

# Transit Existing Conditions

## Executive Summary

MAY 31, 2022

TriMet Forward Together

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# Why this project now?

Forward Together is about the design of TriMet's services and schedules: where should the buses go, and when? What should the structure of lines and schedules be? What goals should the agency be pursuing in its service design? Our focus is largely on the bus network since it is the easiest to revise as needs change.

TriMet's most recent systemwide network planning project was the Service Enhancement Plan (SEP) process completed in 2018. Most of the work of developing the individual SEPs happened between 2011 and 2016. The SEPs generated ideas for future bus network structure based on extensive analysis and conversations with the community. The SEP ideas have been the source of many of the service improvements that have been made since then.

Dramatic shifts in ridership and travel demand have occurred since the beginning of the COVID-19 pandemic. The simplest view of the change is illustrated by **Figure 1**, showing the enormous drop in ridership and significant reduction in service since the beginning of the pandemic. The number of riders, the places they are

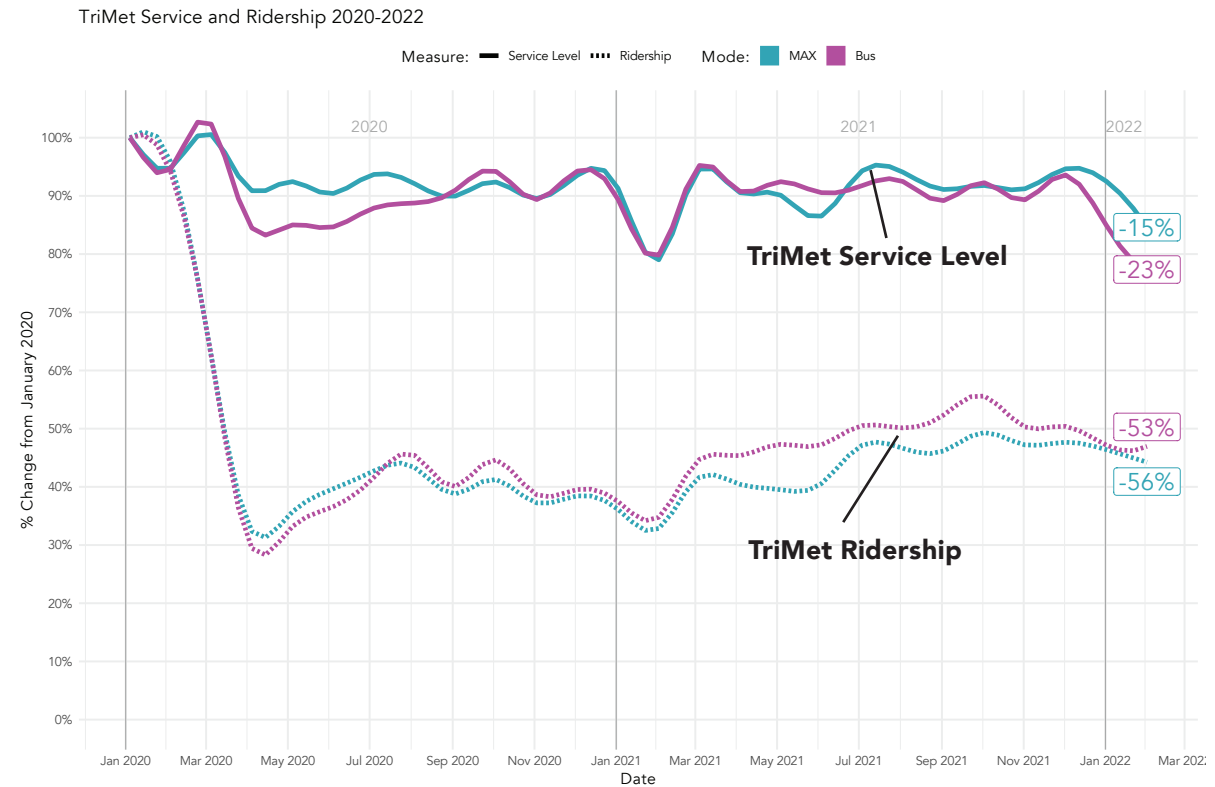


Figure 1: TriMet Service Level and Ridership, 2020-2022

going, and the outcomes the public desire from transit are all changing. For these reasons, TriMet needs to take a fresh look at the network.

# Why this project now?

## Three Kinds of Change

The last two years have seen abrupt and possibly permanent changes in the life and economy of our region and have raised new questions about what TriMet's priorities should be. Planning forward, we must think about three dramatic changes that have affected TriMet and the communities it serves:

- Changes in Goals and Priorities
- Changes in Need and Demand
- Changes in Financial Resources

With Forward Together, TriMet wants to start a public conversation about how the agency's network should change in the face of all these questions.

### Changes in Goals and Priorities

The foundation of this effort is the need to update our priorities. Transit plays a central role in many issues that people care about, including urban development, social equity, racial justice, traffic, safety, and climate change. Each of these issues suggests certain priorities for TriMet, but they sometimes push

the agency in different directions.

For that reason, Forward Together will develop three alternative network concepts. Each one will consist of a network of proposed lines, specifying how frequently, and at what times, each line would operate. Each concept will be designed to serve one or more popular goals, but they will differ in what their priorities are among those goals. The point is to illustrate to the public several different possible ways that the network could develop – each with clear advantages and disadvantages – so that the community can help TriMet determine which concept should be the starting point for the next changes in its network.

### Changes in Need and Demand

COVID-19 caused a steep drop in transit ridership that has been returning gradually, but it also changed the shape of transit demand. Rush hour commuting is a much smaller share of our ridership than it was before. What is the future of rush hour demand, which was a significant part of our ridership before the pandemic? Should we prepare for a future in which some

office workers no longer commute at rush hour every day?

### Changes in Financial Resources

Unlike the SEPs, the Forward Together recommendations will be financially constrained. They will be designed to be financially possible for TriMet to implement in the next three years. This funding level is 9% above the pre-COVID service level, as it accounts for recent Federal assistance and new state funding flowing through HB 2017. It is 32% above the level of service operated now in early 2022, a level that is held down by a shortage of staff. The revenue level assumed in Forward Together is not a statement about how much transit service the region needs or should have; it's merely a description of what, given the current funding sources, TriMet anticipates it can afford.

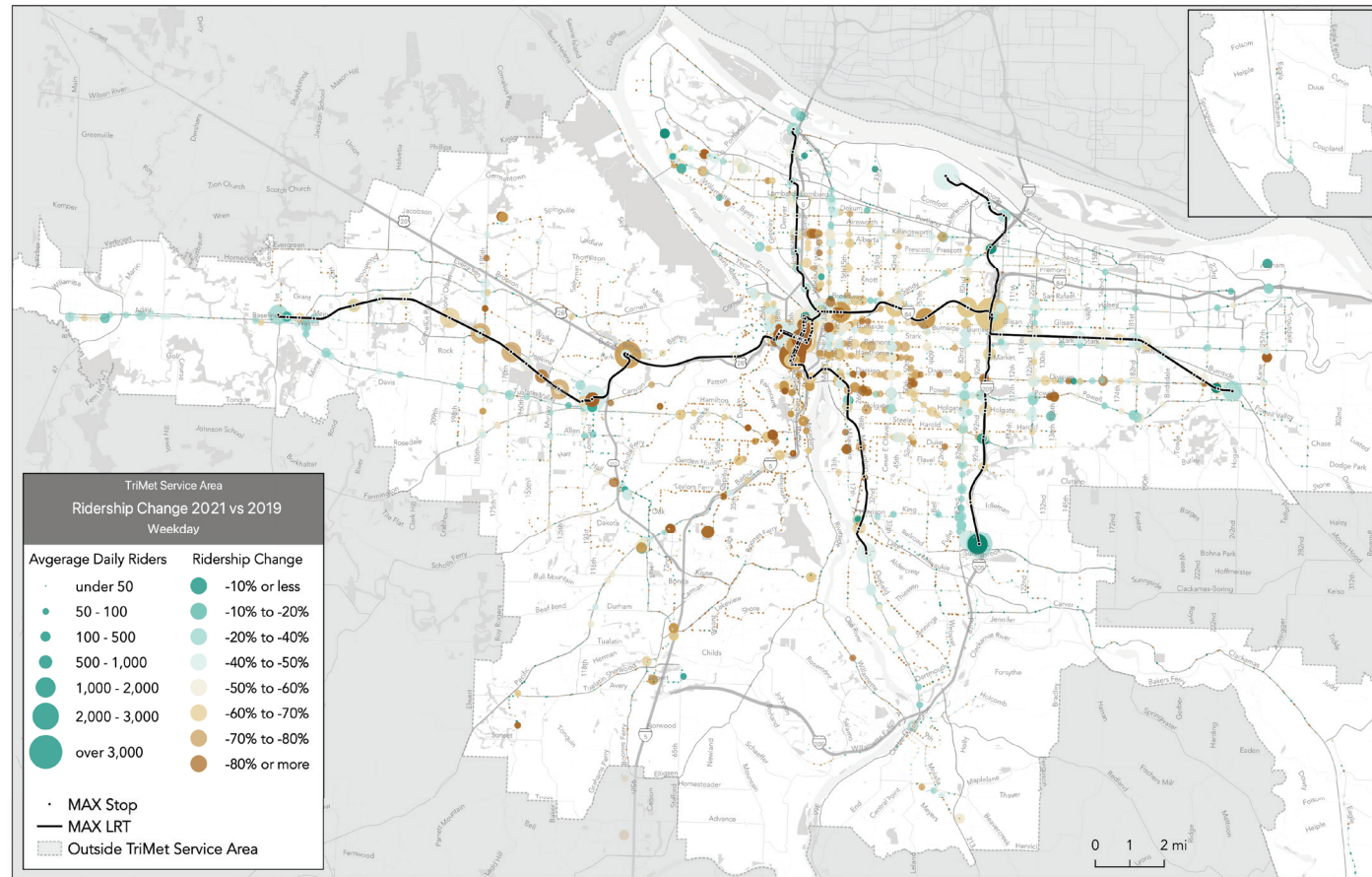
**The foundation of Forward Together is the need to update our priorities.**

# Changes in demand

One of the biggest changes in the past two years is where people are riding transit.

**Figure 2** shows the change in daily ridership by stop, compared to the network as a whole. Stops that lost more ridership than the network average are shown in shades of brown, while stops that retained more of their 2019 ridership are shown in green. Each stop is sized based on 2019 average daily weekday boarding.

Generally speaking, ridership fell off the most on the downtown-oriented commuter corridors, as many office workers shifted to remote working. These were some of TriMet's most important markets before the pandemic. Ridership fell off the least on corridors that serve employment that has always stayed in-person (particularly retail and service sector jobs), and that serve lower-income areas and areas with households with limited access to personal vehicles.



**Figure 2: Change in Ridership by Stop, Fall 2019 and Fall 2021**

While pandemic-era restrictions are a thing of the past, the changes produced by the pandemic have proven more durable. As part of the existing conditions phase of this project, interviews were conducted with a number of major employers, including downtown

office employers; few reported any near-term plans to return to the mandatory in-person work expectation that fueled the pre-pandemic downtown commute pattern.

# Network design goals

Transit can serve many different goals. Individual people and communities value these goals differently. Some common goals for transit include reducing single-occupancy vehicle trips, providing an affordable transportation option for people without access to a car, generating high ridership, or offering a lifeline service to as many people as possible .

TriMet has adopted its own set of goals, which are laid out in its FY2022 - FY2027 Business Plan, shown in **Figure 3**. This document identifies internal and external objectives for the agency. This version of the document is currently out for public comment, but the customer-focused goals are similar to those in prior years.

These goals address a range of widely held values among the public, including environmental sustainability, economic opportunity, equitable distribution of public benefits, reducing congestion, and helping deliver the urban development outcomes of the Metro 2040 Growth Concept.

**Some of these goals are only served if many people use transit.** For example, transit can only mitigate congestion and reduce greenhouse gas emissions if many people ride the bus rather than drive. We call such goals **“ridership goals”** because they are achieved only when many people use transit rather than drive.

Goals related to economic opportunity and equitable mobility are also related to the ridership goal, because for the positive outcomes that affordable, useful public transportation can provide to be widespread in the community, many members of the community must actively use the service.

**Other goals are served by the simple presence of transit.** A bus route through a neighborhood provides residents insurance against isolation, regardless of whether or not they are able to drive, walk or cycle a long distance. A route may also fulfill political or social goals, for example by getting service close to every taxpayer or into every municipality. We call these types of goals **“coverage goals”** because they are achieved in large part by covering geographic areas with service and ensuring that transit is widely available, rather than by high ridership.

| Customers  |                    |   |  |  |                                |  |
|------------|--------------------|---|--|--|--------------------------------|--|
| Goals      | 1 Satisfied riders |   | 2 Satisfied community stakeholders and employers |  | 3 Supportive broader community |  |
| Objectives | 1A                 | Provide safe service                                    | 2A   | Improve environmental sustainability and stewardship and reduce TriMet's carbon footprint                                | 3A                             | Ensure strong support for transit and TriMet     |
|            | 1B                 | Increase ridership                                      | 2B   | Advance mobility for those with limited options  | 3B                             | Increase funding for regional mobility expansion |
|            | 1C                 | Improve customer experience, information, and services  | 2C   | Support economic opportunity for all by expanding employee access to jobs and customer access to businesses and services |                                |  |
|            | 1D                 | Ensure equitable distribution of services and resources | 2D   | Help shape the future of cities and our region in line with Metro 2040 Growth Concept                                    |                                |  |
|            |                    |   | 2E   | Ease congestion by providing attractive travel options during peak periods   |                                |  |

Figure 3: TriMet Customer-Oriented Goals from TriMet Business Plan FY2022-23



# Ridership and coverage goals

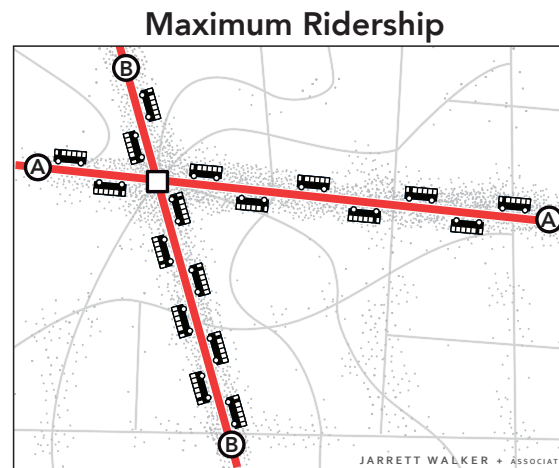
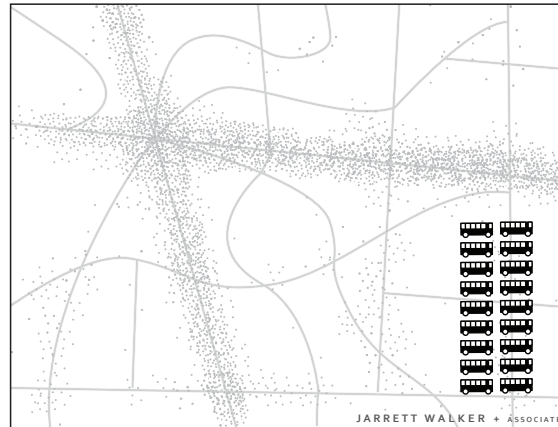
In planning transit services, the goal of **ridership** is in conflict with the goal of **coverage**. **Figure 4** explains why.

In the fictional town at the top of the image, little dots indicate the presence of people and jobs. The lines indicate roads. Most of the activity is concentrated around a few roads. The transit agency serving this town has 18 buses and drivers it can use to provide service.

A transit agency pursuing only a ridership goal would focus service on the streets where there are large numbers of people. Because service is concentrated onto fewer routes, frequency is high, and a bus is always coming soon.

If the agency's only goal was coverage, it would spread out services so that there was a bus route near everyone. Spreading the buses out means spreading them thin. These buses wouldn't come very often, so they'd be less likely to be there when a customer needs them.

Your own goals for transit probably imply an opinion about the ridership-coverage tradeoff. The Coverage goal means service in every city, and



Imagine you are the transit planner for this fictional town.

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?

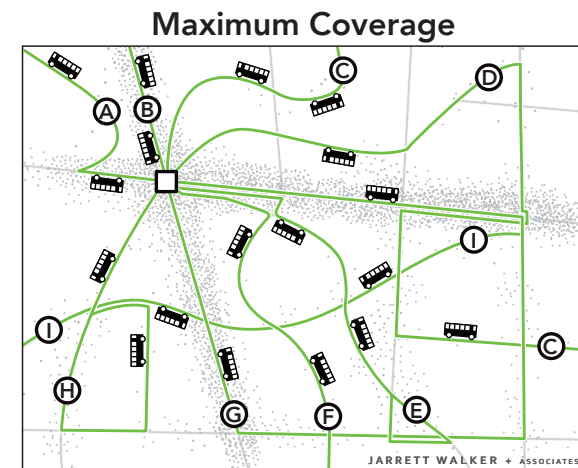


Figure 4: Ridership and Coverage Goals

lifeline access for people regardless of where they live. The Ridership goal leads to the reduced vehicle trips and emissions, plus greater support for dense and walkable development.

In reality, no transit agency designs service only for ridership, or only for coverage. All agencies must determine for themselves the proper balance of these goals within their financial limits.

# TriMet's Market

When TriMet considers the balance between ridership and coverage in its own network, it begins by looking at its market. Where are the people who could choose to use the service, if it met their needs?

One of the most important factors is density: how many people or destinations are near each potential bus stop. **Figure 5** is a map of the region where each dot represents 25 residents. Dots closer together mean higher density.

When planning for a ridership goal, these are the areas that higher frequency service would focus on, because they have more people who could choose to ride transit.

The colors on this map show how many jobs are within a mile-walk of each resident. Blue dots are residents who are close to lots of jobs; red dots represent residents who do not live close to jobs. Where this number is very high, many people will walk or cycle. But overall, high ridership transit focuses on these concentrations of jobs. On the other hand, lower density areas (dots wider apart) are more likely to be served only if coverage is the goal.

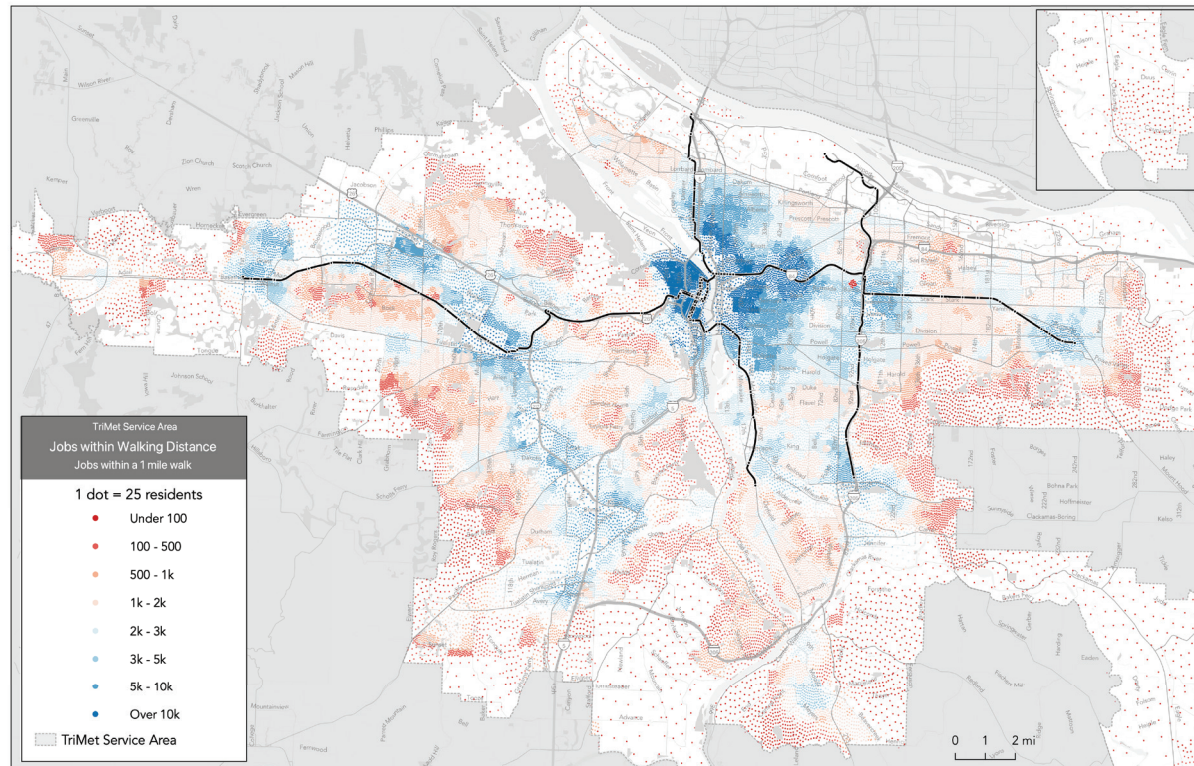


Figure 5: Proximity in the TriMet Service Area  
ACS 5-Year Estimates, 2015-2019, LEHD LODES 7, 2018

Density is one of the most important things TriMet must consider when designing service, but there are many other factors that together shape the network. The full Transit Existing Conditions report provides a detailed overview of a variety of demographic and land use factors that can together influence transit's ridership potential.



# Transit Equity

TriMet is committed to equity across its operations. As the agency's 2019 Title VI Program Update reads:

*Continuing to invest in transit equitably and embracing an inclusive model where equity is a core business objective is critical to TriMet.*

For TriMet, transit equity has three defining elements:

*Policies that promote the equitable distribution of burdens and benefits*

*Promoting equal access to resources and services*

*Engaging transit-dependent riders in meaningful planning and decision-making processes*

TriMet has a sophisticated 10-factor equity index that can serve as a helpful guide in planning for equity goals, but identifying areas of equity priority is just the beginning of this process. The full Transit Existing Conditions includes a detailed description of this index and other important factors for equity-focused service design.

Transit equity goals are embedded within the ridership/coverage tradeoff.

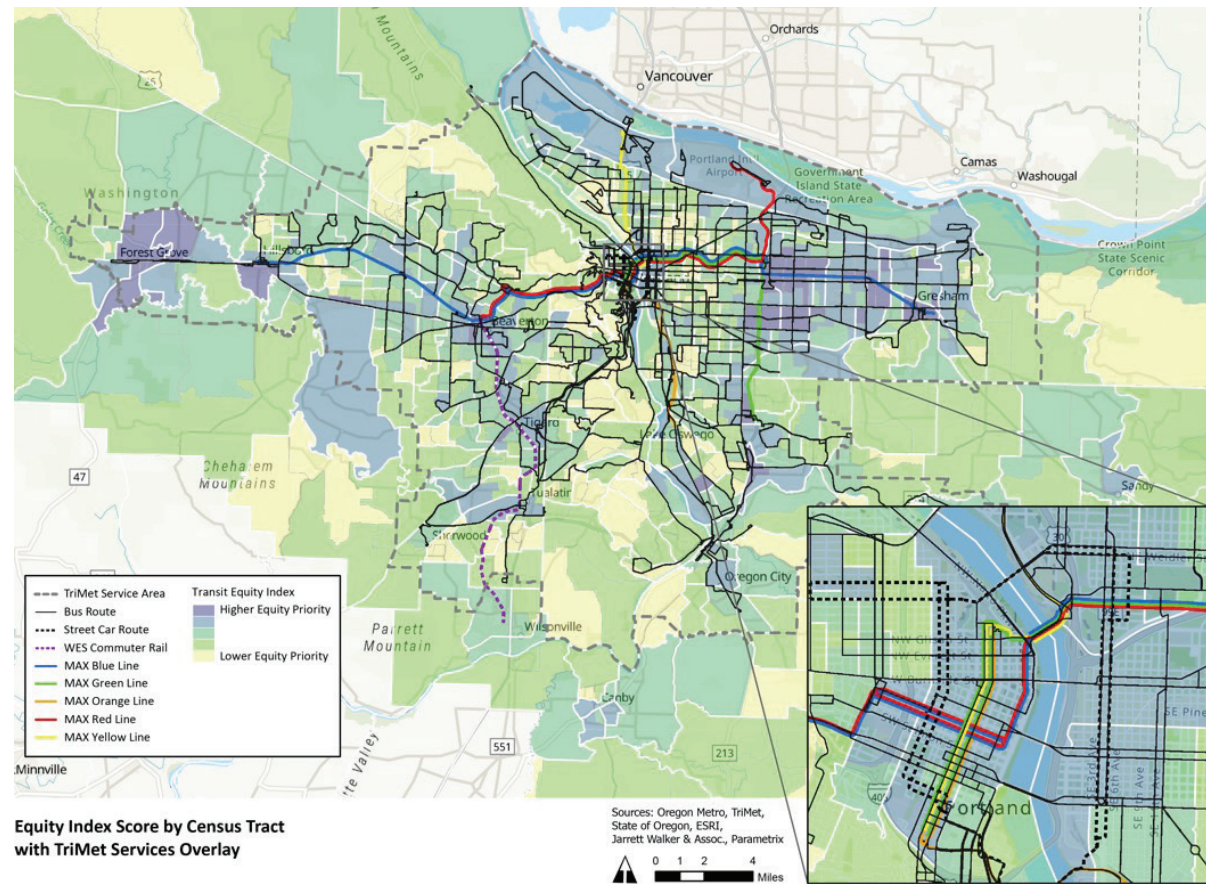


Figure 6: TriMet 10-Factor Equity Index

One of the challenges that all transit agencies face in planning more equitable service is in defining exactly what the service should be doing, and which more equitable outcomes it should be pursuing.

Should transit be design to be **more useful** for disadvantaged populations, reducing the burden of travel time, and potentially cost of vehicle ownership for people of color and lower-income people, and expanding the range of



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# Transit Equity Goals

opportunities it can connect them to? This is an equity goal that is embedded within the ridership goal, because it requires a useful service that can attract substantial ridership to ensure that the outcomes it can deliver are broadly felt throughout the community. TriMet's objective of "economic opportunity for all" is an example of an equity goal that requires a useful network capable of generating high ridership.

Should transit be **widely available** for members of disadvantaged communities, so that everyone that needs transit has access to it? This is a coverage goal, and service designed to achieve it will need to run in places that are unlikely to generate high ridership, to ensure that few people are left behind.

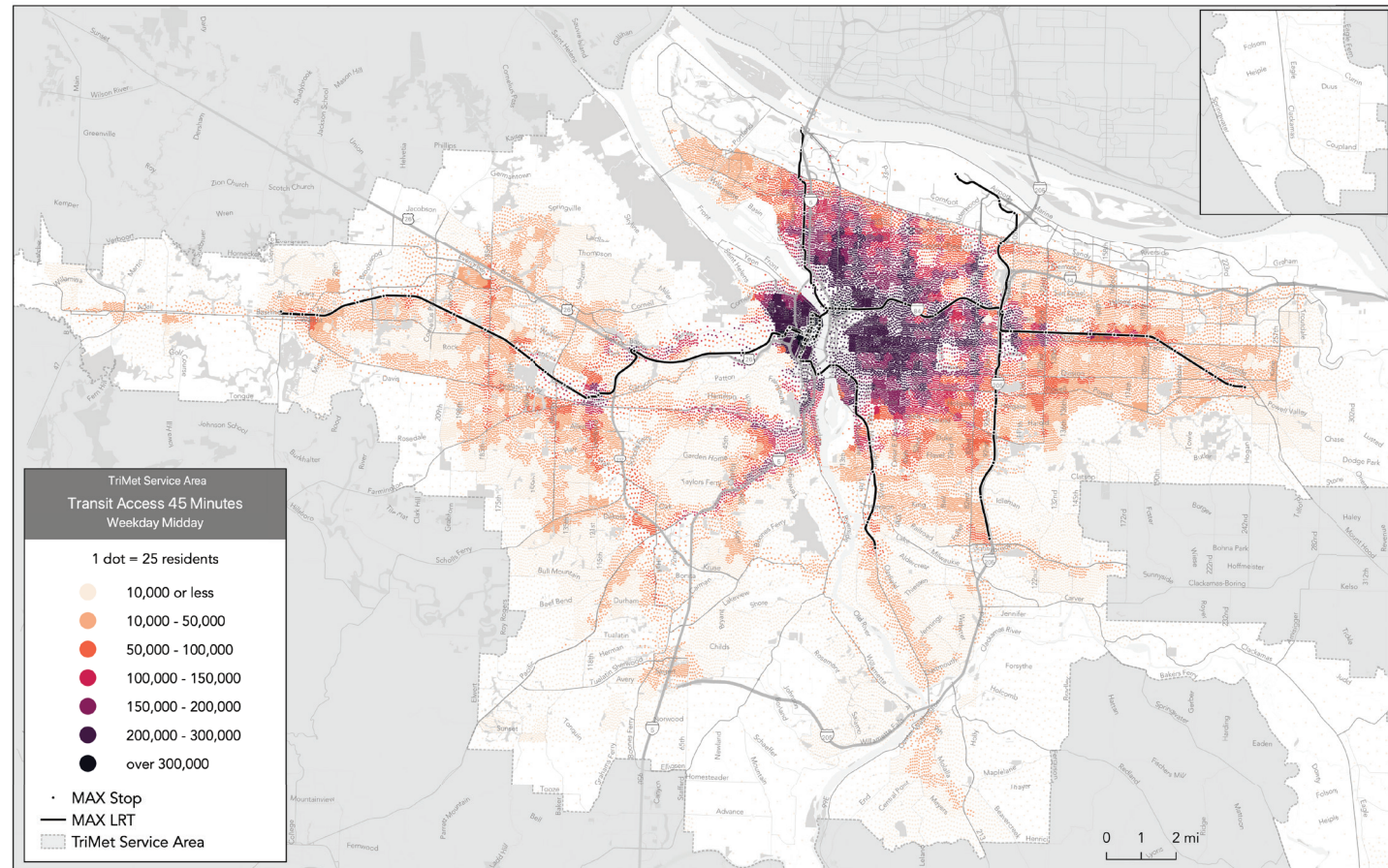
One of the purposes of Forward Together is to better understand which equity goals TriMet should be focused on as it designs service.

# Access Analysis

One of the most important measures that will be used in Forward Together is access analysis. When we talk about access, we are talking about where transit can take you: to work, to the grocery store, and all the other places people need to travel to in the course of everyday life. What sort of opportunities does the transit network put in reach within 45 minutes?

The full Transit Existing Conditions Report describes access in much more detail, but **Figure 7** provides one of the most basic illustrations.

This map shows a dot for every 25 people in the TriMet service area. Those dots are shaded based on how many jobs they could reach on transit in 45 minutes. The darker dots are where residents can reach more jobs, both because they are close to job centers like Downtown Portland, and because they are close to TriMet's most useful



**Figure 7: Job Access by Transit - 45 minutes at 12:00 p.m. on a weekday**

routes like MAX and the Frequent Bus Network, which run every 15 minutes or better all day.

In Forward Together, we will use access (to jobs, and to other types of destinations) to compare each alternative. How

do the places where transit is most useful change when the goal of the network design is more focused on ridership, coverage or equity than today?

# Next Steps in Forward Together

## The Forward Together Process

This study has three main phases. The chart on the next page provides a more detailed timeline for this study.

### 1. Existing Conditions

The reports in the first phase of this project are about analyzing the existing network and telling the story of why TriMet's service looks like it does today. That's the purpose of the main Transit Existing Conditions Report. The accompanying Trends in Transit Mobility memo focuses on the major trends in transportation that have emerged since the beginning of the pandemic that TriMet will have to consider as it plans for service restoration.

During the existing conditions phase, TriMet also conducted initial outreach about some of the goals and priorities for transit described in this document and the main Transit Existing Conditions Report.

### 2. Alternatives

The purpose of this project is to

convene a public conversation about which goals TriMet should prioritize as it restores service. TriMet will design three alternatives focused on illustrating design goals that emerged from the first phase of outreach. These will be presented to the public in Summer 2022 in an effort focused on the goals and values they believe should go into service planning. The network alternatives will help to clearly explain the costs and benefits of each option.

### 3. Future Service Recommendation

Finally, a report detailing the future service recommendation will be developed in Fall 2022 based on the input received in the Summer Phase 2 engagement process. This is not about picking a single alternative as "the" future service recommendation; instead, it will synthesize the feedback received in the engagement processes into a set of lessons for TriMet to carry forward into its future service planning efforts.

The form of the recommendation in this document will depend entirely on the nature of the public conversation, and

what TriMet hears from its riders, stakeholders, and the broader community.



# Forward Together Timeline

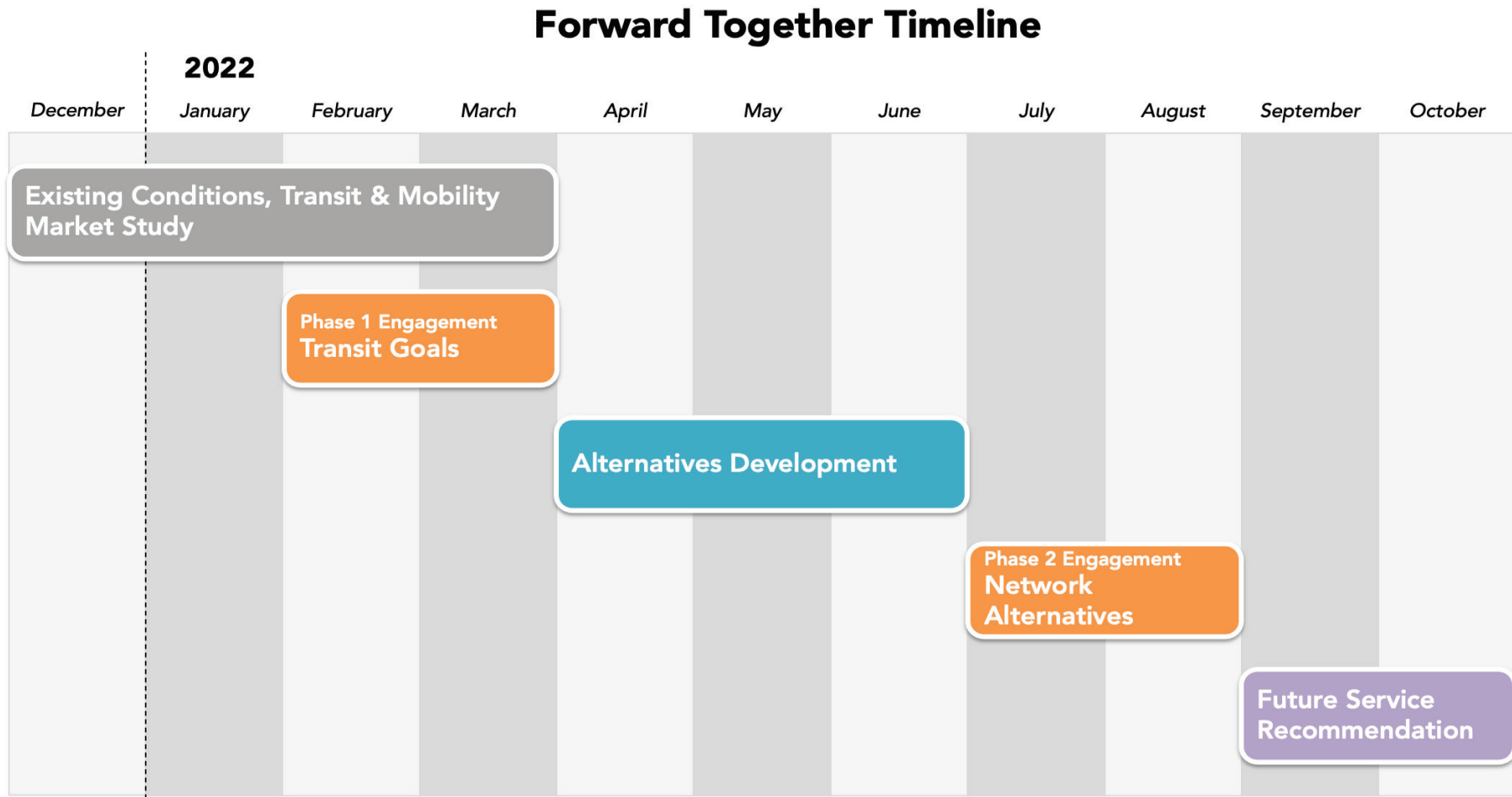


Figure 8: Forward Together Timeline