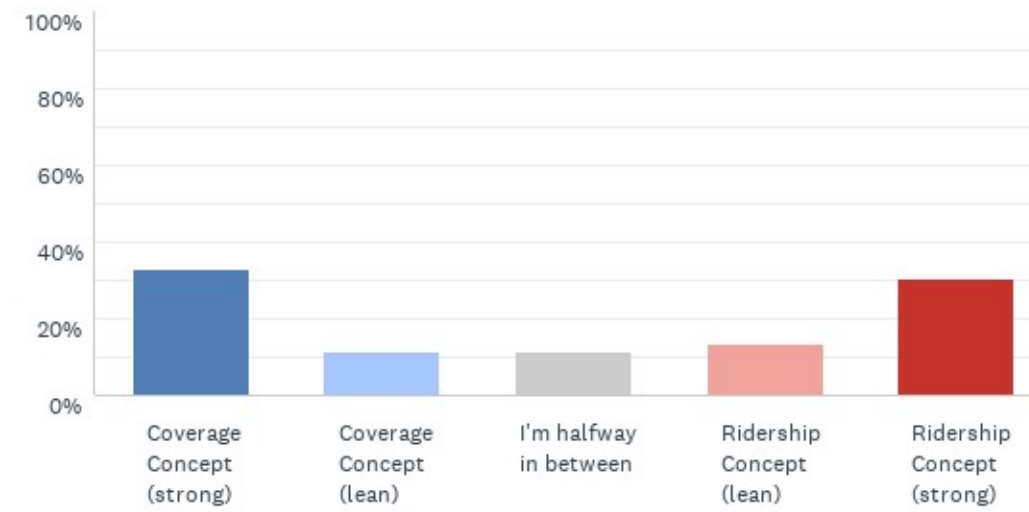
Q2 Walking vs. Waiting
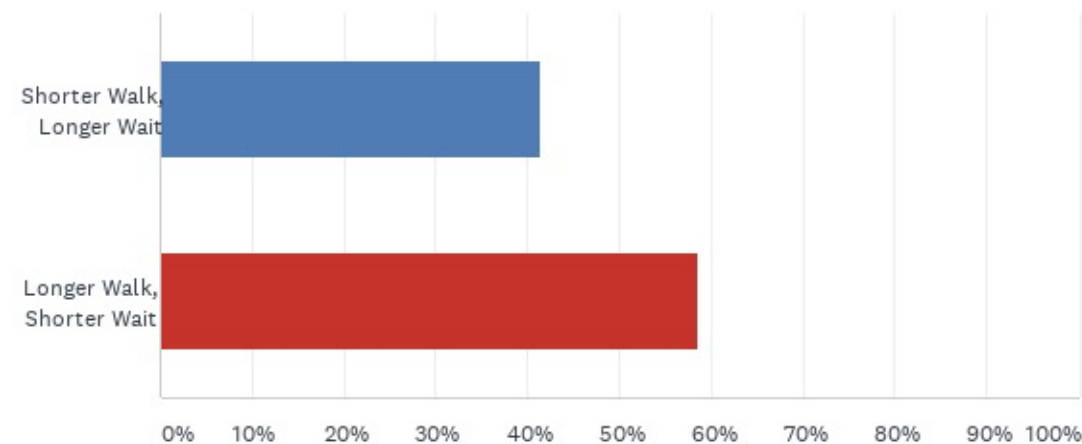
Existing Network

The map on the right (Figure 7) shows The COMET's existing bus network. The map on the following page shows the Final Recommended Network.

In both maps, every route is color-coded based on its frequency during the midday on a weekday. In the network maps, colors make all the difference:

- **Dark blue** lines every 30 minutes;

- **Light blue** lines every 60 minutes; and

- **Light Tan** lines every more than 60 minutes.

Every bus route in The COMET's network operates every 30 minutes or more at midday.

Most main corridors in Columbia have blue lines, which run every 30 minutes, but most of the network has light blue lines, which run every 60.

The Existing Network uses 45% of resources towards service that can achieve high ridership, 45% is spent on coverage goals, and about 10% of the network provides duplicative service.

Policy Direction

The public survey responses on page 9 were presented to The COMET Board to help them make a decision on how resource should be allocated between ridership and coverage. On September 22, 2021, the Board passed a resolution on the balance between ridership and coverage. They decided that the Final Recommended Network was to be designed to follow these guidelines:

- 60% of resources are devoted to service that is expected to get higher ridership relative to cost.

- The other 40% of resources are going to service that is not likely to get high ridership, but will provide service in areas where it is needed the most.
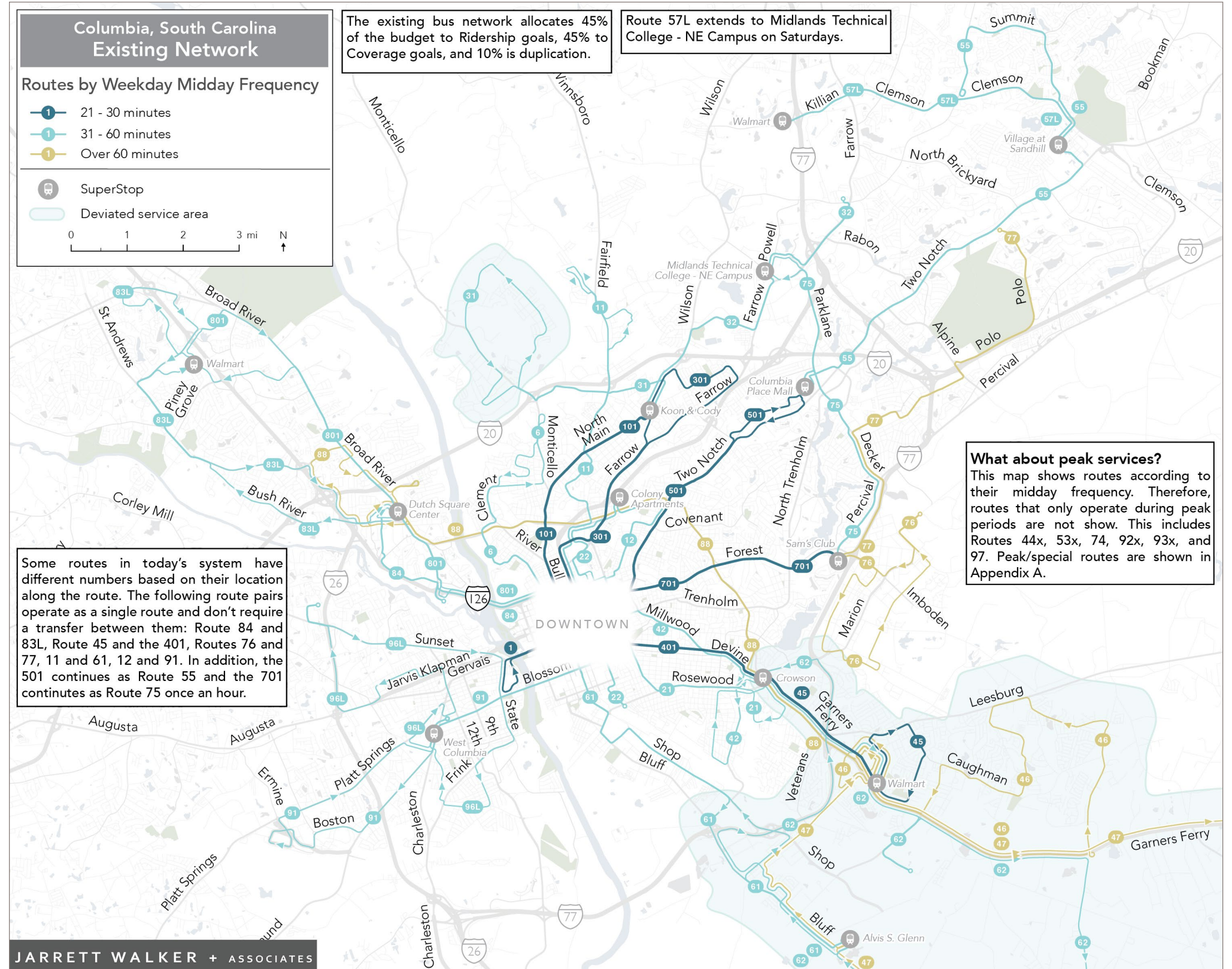

Figure 7: The COMET's Existing Network with Routes Colored by Frequency

Final Recommended Network

Based on the Board's resolution, the Recommended Network was designed to assign 60% of resources to goals that can achieve high ridership and 40% to provide service in areas where transit is important but is unlikely to yield many riders. This is done by consolidating duplicative resources and moving some resources from coverage service to ridership (or higher frequency) service. These changes are described in more detail on page 16.

For most people and places, the Recommended Network improves access to jobs, people, and opportunities by transit. It does this by providing more frequent service along the busiest and densest corridors.

Change in Job Access

The Recommended Network allows the average person to reach 7,500 jobs within 45 minutes by walking and taking transit, **11% more jobs than are reachable within the existing network**.

For the average person in poverty, the number of jobs accessible by transit within 45 minutes would increase by 12%. For the average resident of color, jobs accessible would increase by 10%.

This analysis measures jobs, but it reflects a wide range of opportunities that a person can reach. This mean a person can get to more shopping, education, recreational areas, social events, places of worship, and any other opportunities that the region can offer.

Proximity to 30-Minute Service

The Recommended Network provides 30-minute service near (within 1/4 mile of) 12,900 more residents and 8,700 more jobs. This is a significant increase from today, by 42% more residents and 16% more jobs.
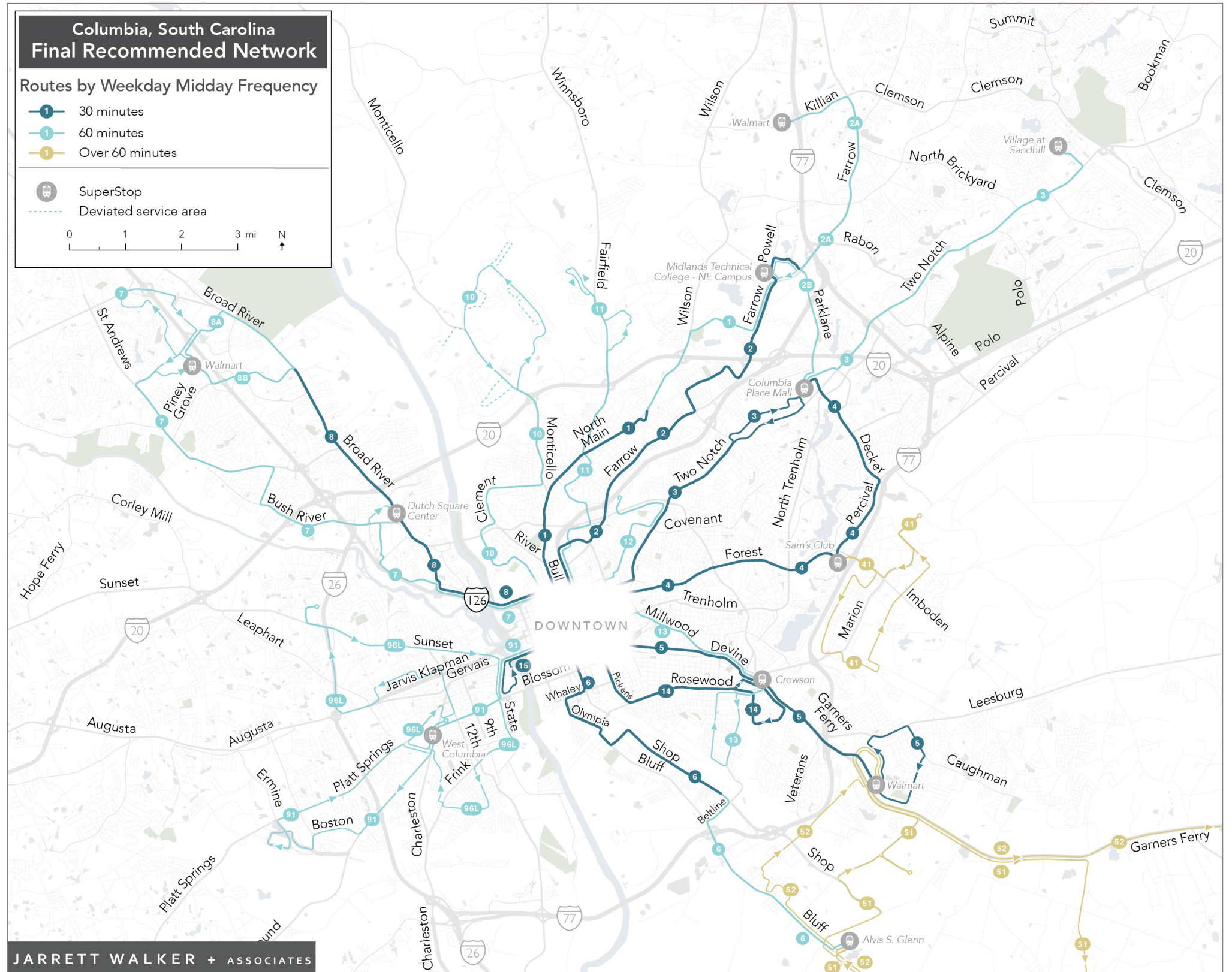

Figure 8: The Final Recommended Network with Routes Colored by Frequency

Final Recommended Network Increases Job Access

Freedom, Access, Usefulness

Wherever you are, there is a limited number of places you could reach in a given amount of time. These places can be viewed on a map as a blob around your location. Figure 9 shows an example of this type of visualization of transit access for Downtown comparing the Recommended Network to the Existing Network.

Think of this blob as "the wall around your life." Beyond this limit are jobs you can not hold, places you can not shop, and a whole range of things you can not do because it simply takes too long to get there. The technical term for this is accessibility, but it's also fair to call it freedom, in the physical sense of that word. The extent of this blob determines what your options are in life: for employment, school, shopping, or whatever places you want to reach. If you have a bigger blob, you have more choices, so in an important sense you are more free.

The real measure of usefulness is not just how much geographic area we can reach, but how many useful destinations are in that area. **For the area around Downtown, residents can reach 3.5% more jobs in the Recommended Network.**

Change in Job Access

By calculating this kind of access blob for the many points in the region, it is possible to estimate how access changes for everyone in Richland and Lexington Counties. The Recommended Network allows the average person to reach 15,300 jobs within 60 minutes by walking and taking transit—**17% more jobs than are reachable with the existing network.**

For the average person in poverty, the number of jobs accessible by transit within 60 minutes would increase by 19%. For the average resident of color, jobs accessible would increase by 19%.

This analysis measures jobs, but it reflects a wide range of opportunities that a person can reach. Access to more jobs means a person can get to more shopping, education, recreational areas, social events, places of worship, and any other opportunities that the region can offer.

With the Recommended Network, residents near Downtown can reach 2,800 more jobs in 45 minutes.

Figure 9: Example of change in places reachable in 45 minutes from Downtown in the Recommended Network, compared to the Existing Network
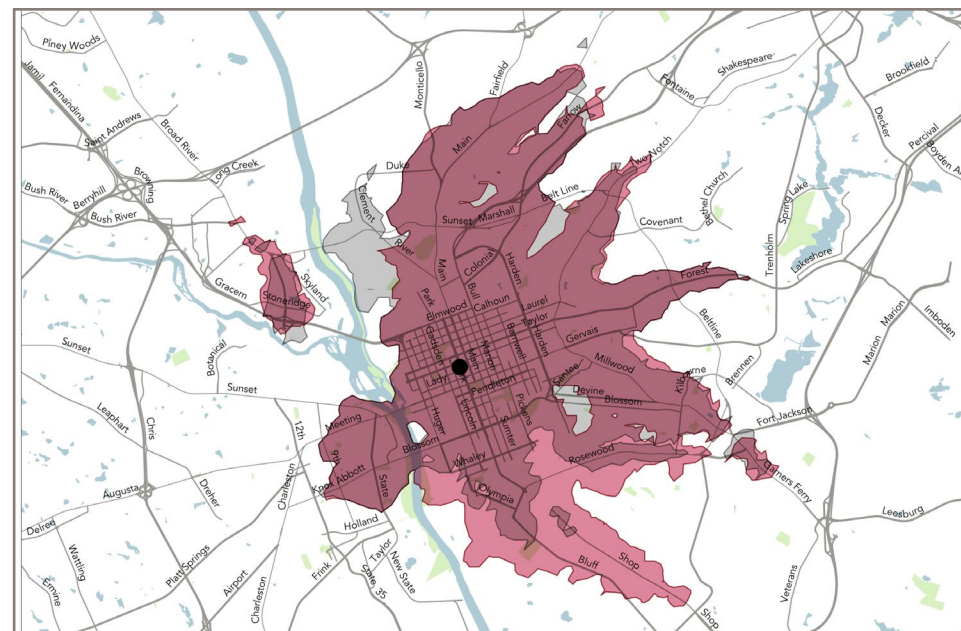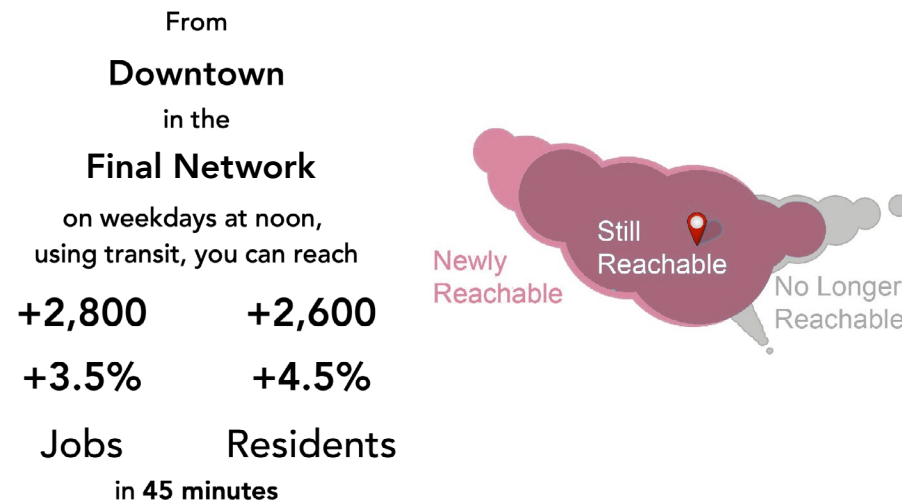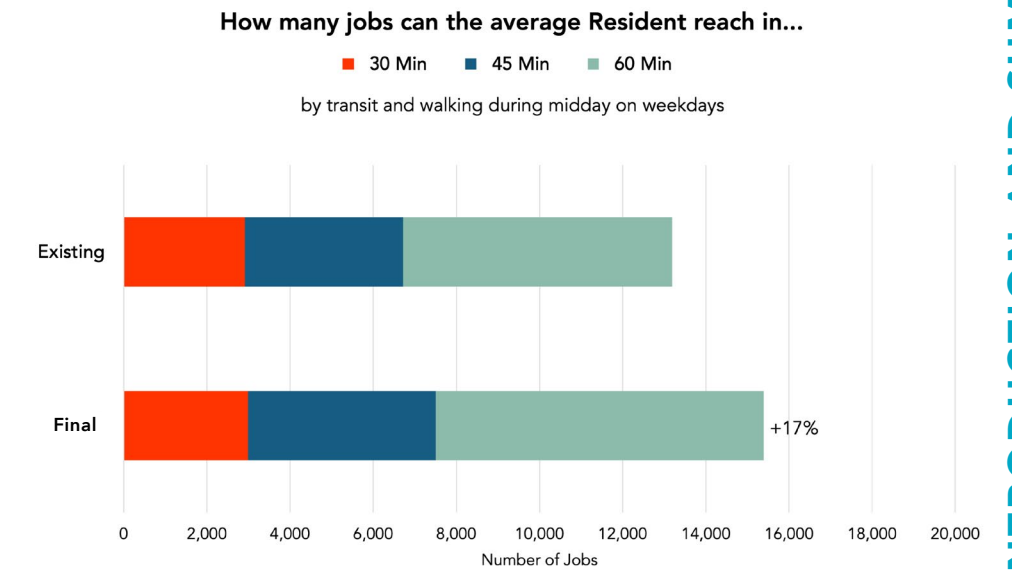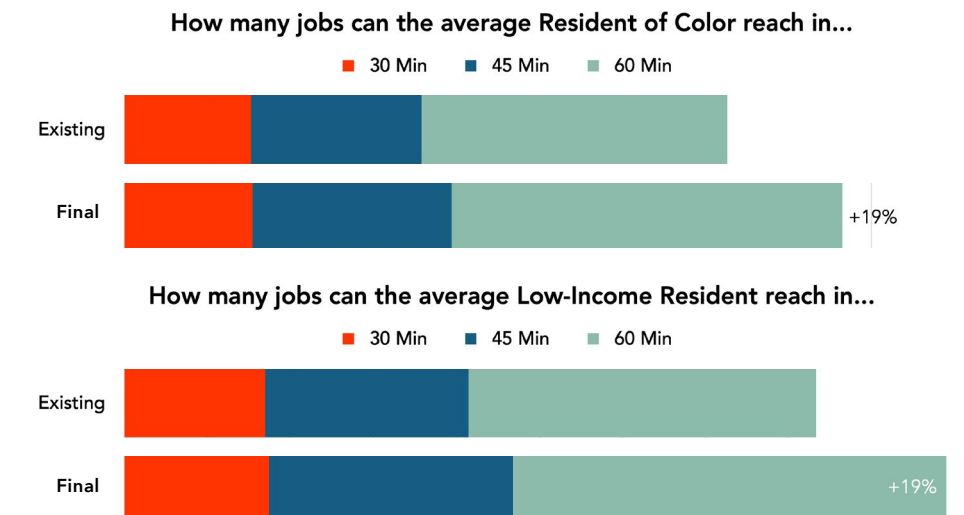

From

Downtown

in the

Final Network

on weekdays at noon, using transit, you can reach

+2,800	**+2,600**
+3.5%	**+4.5%**
Jobs	Residents

in **45 minutes**

Newly Reachable · Still Reachable · No Longer Reachable

Figure 10: Jobs Reachable for the Average Resident

How many jobs can the average Resident reach in...

■ 30 Min ■ 45 Min ■ 60 Min

by transit and walking during midday on weekdays

Final: +17%

The Recommended Network allows the average resident to reach 17% more jobs in 60 minutes.

Figure 11: Jobs Reachable for the Average Resident in Poverty and Resident of Color

How many jobs can the average Resident of Color reach in...

■ 30 Min ■ 45 Min ■ 60 Min

Final: +19%

How many jobs can the average Low-Income Resident reach in...

■ 30 Min ■ 45 Min ■ 60 Min

Final: +19%

Summary of Engagement on Recommended Network

The final round of engagement was focused on getting riders and the public to respond to the Draft Recommended Network to determine whether there were any changes that needed to be made from Draft to Final. Through the online and paper surveying efforts, 210 total survey responses were collected. Paper surveying was done by project staff at COMET Central and other transit centers.

Two virtual public meeting were held to discuss the concepts along with tabling events at COMET Central.

Response to Draft Network

The **first question** of the survey asked respondents to indicate whether the Draft Network will be better for them. Approximately 66% of respondents said they agree that the Draft Network would be better for them, 17% were indifferent, and only 17% disagreed.

The **second question** asked respondents to think about other people they know. The question asked respondents to indicate whether the Draft Network will be better for their friends, neighbors, coworkers, or other people they know. Approximately 60% of respondents said they agree that the Draft Network would be better for them, 23% were indifferent, and, like before, only 17% disagreed.

The **third question** of the survey tried to get respondents to think more selflessly. The question asked respondents to indicate whether the Draft Network will be better for the region overall. Approximately 67% of respondents said they agree that the Draft Network would be better, 18% were indifferent, and only 15% disagreed. With only 15% of respondents saying that the they disagree, the Draft Network had a high level of support.

The survey also asked what changes, if any, do they think are needed for the Draft Network remembering that any increase in service on one street would require cutting service elsewhere. The purpose of this question was to see if there was anything that community collectively wanted to change in the plan. The comments about the network that were repeated and stood out included a desire for higher frequency and longer spans of service. While these comments don't suggest any routing changes to the network, they are important to note in case The COMET has additional funding in the future.

The detailed information about the survey responses and the respondents's demographic analysis can be found in Appendix B of this report.

From Draft to Final

The results from the survey were mostly positive and there weren't any specific concerns that come out of the process. As a result, the Draft Network has been turned into the Final Recommended Network without any changes. However, The COMET understands that before implementing any changes, there should be additional phases of engagement to provide clear information and make sure that the community is involved.

67% of respondents agree that the Recommended Network will be better for the region overall

Only 17% disagree.

Compared to the Existing Network, the Draft Network will be better for the region overall.
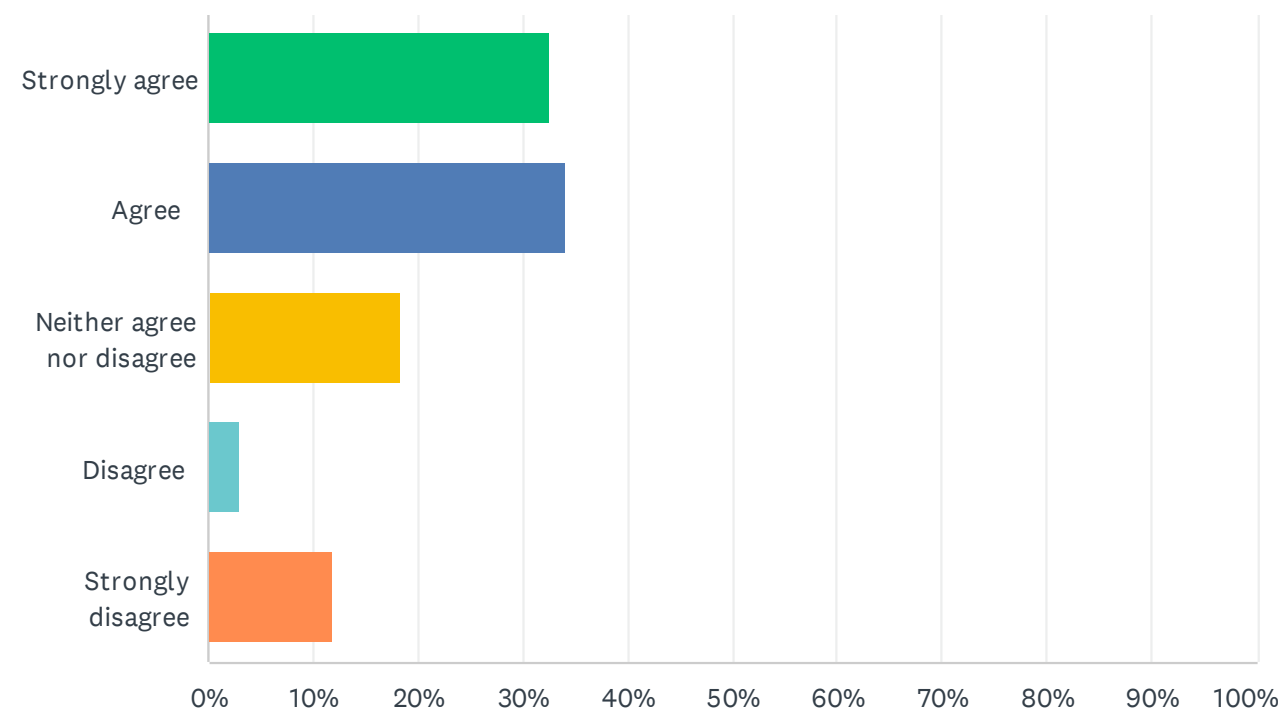

Figure 12: Most people agree that the Recommended Network will be better for the region overall.

How to use this Report?

This report shows the Final Recommended Network in detail. To assess this Final Recommended Network and how it fits your goals for transit, we suggest you:

- Look at the maps starting on page 16, find the places you care about and note the nearby routes and their frequencies (as indicated by the color). Route numbers in the Final Recommended Network may not match existing route numbers.

- Consider how all the routes connect various parts of the whole region. Remember that no bus network can provide direct service to and from every origin and destination, so look at how routes connect with each other.

- Frequencies (how often) and spans (how long) of every route in the Final Recommended Network can be found in the tables starting on page 19. This tells you when the route (or routes) you care about run and at what frequencies.

- For information about how the Final Recommended Network would affect access to jobs, look at the job access maps starting on page 22.

- If you care about proximity to transit, look at page 27, which describes how many people and jobs are near any transit service and near frequent service.

What is in the rest of this report?

In Chapter 2, we describe the Final Recommended Network compared to the Existing Network.

In Chapter 3, we review the outcomes of the Final Recommended Network, including the number of people and jobs near transit, the amount of jobs and opportunities residents can reach by transit, and other outcomes.

In Chapter 4, we take a look at Lexington County. We describe what could be done for transit if the County wishes to invest more.

In Chapter 5, we describe the next steps.

Appendix A provides additional maps that show travel time change for multiple locations around the city.

Appendix B provides more details on the final phase of engagement.

2   Final Recommended Network

Final Recommended Network

The Final Recommended Network assigns 60% of resources to goals that can achieve high ridership and 40% to provide service in areas where transit is important but is unlikely to yield many riders. This is done by consolidating duplicative resources and moving some resources from coverage service to ridership (or high frequency) service. This balance is the outcome of listening to the results from the public engagement and the input of stakeholders and elected officials.

The Final Recommended Network brings 30-minute service to five key corridors:

- Broad River Drive from Downtown to Piney Grove Road

- Farrow Road from Cindy Drive to the Midlands Technical College - NE Campus

- Percival Road and Decker Boulevard from the Sam's Club to Columbia Place Mall

- S Pickens Street from Downtown to Rosewood Drive and to Crowson Road

- Olympia Avenue, Bluff Road, and Shop Road from Downtown to Mauney Drive

This Recommended Network service brings 30-minute service to 43,200 residents compared to 30,200 residents in the existing network, and 62,400 jobs compared to 53,600 in the existing network. This is achieved by removing service from routes that have relatively low ridership relative to cost or are duplicative. Areas where service has been removed in the Final Recommended Network include today's Routes 22, 46, 77, 88, 57L, and 55 north of the Village at Sandhill. The rest of the network has been retained although some areas may be served by a different route than it is today.

This Recommended Network does ask people in some areas to walk farther, but often rewards that longer walk with more frequent service, or connections to more frequent service across much of the city. These changes mean that the average person could reach 7,500 jobs within 45 minutes by walking and taking transit—**11% more jobs than are reachable with the existing network.**

For the average person in poverty, the number of jobs accessible by transit within 45 minutes would increase by 12%. For the average resident of color, jobs accessible in 45 minutes would increase by 10%.
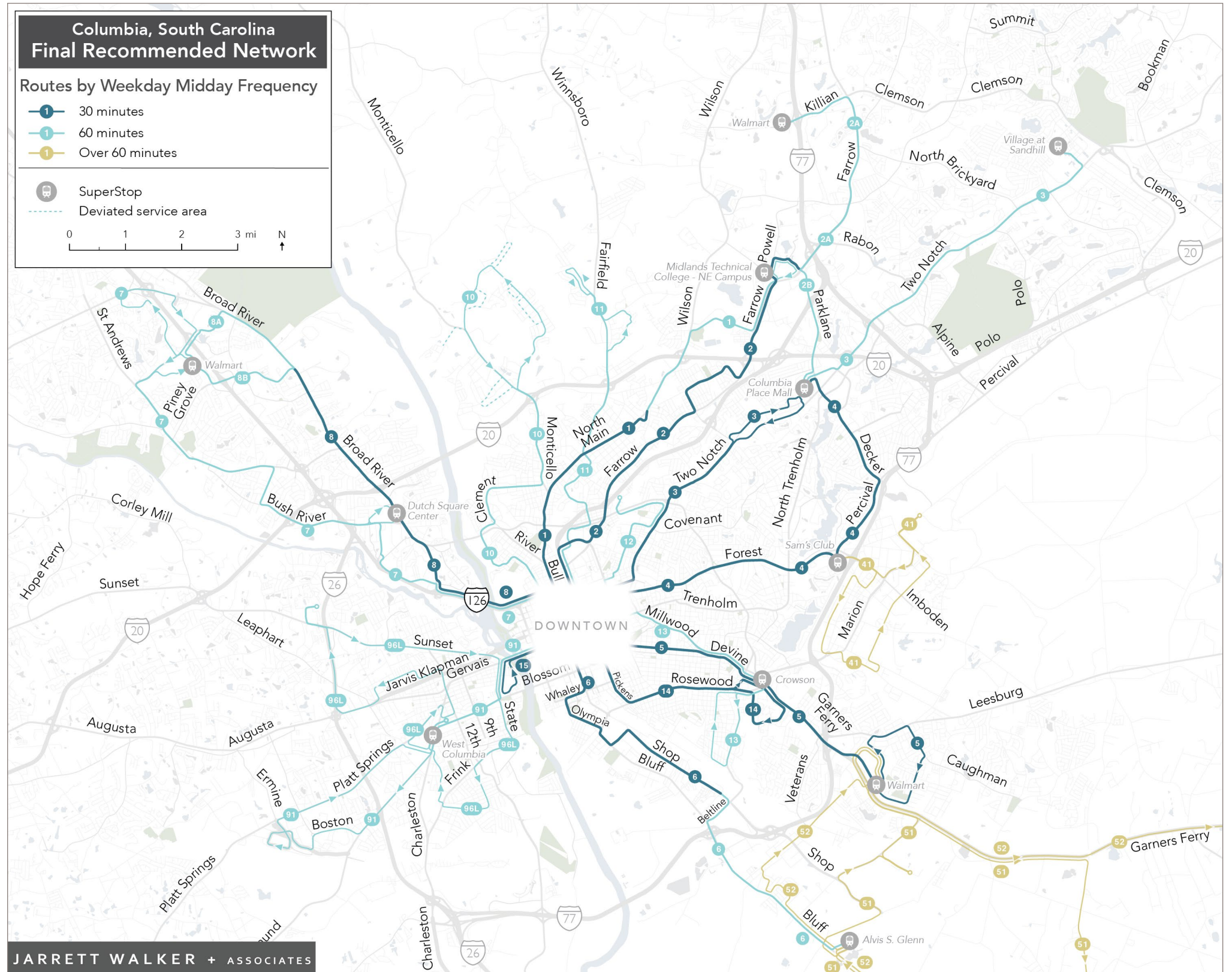

Figure 13: The Final Recommended Network with Routes Colored by Frequency

Exiting Network in Downtown Columbia

Several of The COMET's more frequent routes converge into Downtown to reach COMET Central. There, these routes enable "pulsing", or timed connections where passengers can transfer while minimizing waiting times.

The Soda Cap Connector routes (1, 2, and on game days, 3) and the Orbit (Route 4) are short, relatively frequent routes which circulate passengers in and near Downtown Columbia. Routes 1 and 2 include large one-way loops at either ends.

The COMET operates a mostly low-frequency network. This is because:

- The COMET has decided that it is important to get some minimal service close to a large area, and a large number of people, which means that not very much service is available to focus into fewer, more frequent routes.

- The COMET's operating budget is small.

- The COMET's service area is large.

These three facts taken together yield a network of low-frequency routes.

When low-frequency routes cross, this does not mean there is a *connection* between them. For example, Routes 801 and 88 cross each other at Forest Drive and Beltline Boulevard. Transferring between them requires waiting at least 30 minutes and up to 90 minutes at most times of day.

When frequent bus lines cross, it's almost like roads intersecting: someone can transfer and travel in any direction, with just a short wait. When low-frequency lines cross, the transfer requires much more planning, and is riskier, and may just take too long. Low-frequency routes cannot act as a *network* the same way that high-frequency routes can, because transfers between them tend to be onerous.
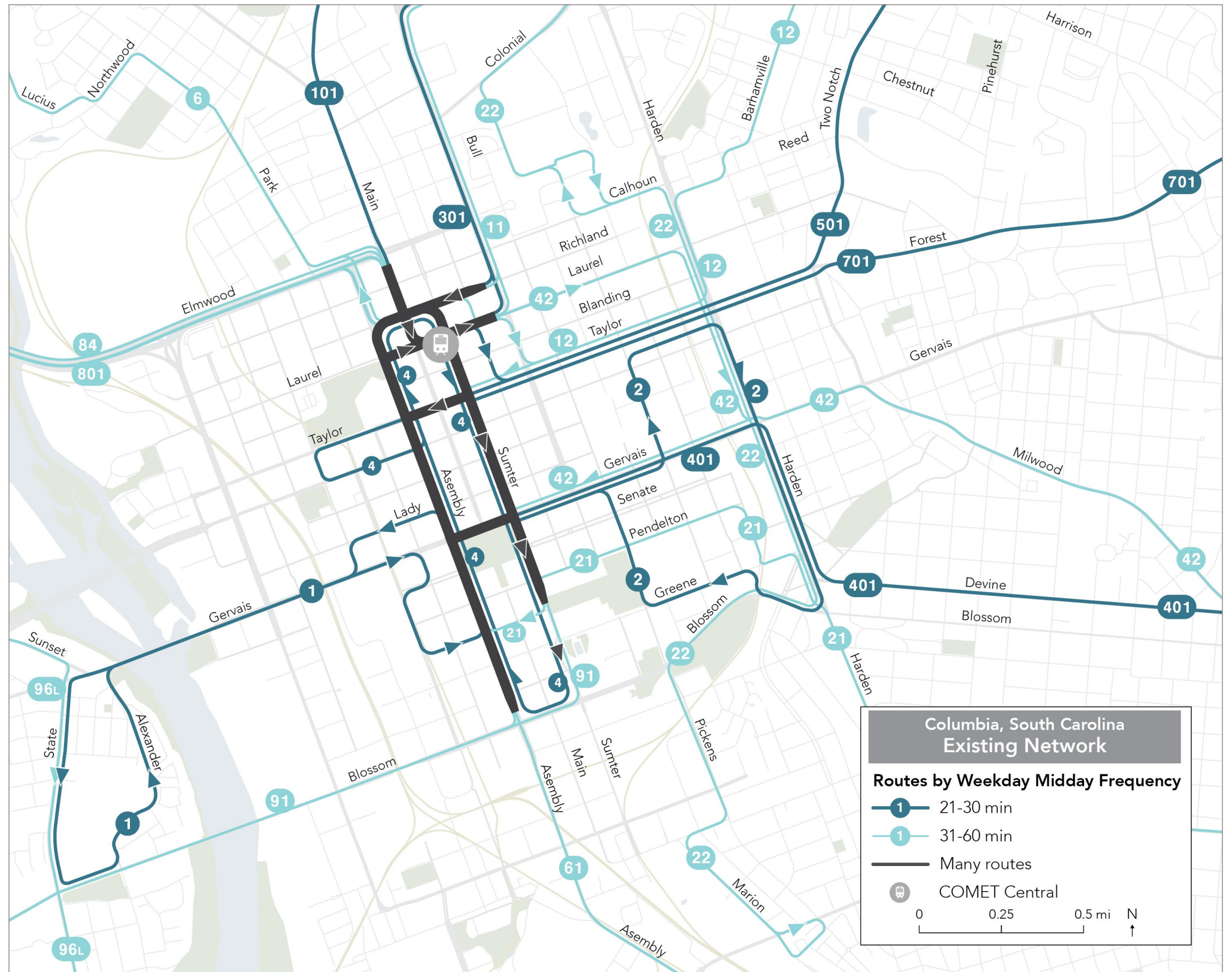

Figure 14: The COMET Network Around Downtown Columbia

Final Recommended Network in Downtown Columbia

In the Final Recommended Network the network of routes through Downtown would generally have simpler patterns, making it easier for a rider to figure out how to get around downtown. Within downtown, two Soda Cap shuttle routes are retained in this concept:

- Soda Cap 1 serving Gervais Street from Assembly Street across the river to State Street in West Columbia and Cayce. This service is retained to keep the 30-minute frequency connection to the relatively high density development along the river in West Columbia and Cayce into the heart of Downtown.

- Soda Cap 2 would serve a similar pattern that the current "4" serves today, running the counter-clockwise look of Sumter, Blossom, Assembly, and Laurel which connects USC, the Capitol, and major retail and office districts within downtown. It would also extend east along Blossom Street to get to Harden Street.

Another big change in Downtown is the existing Route 22 was removed and wasn't replaced with anything that follows the same complete routing. This is because the current Route 22 didn't go to the pulse at COMET Central, but instead it stayed on Harden passing around the edge of Downtown. This made the route less useful because it was difficult to make connections to other routes.

Route 3, which follows a similar routing than the existing 501 along Two Notch has a slightly different routing in Downtown. It stayed on Calhoun, instead of going down to Taylor. This is done to keep service along some areas that Route 22 covered.
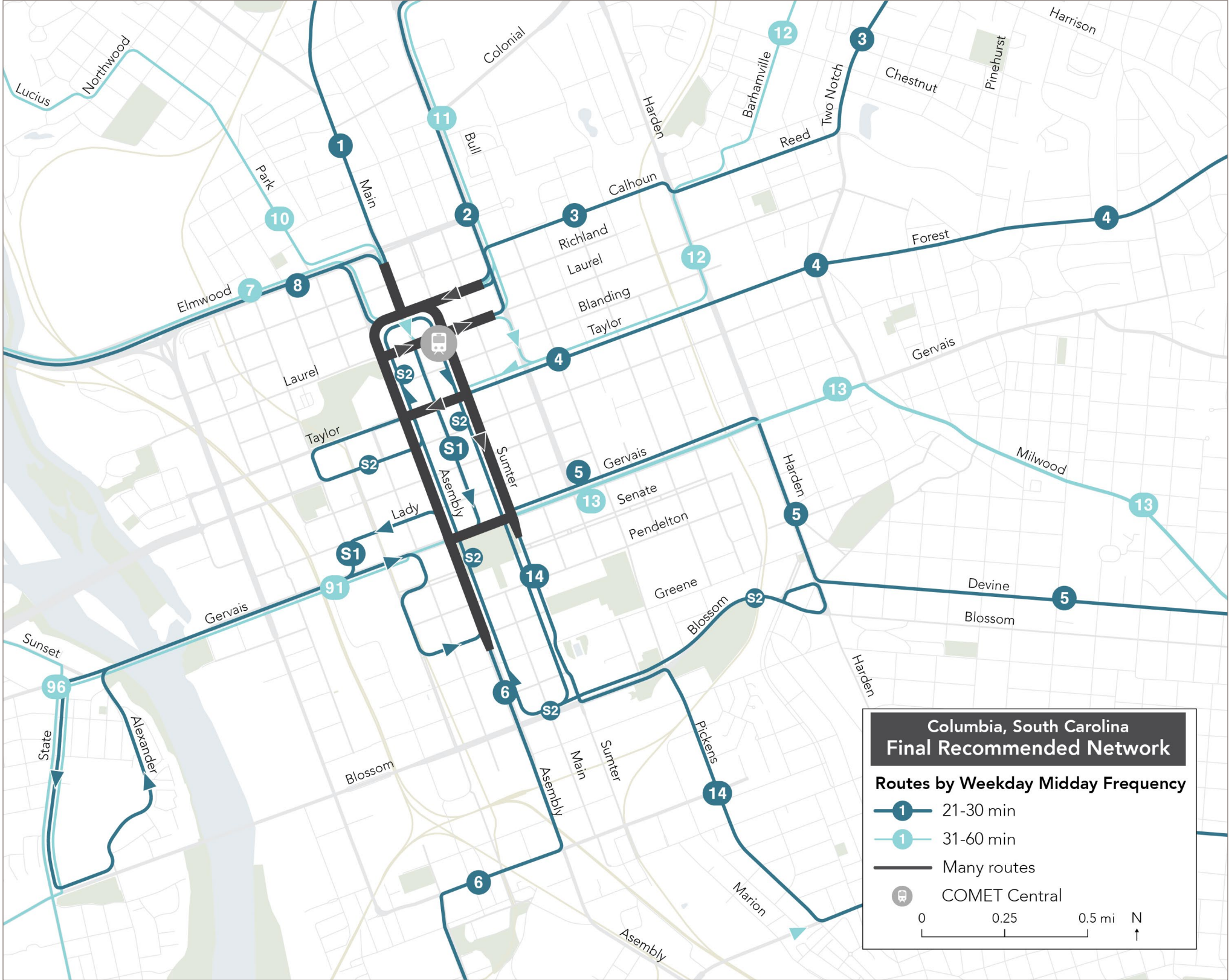

Columbia, South Carolina
Final Recommended Network

Routes by Weekday Midday Frequency
- 1 — 21-30 min
- 1 — 31-60 min
- Many routes
- COMET Central

0   0.25   0.5 mi   N

Figure 15: The Final Recommended Network Around Downtown Columbia

Exiting Network Spans of Service

FINAL RECOMMENDED NETWORK

Existing Spans and Frequencies

The chart on the right shows the frequency of all routes by time of day. Each hour is represented by a single block colored by the frequency of that route during that hour. This chart helps show how frequency varies by routes during peak periods and weekends. It also shows the span of each route clearly.

Four routes in the network have higher frequency during the peak periods. Routes 101 and 501 go from 30 minutes to 20 minutes and Routes 75 and 801 go from 60 minutes to 30 minutes. Routes 53x and 74 have hourly service throughout the peak periods while routes 92x and 93 only have one trip per period.

The Soda Cap Connector Routes 1 and 2 have 30 minute service but they only run from 9am to 6pm Monday through Wednesday.

Saturday and Sunday service are very similar to each other, but compared to the weekday services, they start much later or end much earlier. Three routes do not operate on weekends at all. The five 30-minute midday frequency trunk routes only offer 60-minute frequencies on the weekends.

The COMET also operates a few special services that only run during special events. Soda Cap Route 3 runs during Fireflies game days. Route 2001 runs on USC football game days. Route 7 operates on days when the Inclement Weather Center is open to house people in need of warm shelter during cold conditions.
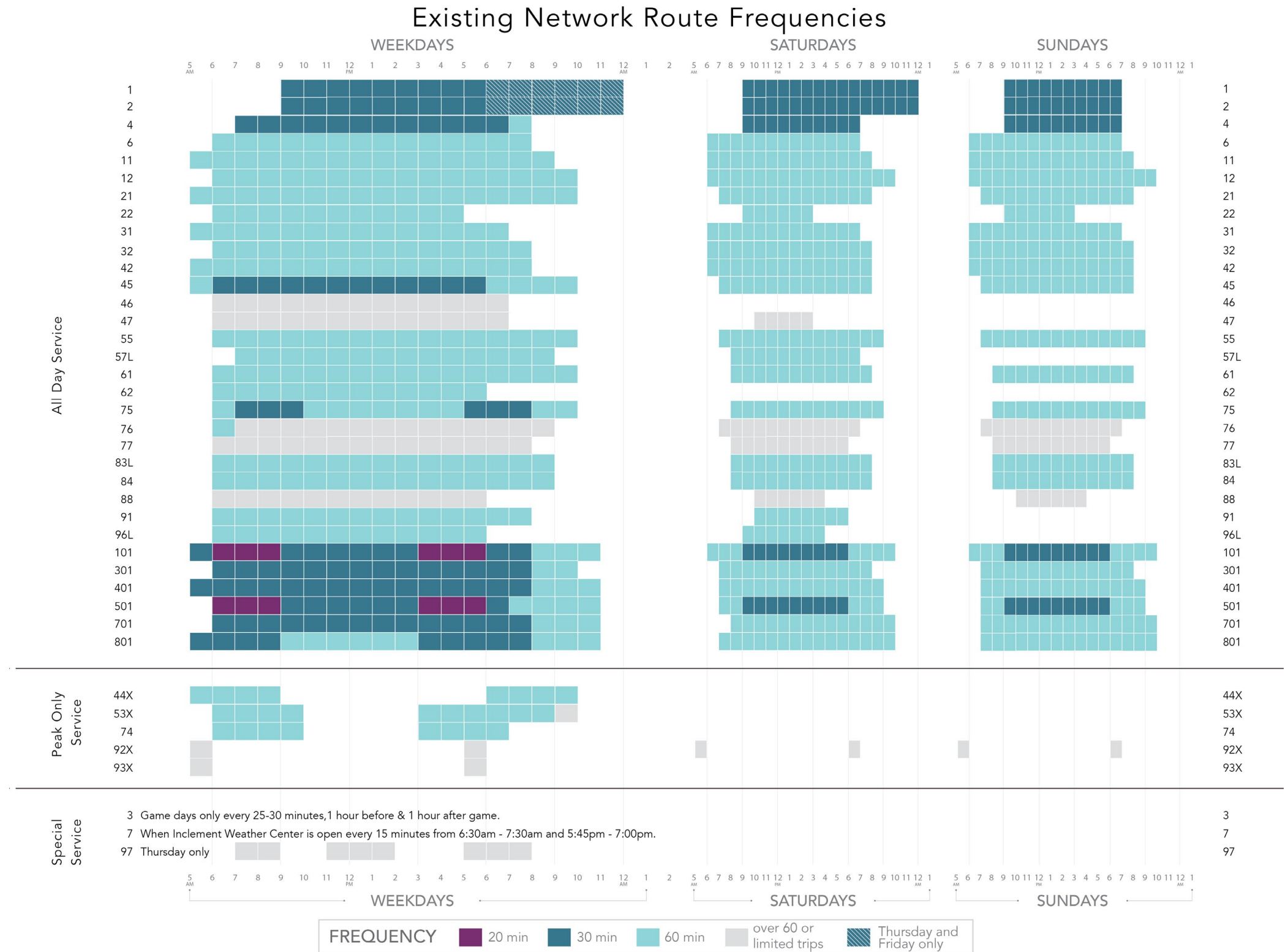

Figure 16: Spans and Frequencies for all Routes in the Existing Network

Final Recommended Network Spans of Service

Figure 17 shows the frequency by time of day for the routes in the Final Recommended Network. In general, it is intended to closely reflect the frequency of the existing network.

Similar to the Existing Network, the span of service on most routes begins around 6am and ends about 10pm on weekdays. A few lower frequency routes (41, 51, and 52) have shorter spans and would end service around 8pm. On weekdays, two routes (1 and 3) would have 20-minute frequency at peak times, roughly 6am-9am and 3pm to 6pm. This mimics the current pattern where routes 101 and 501 have higher frequency service at peak times.

Also like the Existing Network, Saturday and Sunday service levels are much lower, with all routes reduced to hourly frequency on weekends.

Final Recommended Network Route Frequencies

Special Service:
3 Game days only every 25-30 minutes, 1 hour before & 1 hour after game.
7 When Inclement Weather Center is open every 15 minutes from 6:30am - 7:30am and 5:45pm - 7:00pm.
97 Thursday only

FREQUENCY: 15 min or better | 20 min | 30 min | 60 min | over 60 or limited trips | Thursday and Friday only
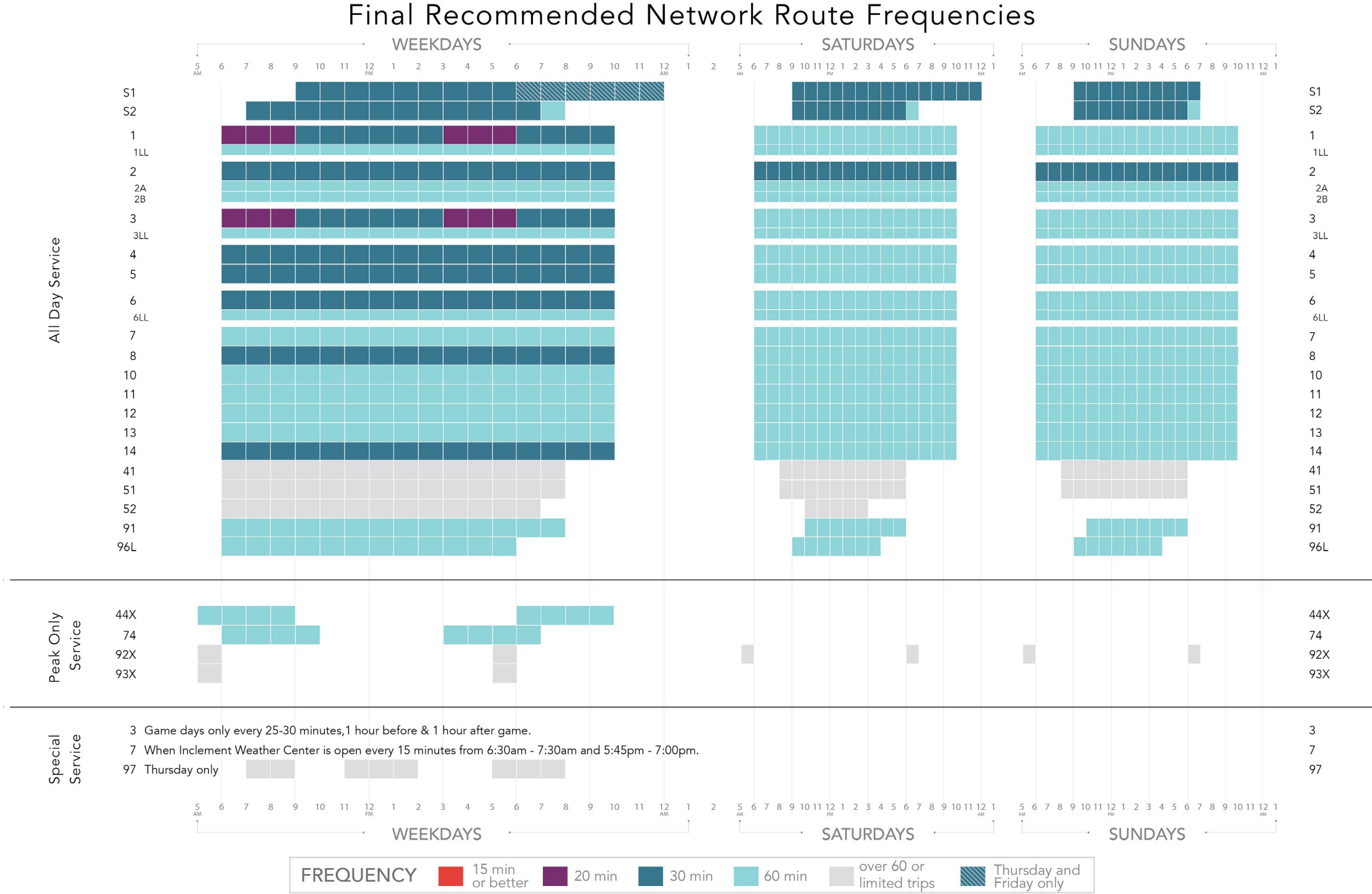
Figure 17: Spans and Frequencies for all Routes in the Final Recommended Network

3   Comparing Outcomes

Freedom = Access = Usefulness

Public transit can be described from many points of view, but there are some basic geometric facts about how transit works and how it interacts with the layout of a city. Public transit ridership arises from the combination of three things:

- **Access (or Freedom):** Where can you get to on public transit in a reasonable amount of time, compared to your alternatives?

- **Pricing:** What does transit cost given its alternatives?

- **Preferences:** These include everything else, all the subjective factors that govern decisions about how to travel, as well as reactions to other aspects of the transit experience.

Network design and planning mostly determine access, and access is central to the usefulness of service for any given trip.

Access

Wherever you are, there is a limited number of places you could reach in a given amount of time. These places can be viewed on a map as a blob around your location. Figure 18 shows an example of this type of visualization of transit access for Downtown, comparing the Final Recommended Network to the Existing Network.

Think of this blob as "the wall around your life." Beyond this limit are jobs you can not hold, places you can not shop, and a whole range of things you can not do because it simply takes too long to get there. The technical term for this is accessibility, but it's also fair to call it freedom, in the physical sense of that word. The extent of this blob determines what your options are in life: for employment, school, shopping, or whatever places you want to reach. If you have a bigger blob, you have more choices, so in an important sense you are more free.

Access is a Matter of Geometry

Freedom is about what you could do, not what we predict you will do. Access is how network design generates ridership, because it measures how likely it is that any particular trip will be viable on transit. Yet, it also represents something that many people will see as a worthy goal in itself. For example:

- **Access to jobs** is a key concern for keeping people employed.

- **Access from a particular location** gives a location value. Real estate firms routinely study where you can get to by car from a particular parcel, and this is the same analysis for transit. In dense cities, transit access can be an important factor in land value.

- Access describes an outcome in terms that many people will care about. **If you are deciding where to live based on whether you'll be able to get to your job, school, or relatives, you are asking a question about access.**

- The whole reason people live in urban areas is to have access to the opportunities that arise from being near other people. **So access is a fundamental measure of whether a city is functional.**

How Transit Expands Access

On transit, the extent of access is determined by:

- **A network,** including transit lines with their frequency, speed, and duration. These features determine how long it takes to get from any point on the network to any other point.

- **The layout of the city.** For each transit stop on the network, this determines how many useful destinations are located there or within easy walking distance.[1] For example, if density is higher, that means there are more people or useful destinations at a given stop, which means that good access from that point is of more value to more people.

Building Access: The Network and Frequency

A transit network is a pattern of routes and services, in which each line has:
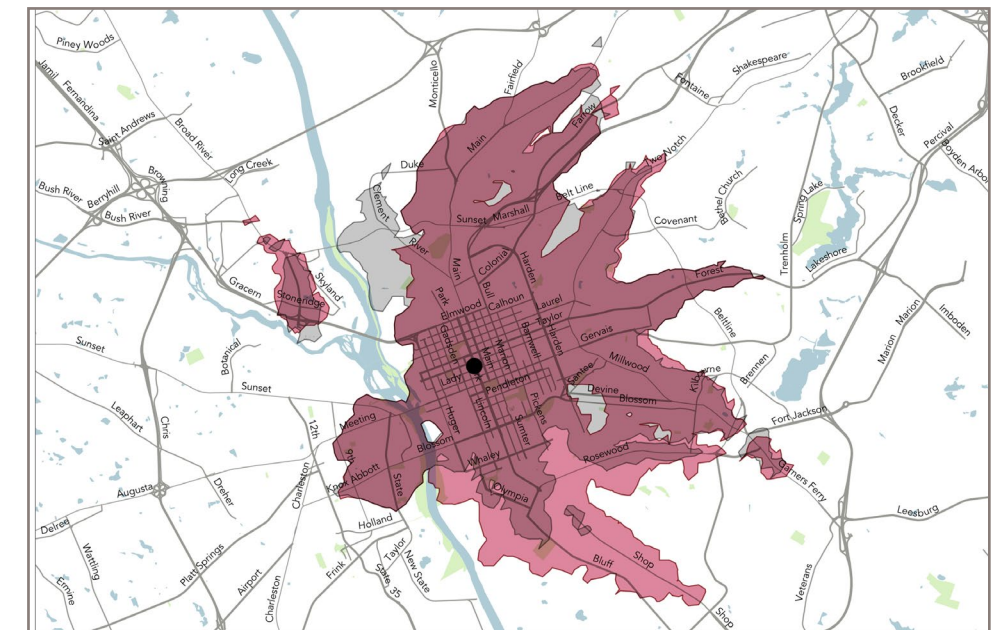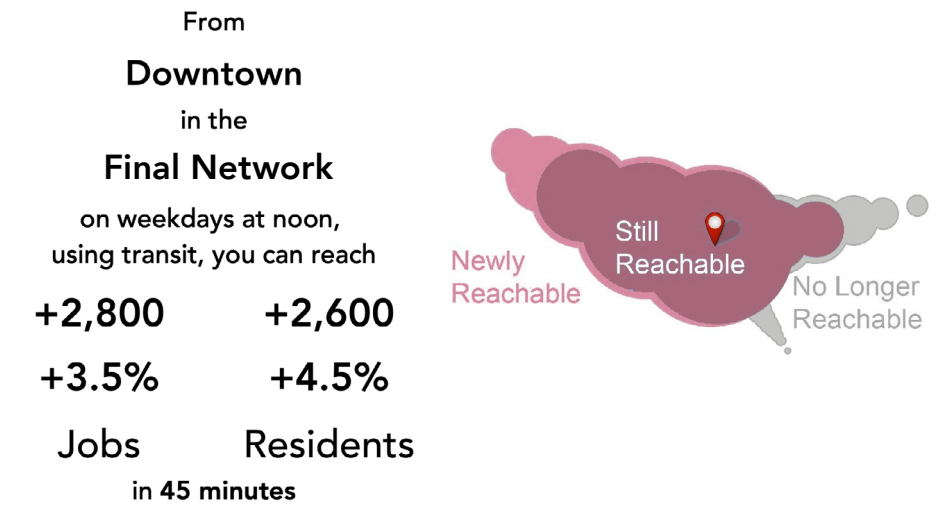
- a path;

- a duration, or span—what hours and days it runs;

- an average speed; and

- a frequency—how often a transit vehicle serves a stop, which determines how long a riders waits for a vehicle.

Of these, frequency is the one that is often invisible and easy to forget. Yet frequency is usually the dominant element of travel time, and therefore significantly affects access in a given amount of time.

To maximize liberty and opportunity for the greatest possible number of people requires a network of routes that optimizes (in order) Frequency, Span, Connections, Speed, Reliability, Capacity, and that follows favorable patterns in the built environment.

---

1 There are other ways to get to transit other than walking, but walking is by far the most common, so we use it here for simplicity as we explain the basic concepts.

Figure 18: Example of change in places reachable in 45 minutes from Downtown in the Final Recommended Network, compared to the Existing Network

From

Downtown

in the

Final Network

on weekdays at noon, using transit, you can reach

+2,800	+2,600
+3.5%	+4.5%
Jobs	Residents

in **45 minutes**

Measuring Access to Opportunities

Frequency Comes First

Ridership responds to many features of a service, including speed and reliability, but the dominant factor is frequency. Frequency is the elapsed time between consecutive buses on a line, which determines the maximum waiting time.

People who are accustomed to traveling by private vehicle often underestimate the importance of frequency, because there isn't an equivalent in their experience. A private vehicle is ready to go when you are, but public transit isn't available until it comes.

High frequency means public transit is coming soon, which means that it approximates the feeling of liberty you have with a private vehicle—namely that you can go anytime. Frequency has three independent benefits for the passenger.

- **Frequency reduces waiting**, which is everyone's least favorite part of a trip. Being able to go when you want to go is the essence of frequency. A smartphone can tell you when the bus is coming, but still does not reduce the wait or get you where you want to be.

- **Frequency makes connections easy**, which makes it possible for a cluster of transit lines to become a network. A transit line without good connections is useful for travelling only along that line. A network of frequent lines can make it easy to travel all over the city. This massively expands the usefulness of each line.

- **Frequency is a backup for problems of reliability.** If a vehicle breaks down or is late, frequency means another will be along soon.

Measuring Access and Freedom

To measure freedom and access outcomes, we measure the change in access to jobs. Since retail and services also account for jobs, access to jobs is a good indicator of the usefulness of transit for many other opportunities that the region offers. So we ask the question: **Could more people access more jobs (and other opportunities) by transit, in less time?**

To answer this question, we explore how a transit network changes people's freedom to travel and access more jobs and opportunities. We measure how far one could go in 45 minutes on transit (door-to-door, including walking, waiting, and riding) from anywhere in the region, and calculate how many jobs are located in the area that is reachable.

Not Just the Area – Also What is Inside the Area

The real measure of usefulness is not just how much geographic area we can reach, but how many useful destinations are in that area.

Ridership arises from service being useful, for more people, to get to more busy places. That's why predictive models of ridership do this very same analysis behind-the-scenes.
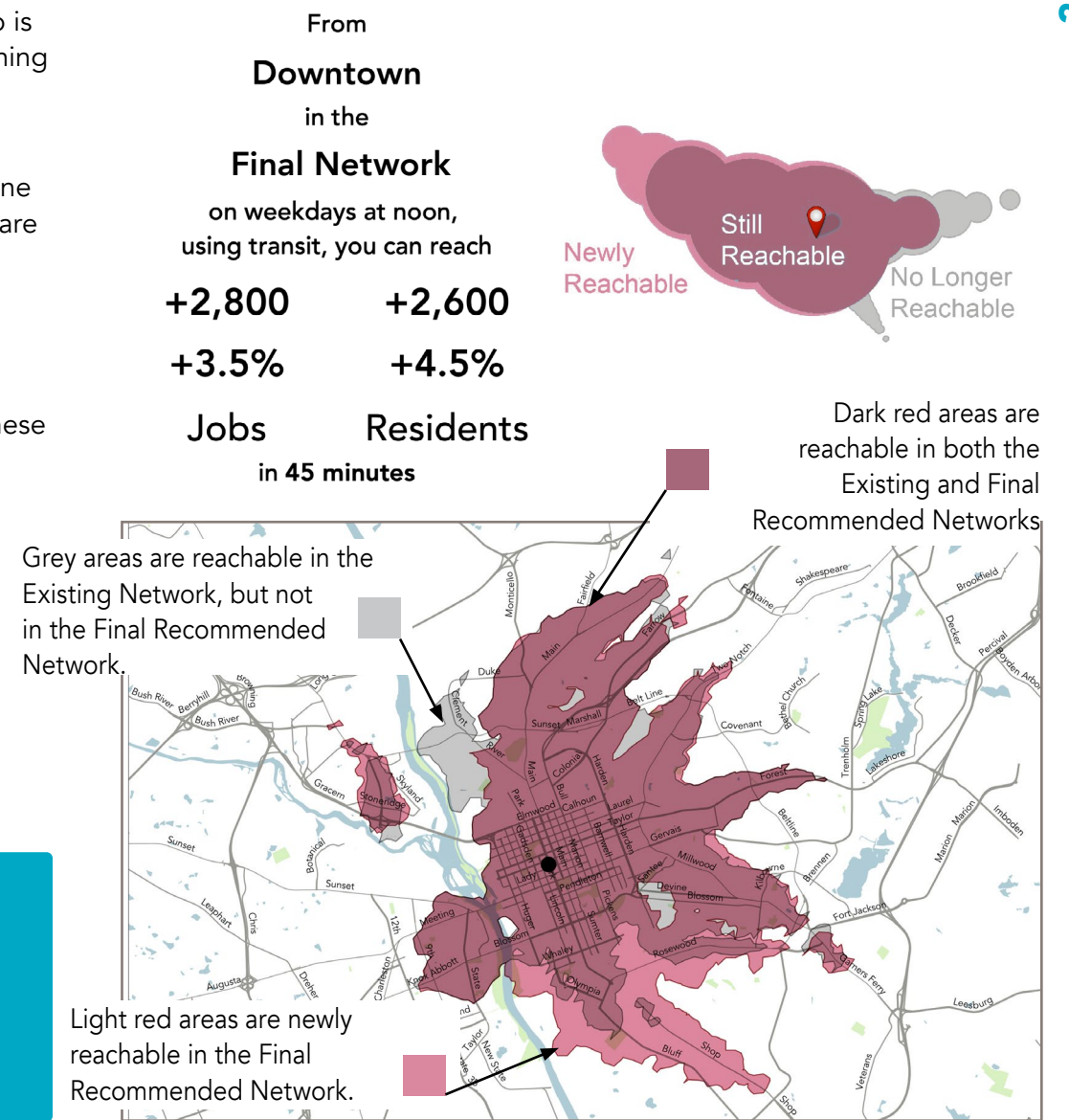
The example in Figure 19 shows how access changes for Downtown with the Final Recommended Network compared to the Existing. Areas reachable with both networks in dark blue, newly reachable areas in light blue, and areas no longer reachable in grey. The table below reports the change in jobs and people reachable. The technical term for this map is an isochrone, from Greek for "iso" meaning same and "chrone" meaning time.

The maps on page 35 show the same comparison of isochrones for three other example locations around the region. Many more isochrone examples are in Appendix A, showing how different parts of the city are affected by the Final Recommended Network.

When reviewing these maps remember that **waiting time counts, and in most cases, a longer walk to a high-frequency route can get people farther and faster**, than a shorter walk to an infrequent route. Also remember that some of the access shown in these maps isn't reached on a single route, but requires a transfer.

With the Final Recommended Network residents near Downtown could reach 2,800 additional jobs in 45 minutes, 3.5% more than today.

From

Downtown

in the

Final Network

on weekdays at noon, using transit, you can reach

Newly Reachable

Still Reachable

No Longer Reachable

+2,800   **+2,600**

+3.5%   **+4.5%**

Jobs   **Residents**

in **45 minutes**

Dark red areas are reachable in both the Existing and Final Recommended Networks

Grey areas are reachable in the Existing Network, but not in the Final Recommended Network.

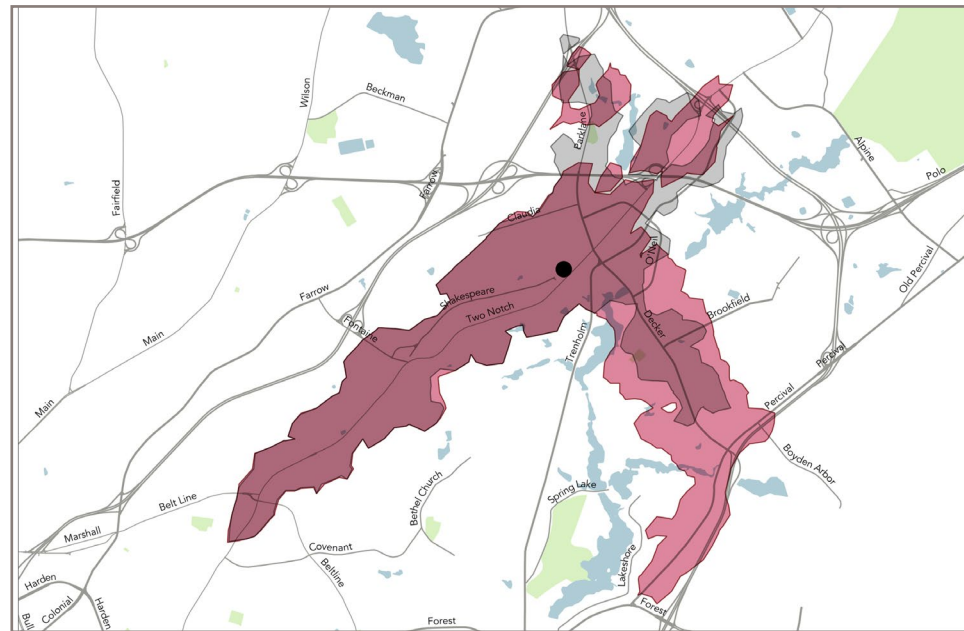Light red areas are newly reachable in the Final Recommended Network.

Sample Isochrones

Figure 20: Places reachable in 45 minutes from Columbia Place Mall in the Final Recommended Network, compared to the Existing Network.

Figure 21: Places reachable in 45 minutes from Koon Road and Cody Street in the Final Recommended Network, compared to the Existing Network.
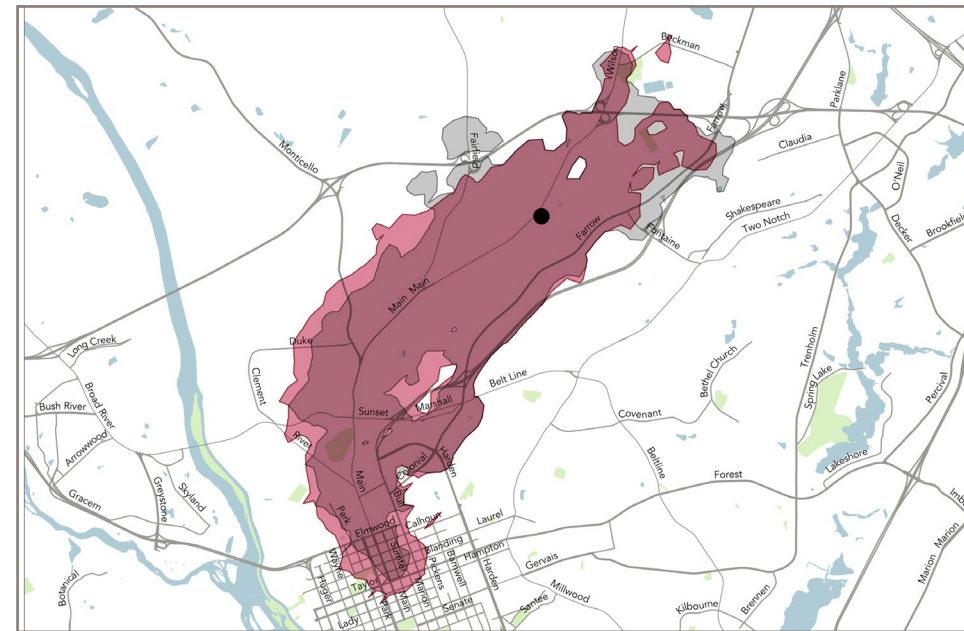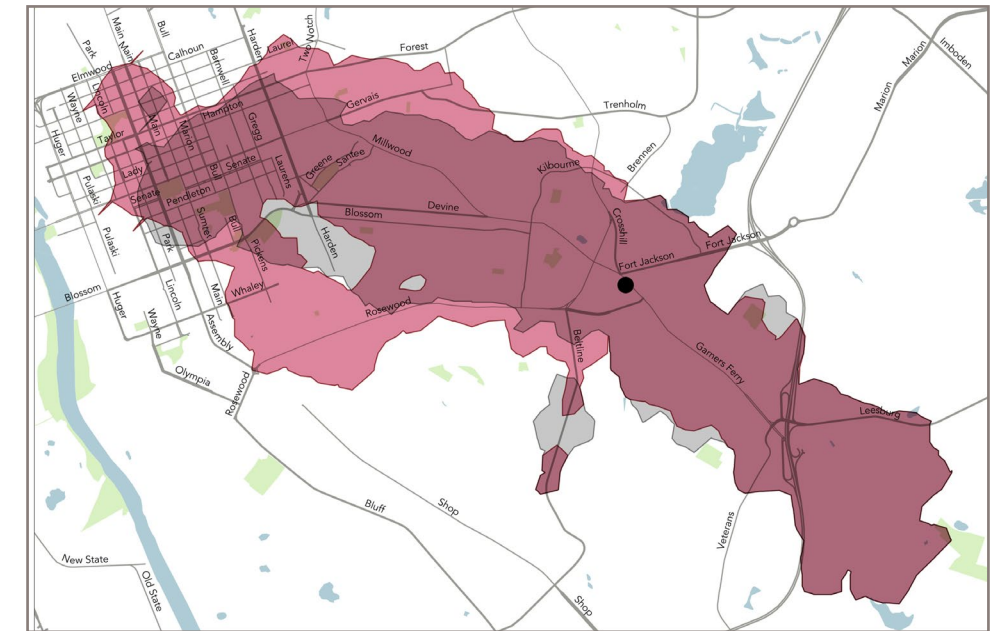
Figure 22: Places reachable in 45 minutes from the Crowson Superstop in the Final Recommended Network, compared to the Existing Network.

From

Columbia Place Mall at Two Notch Rd and Columbia Mall

in the

Final Network

on weekdays at noon,
using transit, you can reach

+1,700   **+4,400**

+26.5%   **+49.0%**

Jobs   Residents

in **45 minutes**

From

Northeast Columbia at Koon Rd and Cody St

in the

Final Network

on weekdays at noon,
using transit, you can reach

+7,900   **+700**

+42.0%   **+4.0%**

Jobs   Residents

in **45 minutes**

From

Crowson Superstop at Crowson Rd and Devine St

in the

Final Network

on weekdays at noon,
using transit, you can reach

+14,800   **+6,800**

+46.0%   **+27.5%**

Jobs   Residents

in **45 minutes**

Newly Reachable — Still Reachable — No Longer Reachable

With the Final Recommended Network an additional 4,400 residents could reach Columbia Place Mall in 45 minutes, 49% more than today.

Residents near the Crowson Superstop could reach 14,800 more jobs in 45 minutes, 46% more than today, with the Final Recommended Network.

Change in Access to Opportunities

The previous maps show how the Final Recommended Network changes where people could go in a given time, from certain places. We can run the same analysis on a grid of locations throughout the city to estimate the access impacts of the Final Recommended Network on jobs access for different areas of the city.

The map on this page summarizes the change in jobs reachable for every part in the city. In this map, every dot represents 50 residents and the color indicates the jobs that can be reached in 45 minutes as compared to the Existing Network. Blue dots represent more jobs accessible and pink dots represent fewer jobs available. The darker the color, the greater the change in jobs accessible.

In general, the Final Recommended Network significantly increases access to jobs for the most dense parts of the city, which is clear because places with many dots close together tend to be darker shades of blue. Also, most parts of the region are blue, indicating that most areas are benefiting from the increased frequency of service on major corridors.

Traveling across large parts of the city, particularly in the most dense areas, would be faster, because waiting times would be shorter, both for the initial wait for a bus and for a connection. The Final Recommended Network would require people to walk longer distances in some places, but it will get most people farther and faster to their destinations, primarily due to shorter waits and easier connections.

Corridors like Broad River Road, Pervical Road and Decker Boulevard, Rosewood Drive, Olympia Avenue, Shop Road, and Bluff Road would see large access benefits due increases in frequency. Even residents in farther out places see job access benefits from the Final Recommended Network.

Not all parts of the city benefit, as some areas see a decrease in frequency or a loss of service. The most substantial decrease in access would be experienced along parts of Two Notch Road and Forest Avenue due to slight routing changes to get to Downtown. Other areas see a slight decrease with the changes to routing. These losses are the trade-off of shifting service toward a higher ridership emphasis.

Figure 23: Change in Jobs Reachable in 45 Minutes for the Final Recommended Network Compared to Existing Network.
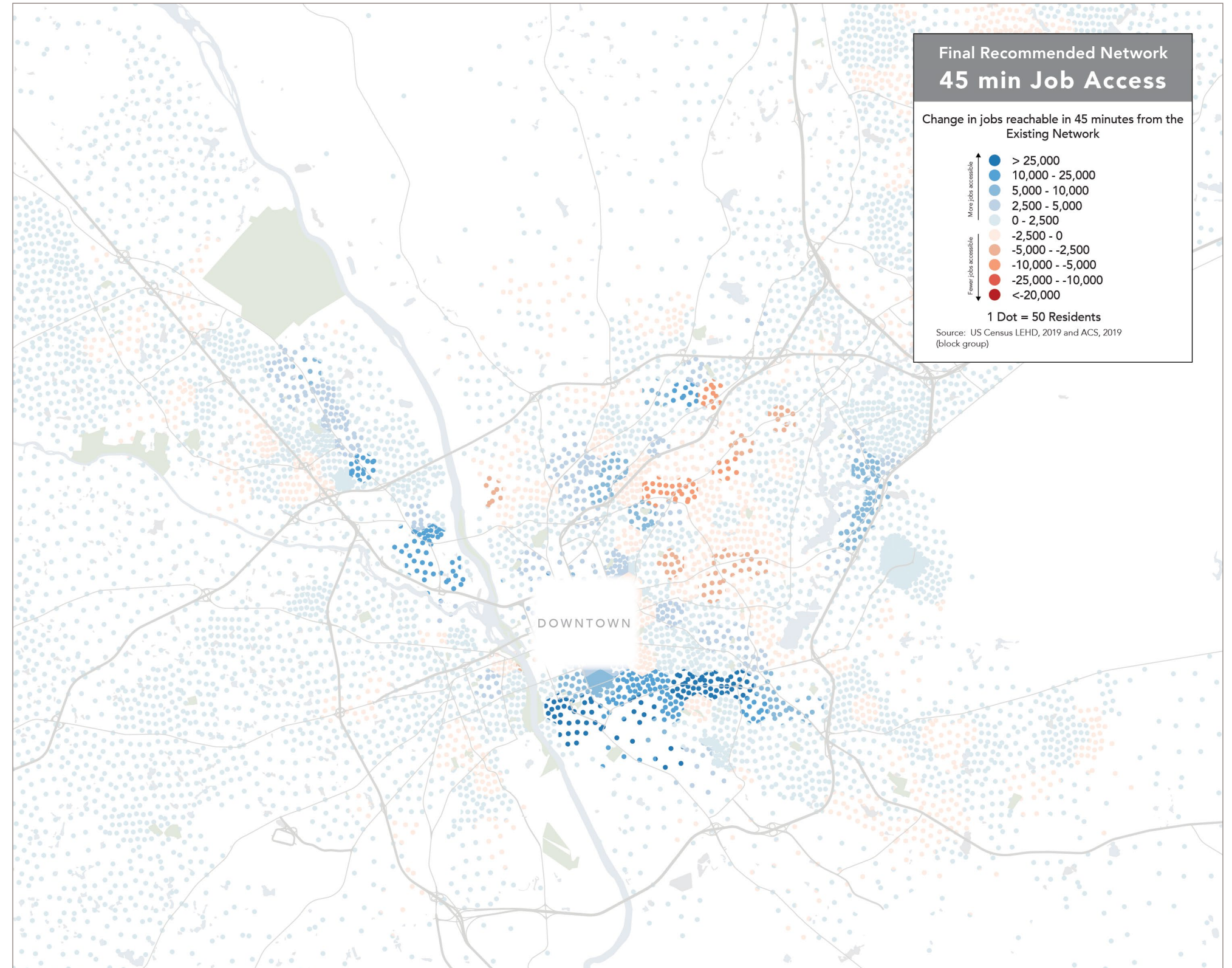
Change in Access Summarized

Using the data in the map on the previous page, we can estimate the change in access for the average person and for different subgroups. Figure 24 compares the jobs reachable for the average resident and Figure 26 compares the jobs reachable for the average person of color and person in poverty. Figure 27 compares the jobs reachable for the average person of color and person in poverty.

By multiplying the change in access in each dot by the population and then dividing by the total population, we can calculate that the Final Recommended Network allows the average person to reach 7,500 jobs within 45 minutes by walking and taking transit—**11% more jobs than are reachable with the existing network.**

By applying the same calculations to people of color and people in poverty we can see that for **the average person in poverty, the number of jobs accessible by transit within 45 minutes would increase by 12%. For the average resident of color, jobs accessible in 45 minutes would increase by 10%.**

This analysis measures jobs, but it reflects a wide range of opportunities that a person can reach. This means a person can get to more shopping, education, recreational areas, social events, places of worship, and any other opportunities that Norfolk, and the region, can offer.

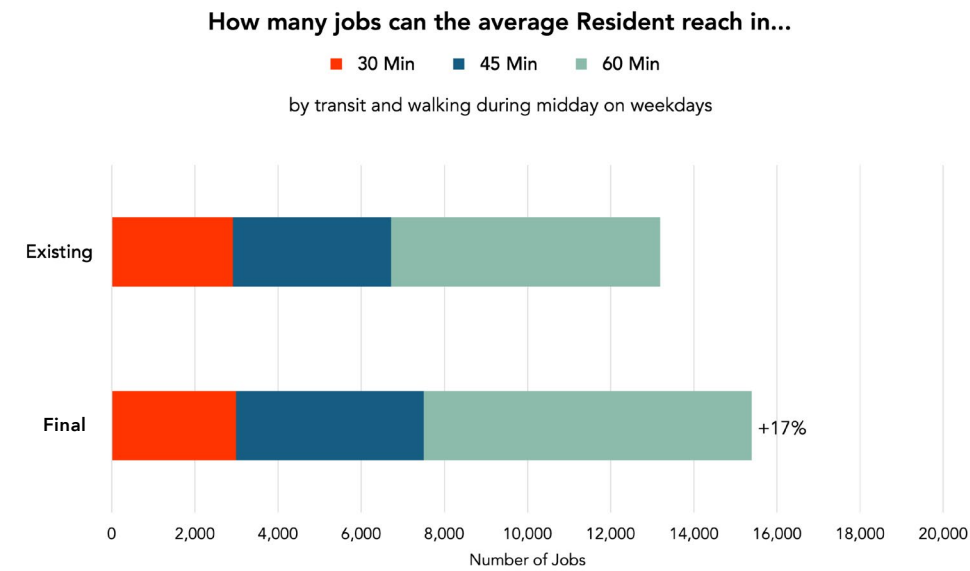Figure 24: Jobs Reachable for the Average Resident

How many jobs can the average Resident reach in...
■ 30 Min ■ 45 Min ■ 60 Min
by transit and walking during midday on weekdays

Figure 26: Jobs Reachable for the Average Resident in Poverty and Resident of Color

How many jobs can the average Resident of Color reach in...
■ 30 Min ■ 45 Min ■ 60 Min

How many jobs can the average Low-Income Resident reach in...
■ 30 Min ■ 45 Min ■ 60 Min
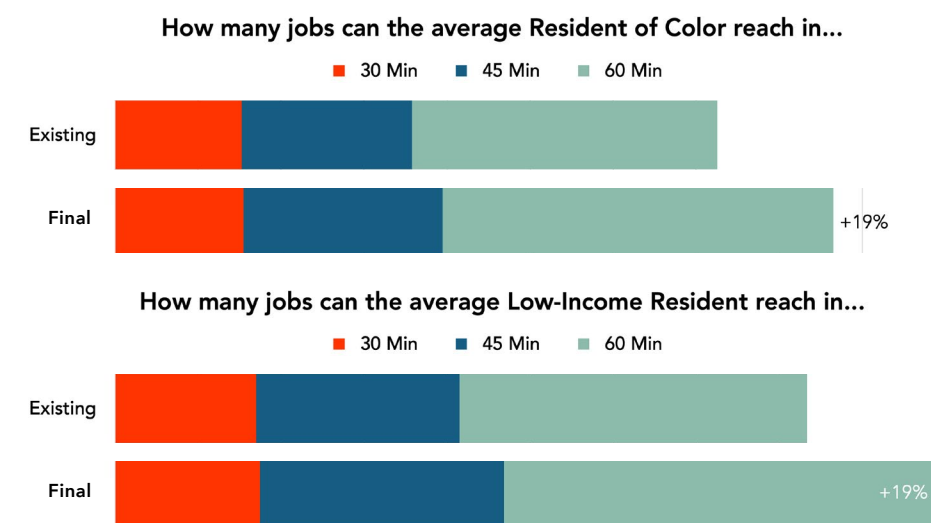
Figure 27: Jobs Reachable for the Average Senior Resident and Young Resident

How many jobs can the average Senior Resident reach in...
■ 30 Min ■ 45 Min ■ 60 Min

How many jobs can the average Young Resident reach in...
■ 30 Min ■ 45 Min ■ 60 Min
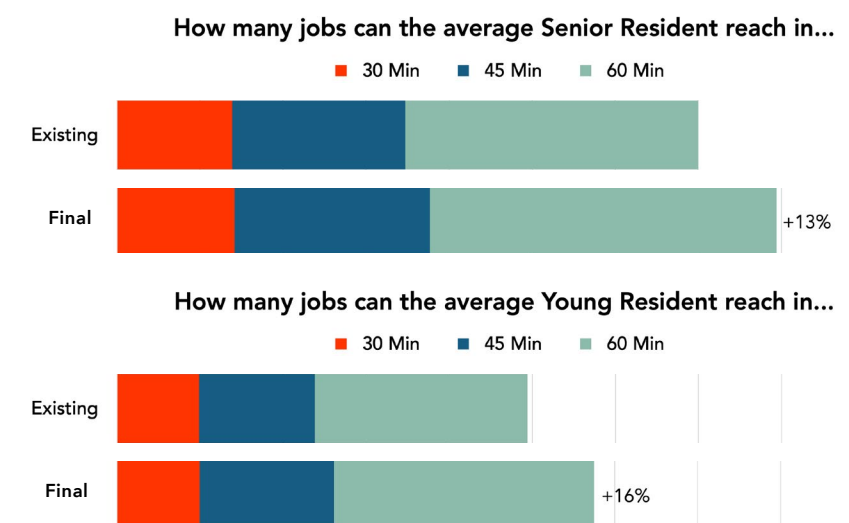
Proximity to Transit

The number of people and jobs within a certain distance from transit is the simplest measure of transit outcomes. In this report we call this measure "proximity to transit".

Overall, the Existing Network reaches 94,600 people and 99,600 jobs, within ¼ mile of a transit stop. Yet because service is spread so thinly, only 30,200 people and 53,600 jobs are near 30-minute service.

The Final Recommended Network would increase the number of people and jobs near 30-minute service.

Compared to Existing, the Final Recommended Network would

- increase the number of residents near 30-minute service from 30,200 to 43,200, a 42% increase.

- increase the number of jobs near 30-minute service from 53,600 to 62,400, a 16% increase.

- reduce the number of residents that are within ¼ of any transit service from 94,600 to 77,900, a 17% decrease in residents that are over ¼ mile from service.

- reduce the number of jobs that are within a ¼ mile of any transit from 99,600 to 90,100, a 9% decrease in jobs that are over ¼ mile from service.

Proximity does not tell us how useful the service is to people—only that it is nearby. Proximity to any service is measure of how well a network is achieving a coverage goal. Since the policy direction provided by The COMET Board indicated a shift in emphasis away from coverage and toward ridership, the Final Recommended Network reduces coverage.

Proximity to more frequent service is a key measure of ridership potential. Frequent service is more expensive relative to the area it covers, but it is more useful and therefore tends to attract higher ridership. Thus, the more people and jobs near frequent service, the more a network is achieving a ridership goal.

Residents - The Final Recommended Network brings 30-minute service near an additional 12,900 residents expanding access to useful service to 42% more residents. However, the total number of residents close to any transit service decrease by 17%.

Jobs - The Final Recommended Network brings 30-minute service near an additional 8,700 jobs, expanding access to useful service to 16% more jobs. However the total number of jobs close to any transit service decreases by 9%.

4   Lexington County Expansion Ideas

Opportunity for Investment

The Final Recommended Network was developed using the budget that The COMET currently has available. Due to this budget limitation and the current funding structure, only minimal changes are presented in Lexington County. Transit service in Lexington County is currently funded through the general funds for the County and the cities (West Columbia, Cayce, and Springdale). In contrast, Richland County funds transit through their a dedicated sales tax (the penny tax). Lexington County has the opportunity to invest more in transit to shape their transit network according to the community's goals.

The following pages show what Lexington County could do at three different levels of investment.

- Low Level of Investment is shown starting on page 30.

- Medium Level of Investment is shown starting on page 32.

- High Level of Investment is shown starting onpage 34.

Low level of Investment

The map on the right shows how the network could be modified as service changes are considered in Lexington County. The modified routes cover mostly the same places as the existing routes, but they are much straighter and all go to Downtown Columbia. Straighter routes tend to be much more useful for riders as they are more direct. By getting to Downtown Columbia, riders can access all the jobs that are available there. Since so many other routes in The COMET's network go to Downtown Columbia, this makes it easy for people to connect to other routes and reach more destinations.

Under this low level of investment, all route would run every 60 minutes with Route 18 splitting into two 120 minutes branches on its way to the airport

While the current route 91 and 96L require one vehicle each (for a total of two buses), this new configuration would require four total buses. Keeping the same spans of service as today, that is approximately a 100% increase in total annual revenue hours.
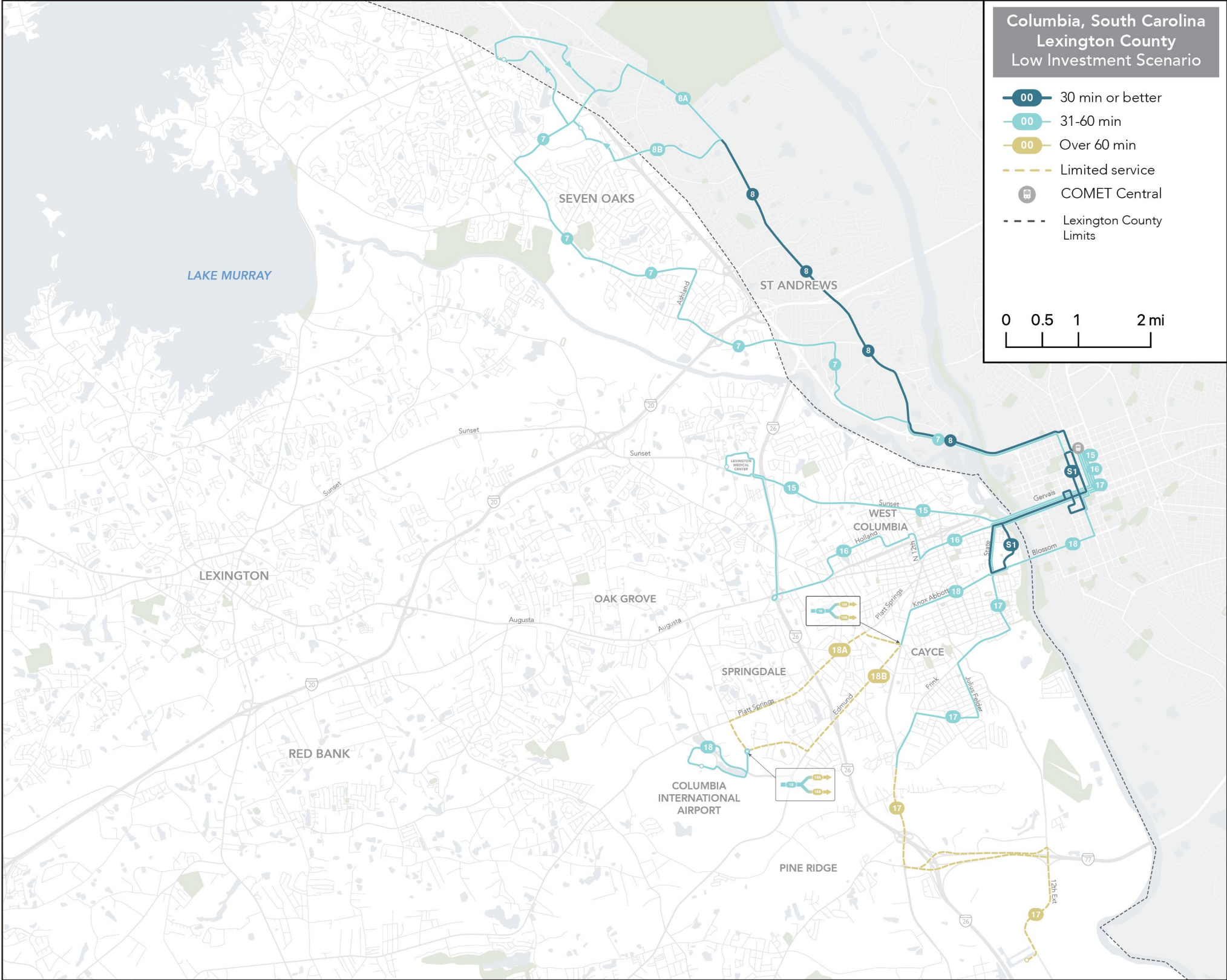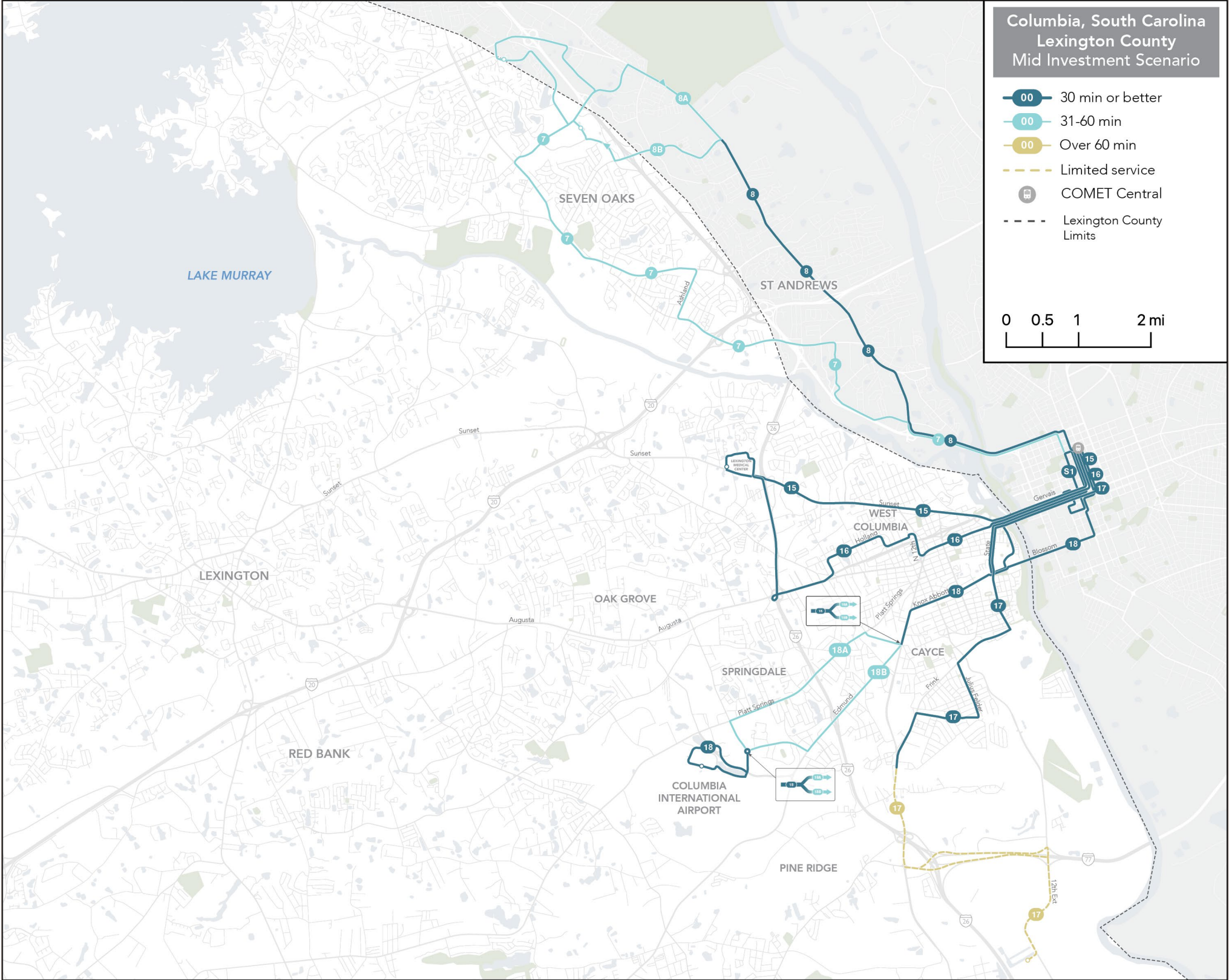

Figure 28: The COMET's Existing Network with Colored by Frequency

Low level of Investment - Access

The map on this page summarizes the change in jobs reachable. In this map, every dot represents 50 residents and the color indicates the jobs that can be reached in 45 minutes as compared to the Existing Network. Blue dots represent more jobs accessible and pink dots represent fewer jobs available. The darker the color, the greater the change in jobs accessible.

In general, the modifications to the network under this scenario don't change access very much. There are some blue or red dots indicating an increase or decrease in access to jobs. Since the dots are so light, this means that the change is access relatively small.

In the Final Recommended Network, the average resident in Lexington County can reach 2,500 jobs in 45 minutes. Under this scenario, the average resident can reach 2,700 jobs in 45 minutes, an 8% increase.

How many jobs can the average Resident in Lexington County reach in...

■ 45 Min ■ 60 Min

by transit and walking during midday on weekdays

Existing
Final +6%
Low +29%

0   2,000   4,000   6,000   8,000   10,000   12,000
Number of Jobs

Low Investment Scenario
45 min Jobs Access

Change in jobs reachable in 45 minutes from the Existing Network

More jobs accessible
- > 25,000
- 10,000 - 25,000
- 5,000 - 10,000
- 2,500 - 5,000
- 0 - 2,500
- -2,500 - 0

Fewer jobs accessible
- -5,000 - -2,500
- -10,000 - -5,000
- -25,000 - -10,000
- <-25,000

1 Dot = 50 Residents
Source: US Census LEHD 2019 and ACS 2019

Medium level of Investment

The map on the right shows what the network could look like if Lexington County wanted to invest more in transit. Like in the previous scenario, the four routes travel on different corridors and eventually connect to Downtown Columbia.

Route 15 travels along Sunset Boulevard and connects to the Lexington Medical Center. Route 16 also connects to the Lexington Medical Center but follows a path along Jarvis Klapman Boulevard, Holland Street, and Meeting Street. Route 17 provides service to Cayce via State, Frink, Juilius Felder, and Taylor. And Route 18 connects to Springdale and the airport via Knox Abbott by splitting its service between Platt Springs and Edmund.

This medium level of investment keeps the same routing on all routes (as in the previous scenario) but increases the frequency to 30 minutes. Frequency is a large part of what makes transit useful to many people, so going from 60 to 30 minutes means that many more people will find the service useful and many more people will likely ride transit. The map on the next page shows what that means in terms of access to jobs.

The existing routes 91 and 96L require two vehicles to run. This scenario would require eight total buses. Keeping the same spans of service as today, that is approximately a 400% increase in total annual revenue hours.
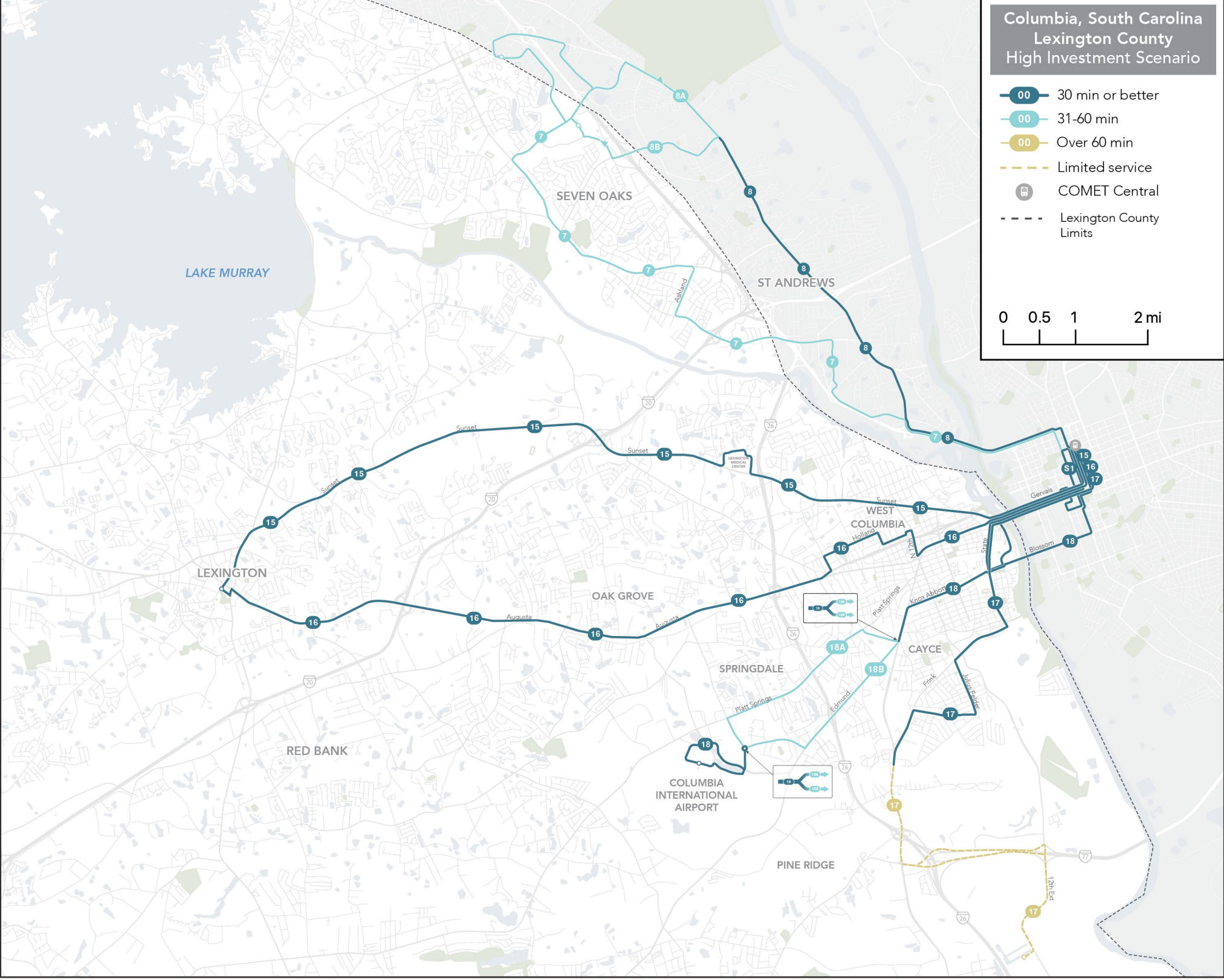

Figure 30: The COMET's Existing Network with Colored by Frequency

Medium level of Investment - Access

This scenario changes residents access to jobs much more significantly. There are many blue dots, indicating that people's access to jobs increases. The dots are also quite dark which mean that the change in access is significant.

This large increase in access to jobs is due the increase in frequency along all routes. Waiting for a bus is an important part of the total travel time when riding. So, by increase frequency, we decrease waiting time and people can get farther in 45 minutes to reach more destinations.

In the Final Recommended Network, the average resident in Lexington County can reach 2,500 jobs in 45 minutes. Under this scenario, the average resident can reach 4,800 jobs in 45 minutes, a 90% increase.

How many jobs can the average Resident in Lexington County reach in...

■ 45 Min   ■ 60 Min

by transit and walking during midday on weekdays

	Number of Jobs
Existing	
Final	+6%
Medium	+120%

0   2,000   4,000   6,000   8,000   10,000   12,000

Number of Jobs

Medium Investment Scenario
45 min Jobs Access

Change in jobs reachable in 45 minutes from the Existing Network

More jobs accessible
- > 25,000
- 10,000 - 25,000
- 5,000 - 10,000
- 2,500 - 5,000
- 0 - 2,500
- -2,500 - 0

Fewer jobs accessible
- -5,000 - -2,500
- -10,000 - -5,000
- -25,000 - -10,000
- <-25,000

1 Dot = 50 Residents
Source: US Census LEHD 2019 and ACS 2019

Figure 31: The COMET's Existing Network with Colored by Frequency

High level of Investment

If Lexington County wanted to invest even more in transit, they could further expand the network as show in the map to the right. Routes 15 and 16 could extend all the way to the Town of Lexington. Route 15 would continue west on Sunset while Route 16 would continue on Augusta Road and E Main Street. This would provide completely new service to these corridors and to the Town of Lexington.

Routes 91 and 96L require two vehicles to run. This high level of investment would require 12 total buses. Keeping the same spans of service as today, that is approximately a 600% increase in total annual revenue hours.

Figure 32: The COMET's Existing Network with Colored by Frequency

High level of Investment - Access

Under this scenario, the eastern parts of the network look very seemlier to the medium level of investment. However, the corridors along routes 15 and 16 have a significant increase in access to jobs since this would be completely new service.

In the Final Recommended Network, the average resident in Lexington County can reach 2,500 jobs in 45 minutes. With this high level of investment, the average resident would be able to reach 5,000 jobs in 45 minutes, a 100% increase.

High Investment Scenario
45 min Jobs Access

Change in jobs reachable in 45 minutes from the Existing Network

- > 25,000
- 10,000 - 25,000
- 5,000 - 10,000
- 2,500 - 5,000
- 0 - 2,500
- -2,500 - 0
- -5,000 - -2,500
- -10,000 - -5,000
- -25,000 - -10v,000
- <-25,000

1 Dot = 50 Residents
Source: US Census LEHD 2019 and ACS 2019

How many jobs can the average Resident in Lexington County reach in...

■ 45 Min   ■ 60 Min

by transit and walking during midday on weekdays

Existing	
Final	+6%
High	+150%

Number of Jobs

Figure 33: The COMET's Existing Network with Colored by Frequency

5   Next Steps

What happens next?

Reimagine The COMET has taken a wholistic look at the transit network for the Central Midlands region and recommended long-term changes based on the community's goals and priorities. This Report is meant to help you, the general public, existing transit riders, stakeholders, and elected officials understand the Final Recommended Network. When The COMET plans to make services changes over the next 10 years, they will look at this plan for guidance. As additional funding is available, there will be room to expand service beyond the recommendations in this document.

Before any service changes are implement, The COMET will hold additional public engagement to provide clear information and make sure that the community is involved.

Analyze existing conditions
2019 - Spring 2020

Transit Choices Report
Fall 2020

Develop new network
Winter 2021

Public outreach phase 2
Summer 2022

Design transit network concepts
Summer 2020

Public outreach phase 1
Fall 2020

Draft Network Report
Spring 2022

Final Network Report
Fall 2022
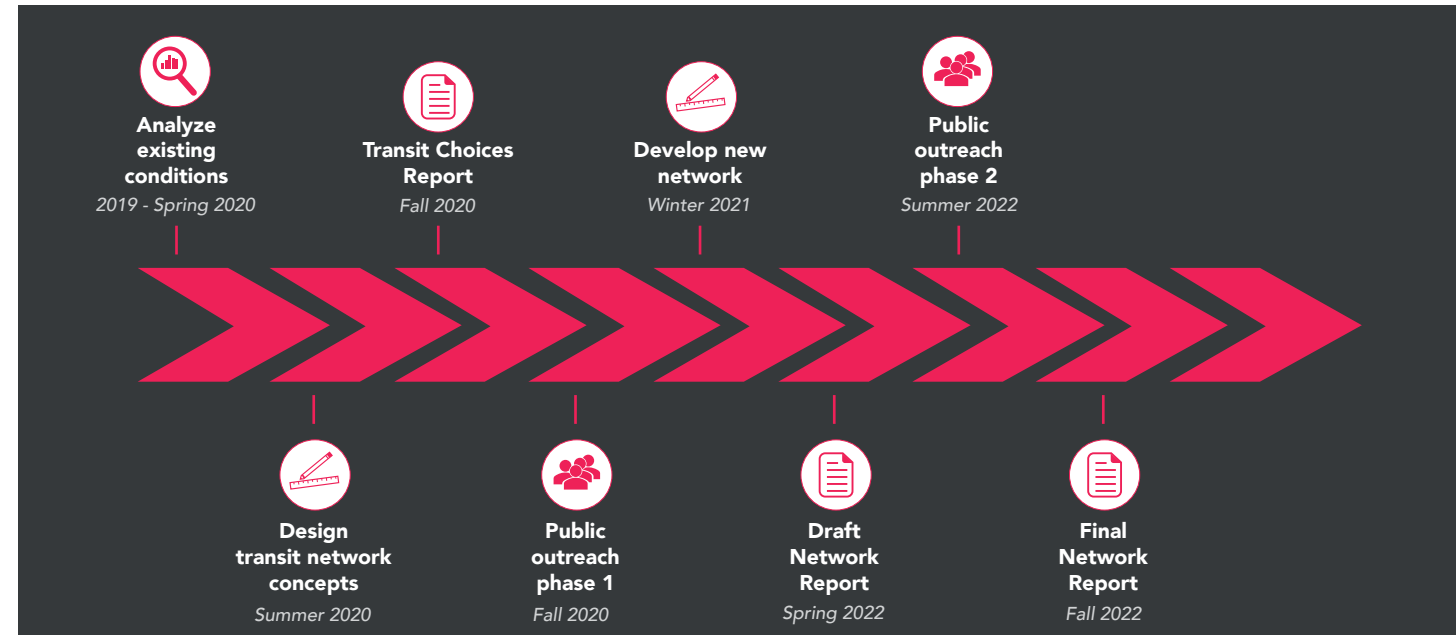
Figure 34: Project Timeline

Appendix A: Additional Maps

From

Cayce at Knox Abbot Dr and
12th Street
in the
Final Network

on weekdays at noon,
using transit, you can reach

+100   -200

+1.0%   -1.5%

Jobs   Residents
in **45 minutes**

From

Denny Terrace Community
Center
in the
Final Network

on weekdays at noon,
using transit, you can reach

-100   -200

-32.0%   -16.0%

Jobs   Residents
in **45 minutes**
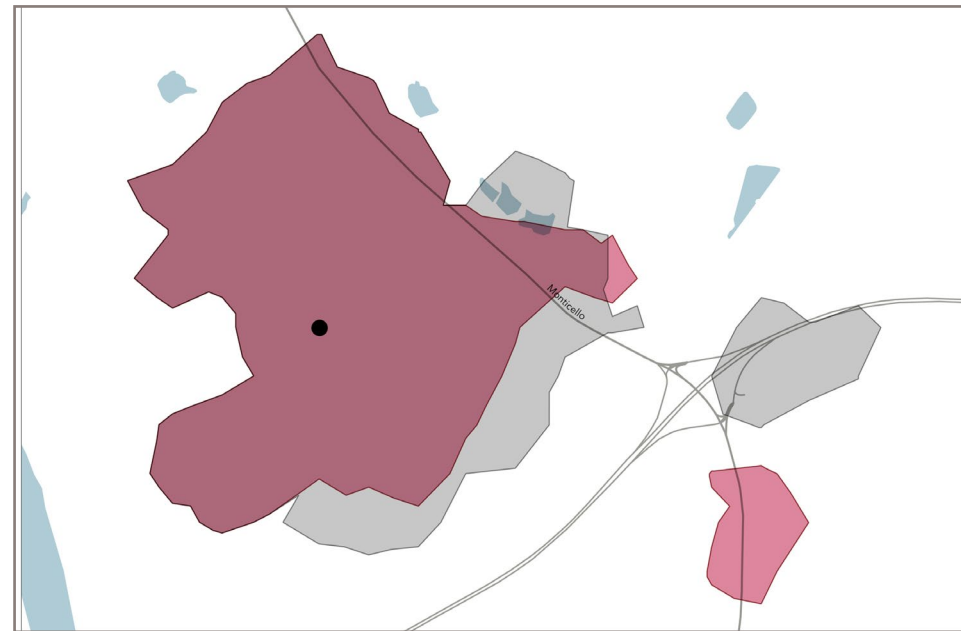
From

Eastover at Chalk St and Main
Street
in the
Final Network

on weekdays at noon,
using transit, you can reach

+0   +0

0.0%   0.0%

Jobs   Residents
in **45 minutes**
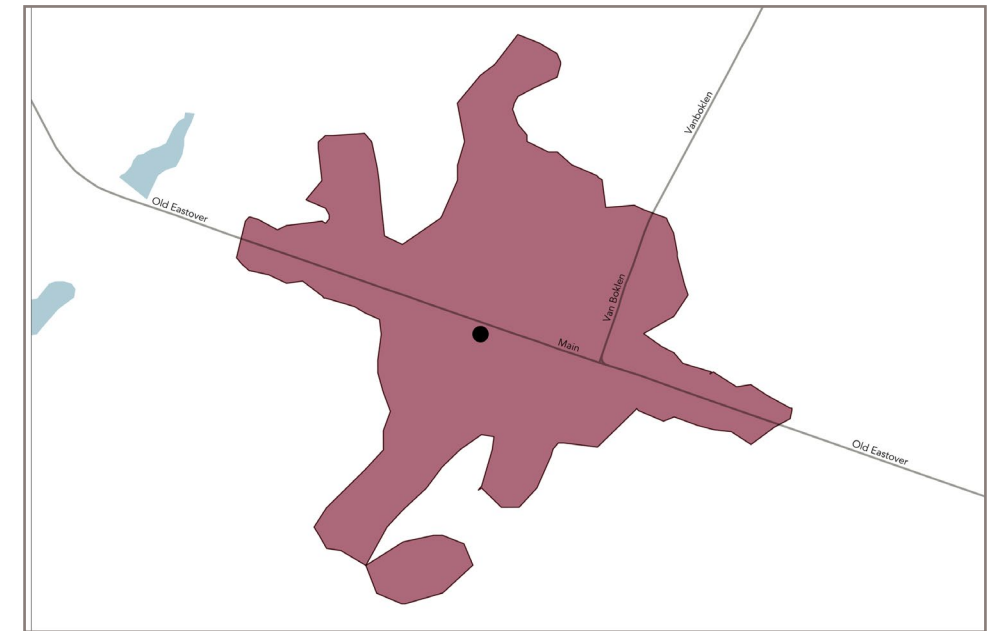
From

Eau Claire North Columbia at Monticello Road and

in the

Final Network

on weekdays at noon,
using transit, you can reach

+0   -100

+4.0%   -2.0%

Jobs   Residents
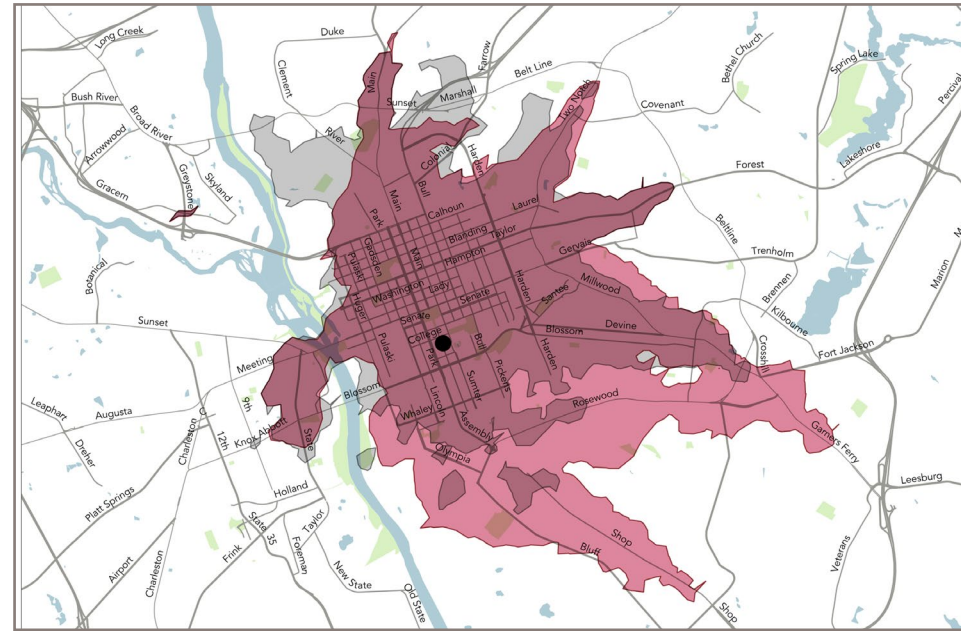
in **45 minutes**

From

Edgewood - Waverly

in the

Final Network

on weekdays at noon,
using transit, you can reach

-4,000   -1,800

-6.0%   -4.5%

Jobs   Residents

in **45 minutes**

From

Forest Acres Walmart Superstop at Forest Drive and

in the

Final Network

on weekdays at noon,
using transit, you can reach

+4,700   +5,300

+37.5%   +40.5%

Jobs   Residents

in **45 minutes**
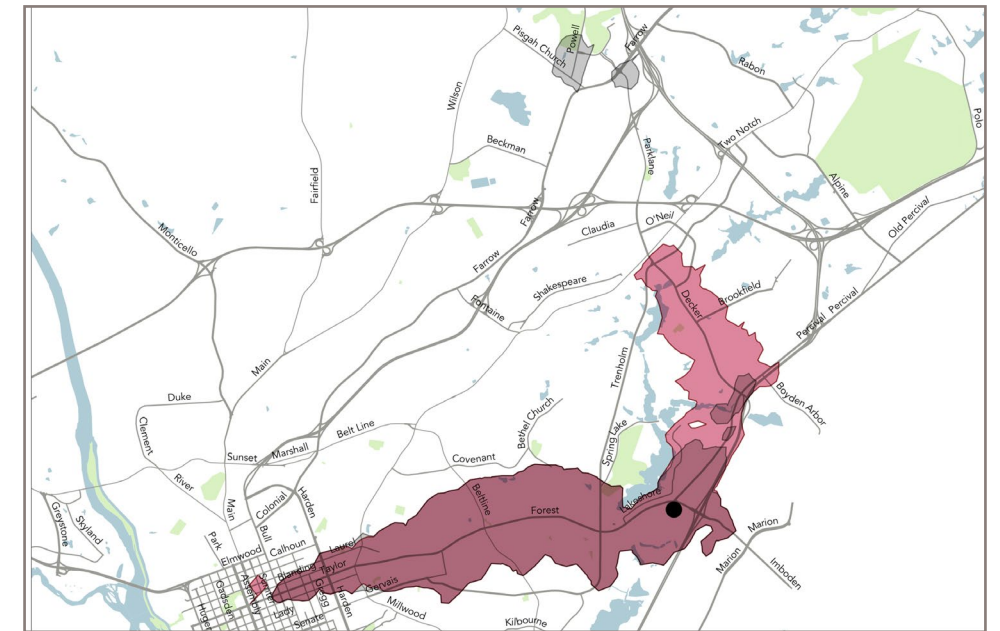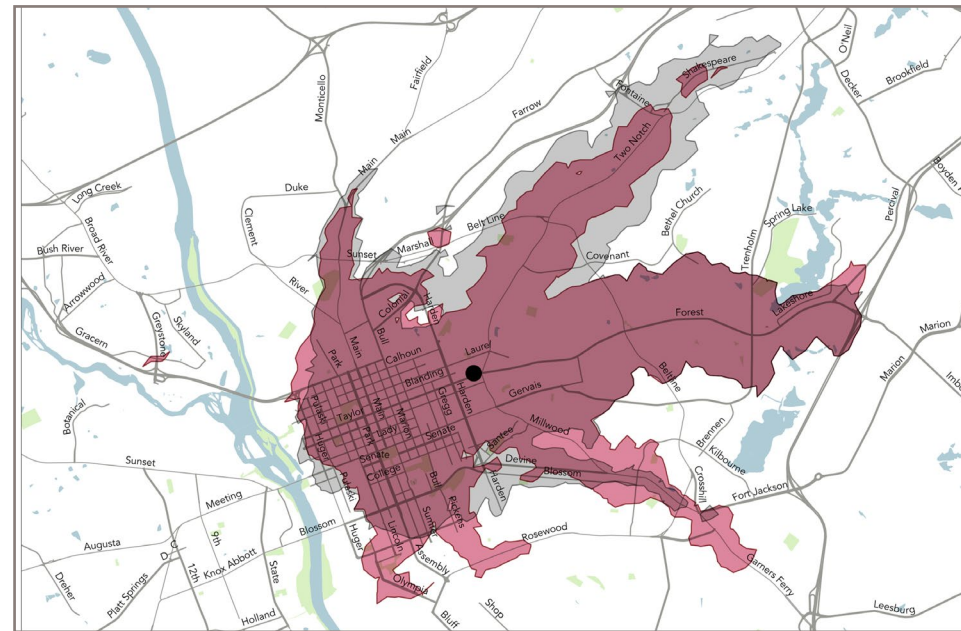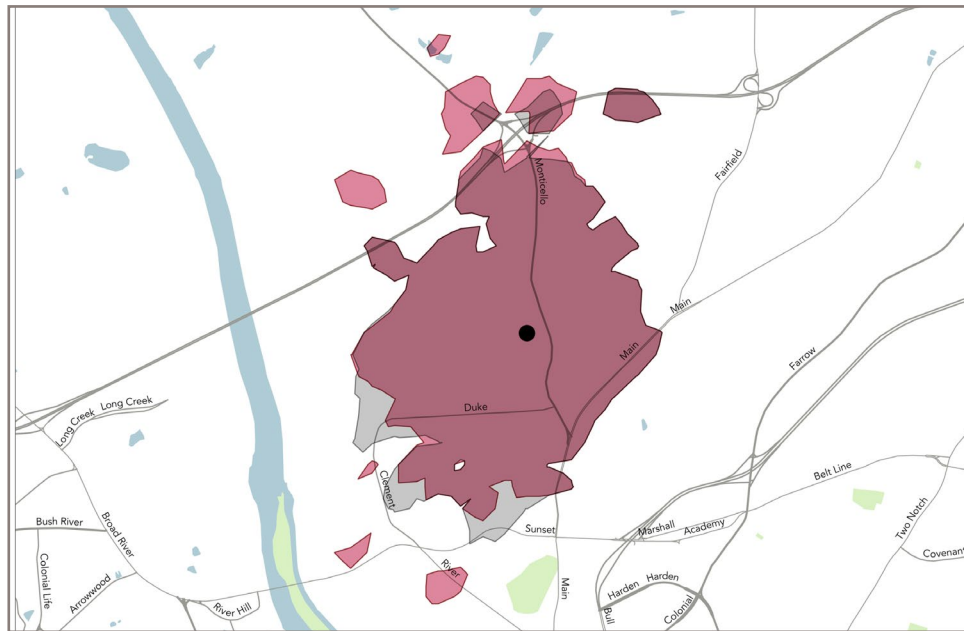
From

**Gadsden at Bluff Rd and
Congaree Rd**

in the

Final Network

on weekdays at noon,
using transit, you can reach

+0   +0

0.0%   0.0%

Jobs   Residents
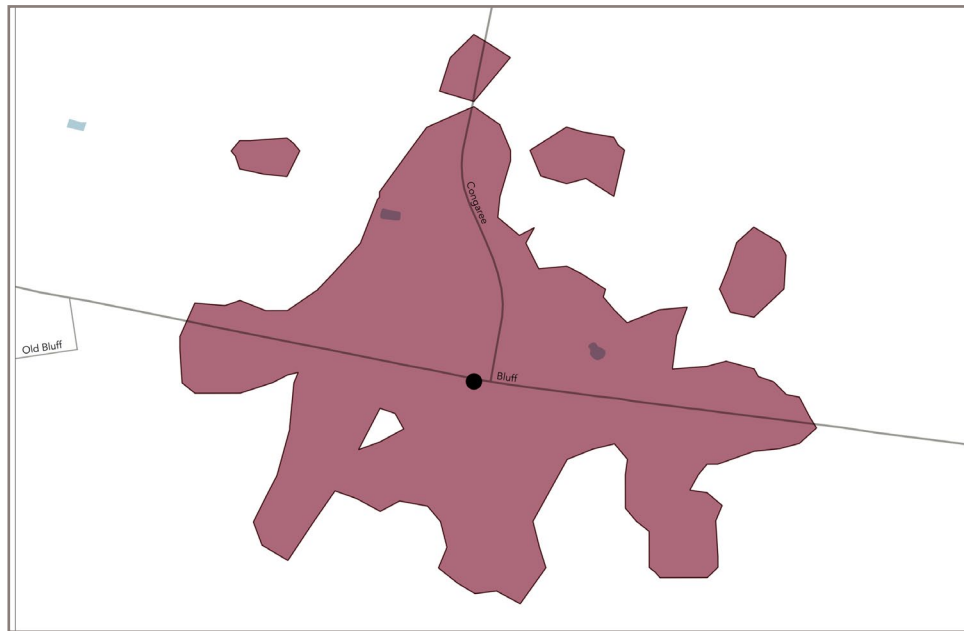
in **45 minutes**


From

**Lower Richland Food Lion at
Garners Ferry Rd and**

in the

Final Network

on weekdays at noon,
using transit, you can reach

+0   +0

0.0%   0.0%

Jobs   Residents
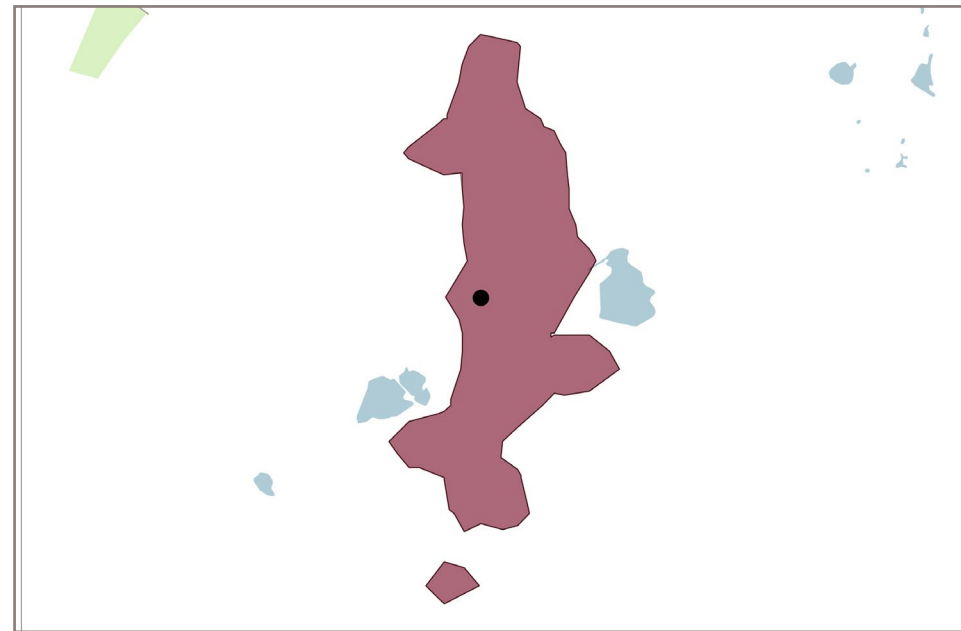
in **45 minutes**

From

**Springdale Town Hall at Platt
Spring Rd and Lee Circle**

in the

Final Network

on weekdays at noon,
using transit, you can reach

-100   +0

-4.0%   -2.0%

Jobs   Residents
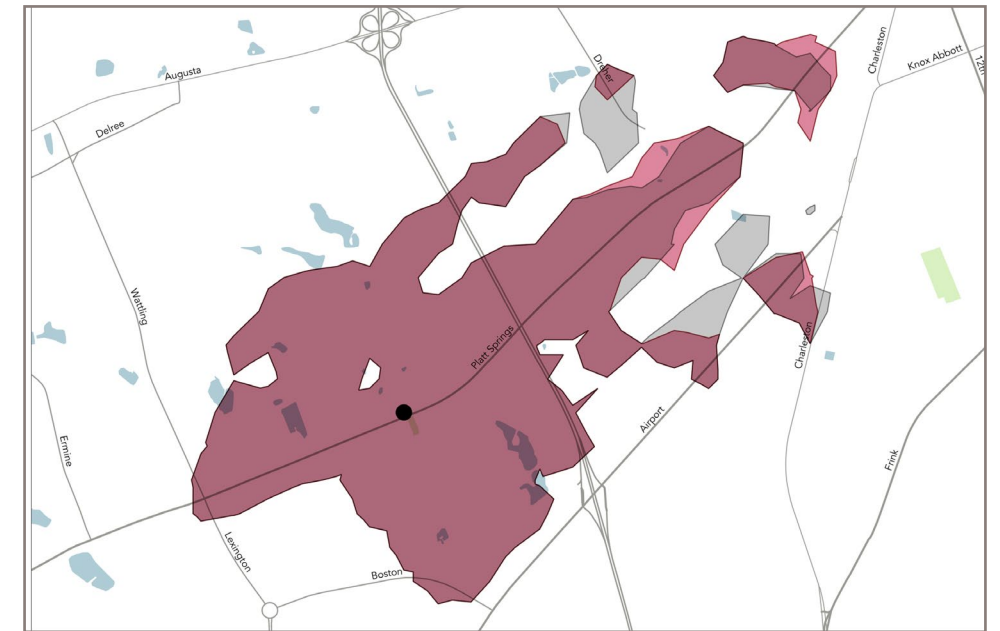
in **45 minutes**

From

St. Andrews Walmart at Harbison Blvd and Park

in the

Final Network

on weekdays at noon,
using transit, you can reach

+1,400	+3,300
+15.5%	+44.5%
Jobs	Residents
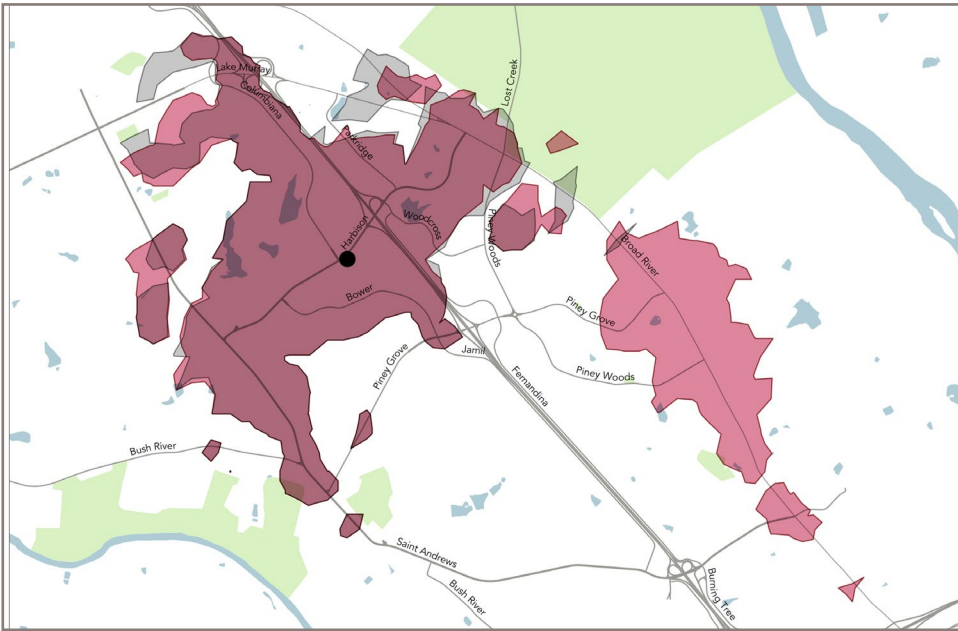
in **45 minutes**

From

University of South Carolina at Sumter St and Greene St

in the

Final Network

on weekdays at noon,
using transit, you can reach

+1,200	+6,400
+2.0%	+17.5%
Jobs	Residents

in **45 minutes**

From

West Columbia City Hall

in the

Final Network

on weekdays at noon,
using transit, you can reach

+0	+0
0.0%	0.0%
Jobs	Residents

in **45 minutes**
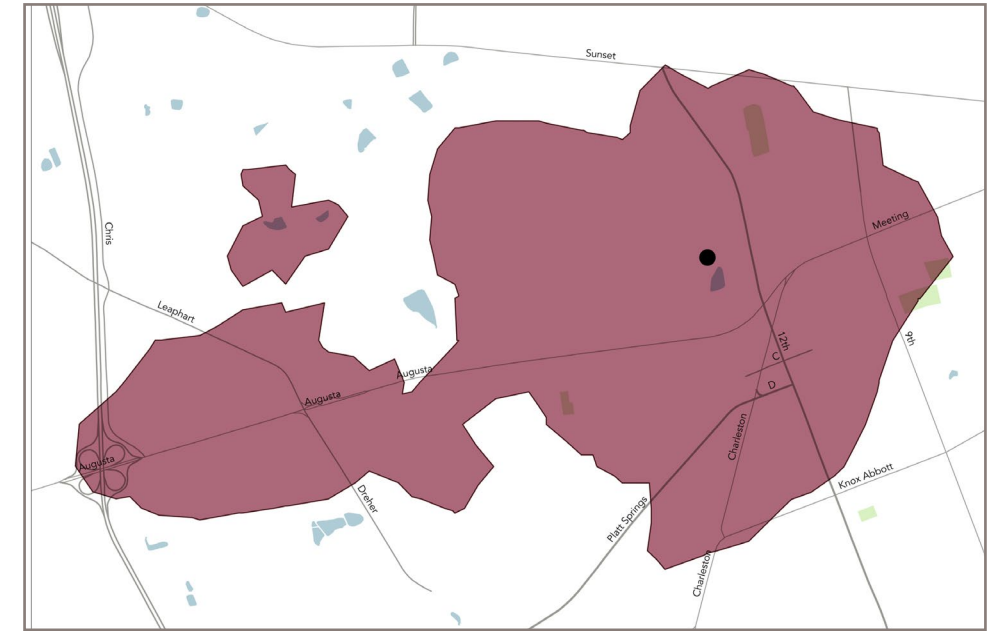
Appendix B: Engagement Results

## Q1. Compared to the Existing Network, the Draft New Network will be better for me.
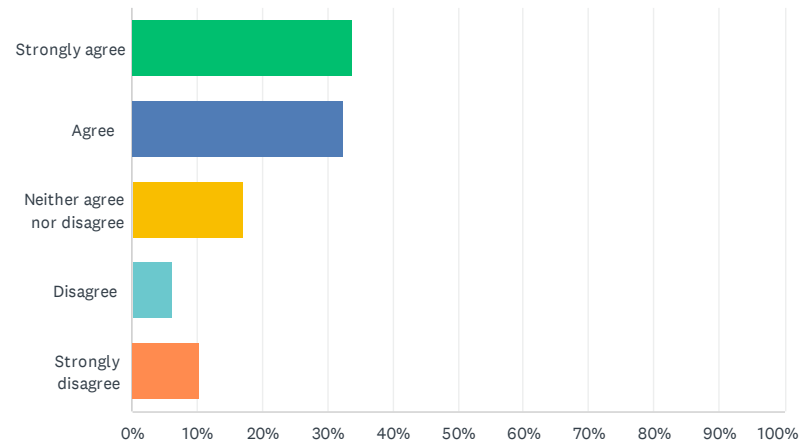
ANSWER CHOICES	RESPONSES
Strongly agree	33.81%
Agree	32.38%
Neither agree nor disagree	17.14%
Disagree	6.19%
Strongly disagree	10.48%
TOTAL	

Q2. Compared to the Existing Network, the Draft New Network will be better for me my friends, neighbors, coworkers, or others I know.
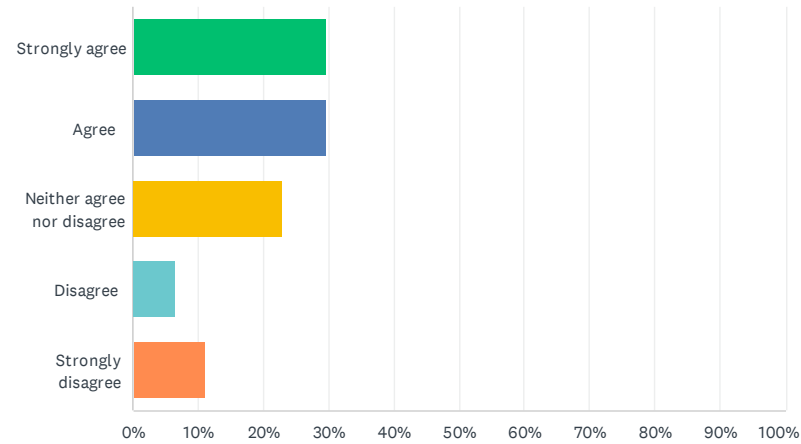

ANSWER CHOICES	RESPONSES
Strongly agree	29.67%
Agree	29.67%
Neither agree nor disagree	22.97%
Disagree	6.70%
Strongly disagree	11.00%
TOTAL	

Q3. Compared to the Existing Network, the Draft New Network will be better for the region overall.
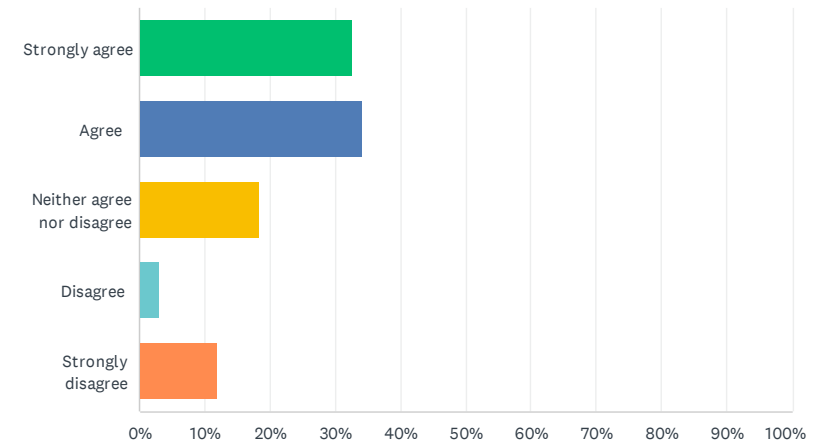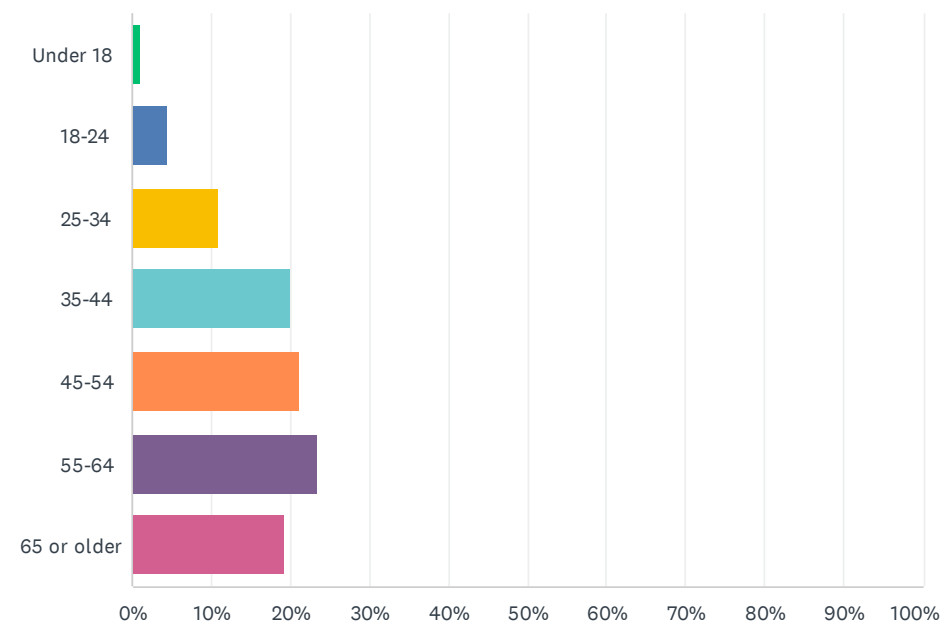

ANSWER CHOICES	RESPONSES
Strongly agree	32.69%
Agree	34.13%
Neither agree nor disagree	18.27%
Disagree	2.88%
Strongly disagree	12.02%
TOTAL	

In a typical month, how often do you use each of the following services?
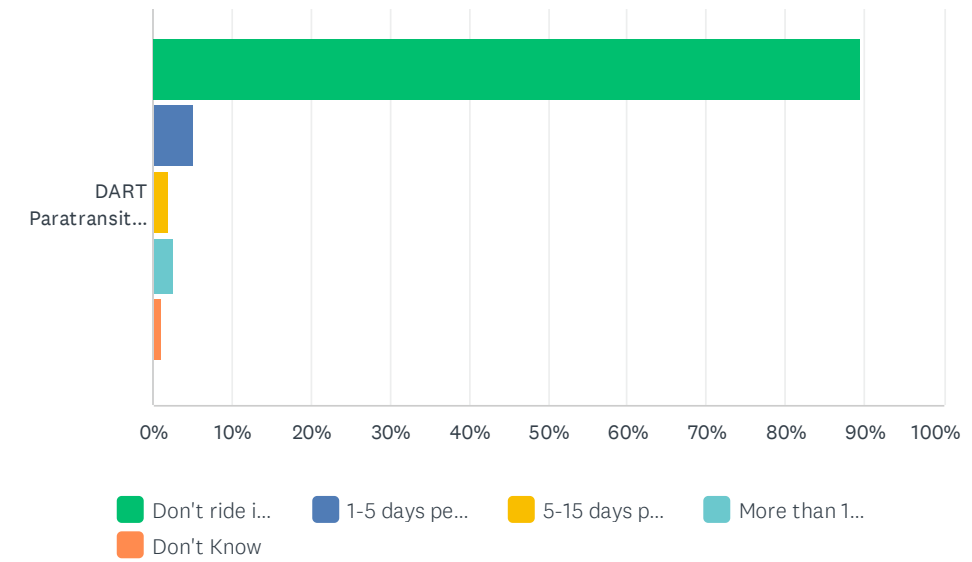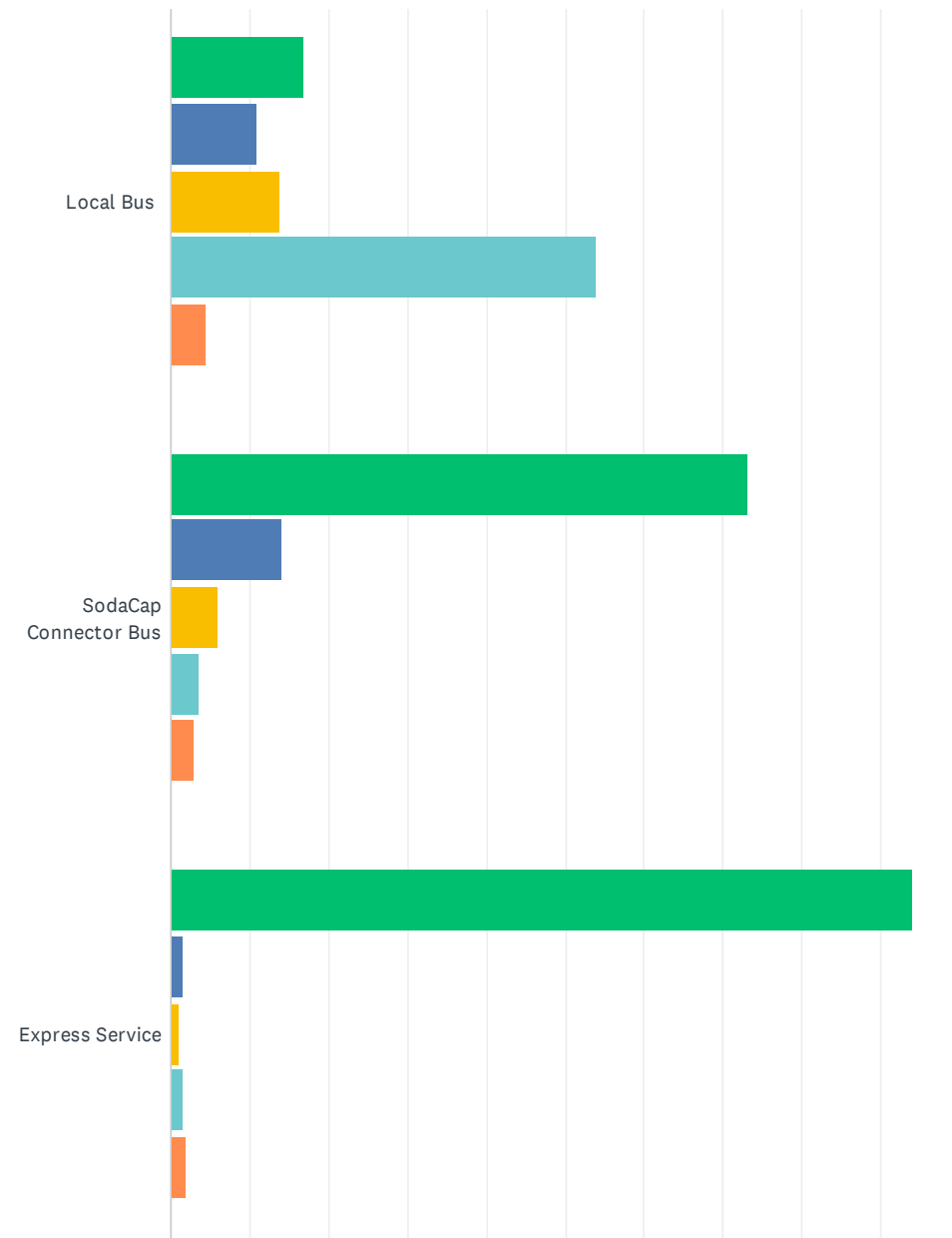
	DON'T RIDE IN A TYPICAL MONTH	1-5 DAYS PER MONTH	5-15 DAYS PER MONTH	MORE THAN 15 DAYS PER MONTH	DON'T KNOW	TOTAL
Local Bus	16.83% 34	10.89% 22	13.86% 28	53.96% 109	4.46% 9	202
SodaCap Connector Bus	73.23% 145	14.14% 28	6.06% 12	3.54% 7	3.03% 6	198
Express Service	93.97% 187	1.51% 3	1.01% 2	1.51% 3	2.01% 4	199
DART Paratransit service	89.45% 178	5.03% 10	2.01% 4	2.51% 5	1.01% 2	199

What is your age?

ANSWER CHOICES	RESPONSES	
Under 18	0.98%	2
18-24	4.41%	9
25-34	10.78%	22
35-44	20.10%	41
45-54	21.08%	43
55-64	23.53%	48
65 or older	19.12%	39
TOTAL		204

What is your race or ethnicity?
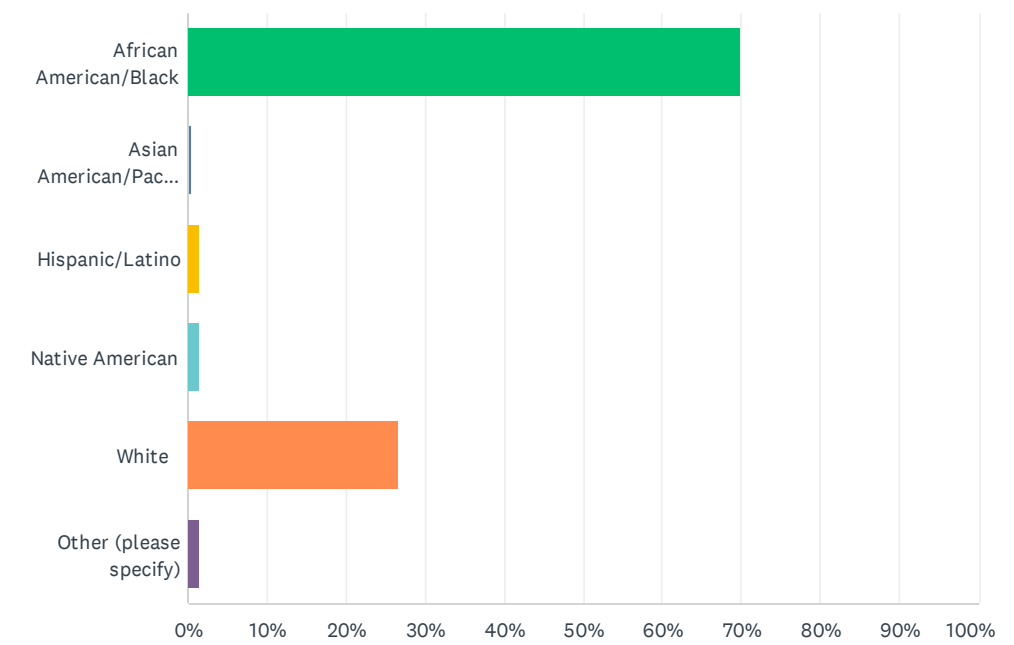
ANSWER CHOICES	RESPONSES	
African American/Black	69.95%	142
Asian American/Pacific Islander	0.49%	1
Hispanic/Latino	1.48%	3
Native American	1.48%	3
White	26.60%	54
Other (please specify)	1.48%	3
Total Respondents: 203		

You identify your gender as:
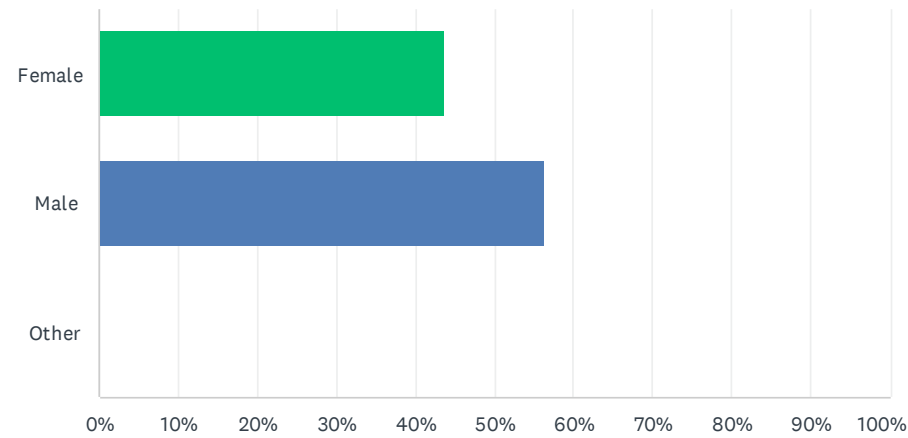
ANSWER CHOICES	RESPONSES	
Female	43.63%	89
Male	56.37%	115
Other	0.00%	0
TOTAL		204

		62
		13

What is the combined annual income of all people living in your home?

Answered: 180   Skipped: 30
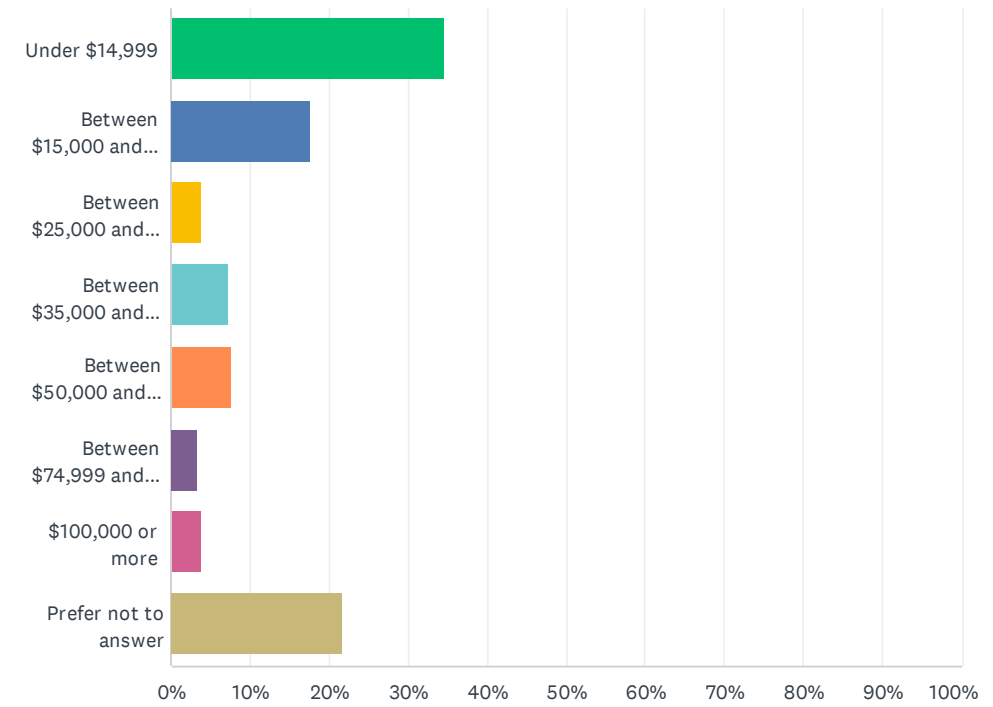
ANSWER CHOICES	RESPONSES	
Under $14,999	34.44%	62
Between $15,000 and $24,999	17.78%	32
Between $25,000 and $34,999	3.89%	7
Between $35,000 and $49,999	7.22%	13
Between $50,000 and $74,999	7.78%	14
Between $74,999 and $99,999	3.33%	6
$100,000 or more	3.89%	7
Prefer not to answer	21.67%	39