Transit Master Plan

Volume I: Choices Report

For Canby Area Transit

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Summary

This report is the first step in the development of a new Transit Master Plan for the City of Canby.

It is called a "Choices Report" because it lays out some key choices for Canby's transit stakeholders and decision-makers. These choices have no technically correct answer. They are a question of values, which only the community can answer. These key choices will have an influence on how Canby Area Transit (CAT) plans for the future.

The two key choices described in this report are:

- With some minor changes, Canby Area Transit could serve the *same number* of dial-a-ride and paratransit customers using a smaller portion of its budget. Is this change worthwhile? If so, it would free up some budget for other uses.
- How should any additional budget be spent: In more express bus routes to other cities, or in an in-town circulator?

Starting on page 45, two future Alternatives are described, that can help people imagine what it might be like if Canby's answer to the first question were "Yes, we should slightly shift our investment toward fixed routes." These two Alternatives show how much service of different types (Route 99, dial-a-ride, paratransit, or a local circulator) could be afforded, within Canby's existing transit budget, if intercity services were increased, or if a local circulating route were added.

These Alternatives are meant to aid the imaginations and conversations of Canby transit stakeholders. Only in the next phase of this project, once public input on these key choices has been collected, will a more detailed plan for future transit services be written.

Canby's transit resources are very limited, and within a limited budget trade-offs like these naturally arise. CAT cannot do it all, and must make trade-offs. The public is invited to think about these trade-offs, and provide their input on how CAT should make them in the future.

This report was published in January 2017 by Jarrett Walker & Associates (JWA), a transit planning firm leading this Master Plan process. JWA is assisted with public engagement by the MultiCultural Collaborative, a consulting firm specializing in community engagement in planning.

Following the release of this report, CAT staff and consultants will be attending meetings, making presentations, distributing surveys, and taking input in other ways, through the end of March 2017.

For more information, and to join the email list to receive information about upcoming meetings and other news, please:

- Email CATMasterPlan@gmail.com
- Call (503) 266-4022
- Visit http://canbyoregon.gov/transportation/CAThomepage.htm

Introduction

This report is the first step in the update of Canby Area Transit's Master Plan.

In this report, we document the existing conditions of transit service in and around Canby. We also present some key choices on which Canby stakeholders will be asked to focus during this Transit Master Plan process.

We hope that readers of this report will come away with an understanding of the basic facts, and well-prepared to help Canby Area Transit make these choices for the future.

The Variety of Transit Services in Canby

There are two basic types of transit service operated by the City of Canby (as Canby Area Transit, or CAT):

Fixed-Route Transit

A fixed route is one that serves fixed stops, in a particular order, at scheduled times.

Route 99 is CAT's only fixed route. It serves stops from Oregon City to Woodburn, along Highway 99E. It does not operate on weekends or major holidays.

There is a more subtle distinction within this type of service, between "express" and "local" fixed routes. This distinction is not always noticeable to customers, but it is important because it affects a transit agency's duty to provide ADA paratransit, which we describe below.

Route 99 has both "express" segments and "local" segments. The segments outside of the city of Canby are "express." The segment inside of the city is considered "local."

The map on the following page shows CAT's Route 99 in a regional context, and the other transit services that reach Canby

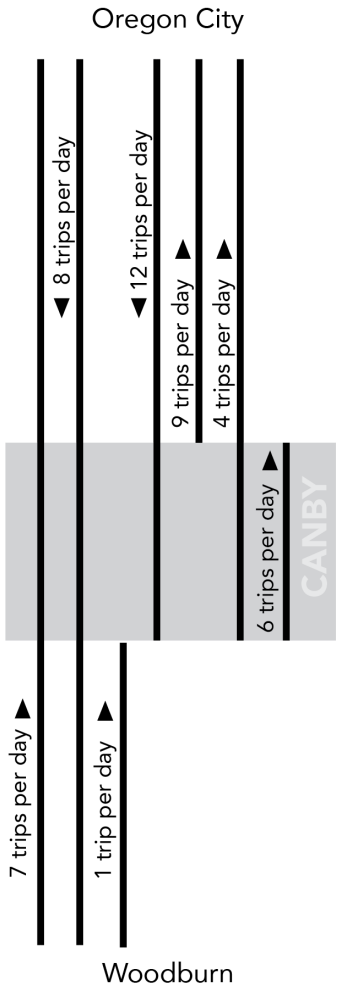


Figure 1: This diagram represents Route 99. The service pattern is fairly confusing, but in short, there are 20 round trips each day between Canby and Oregon City, and 8 each day between Canby and Woodburn.

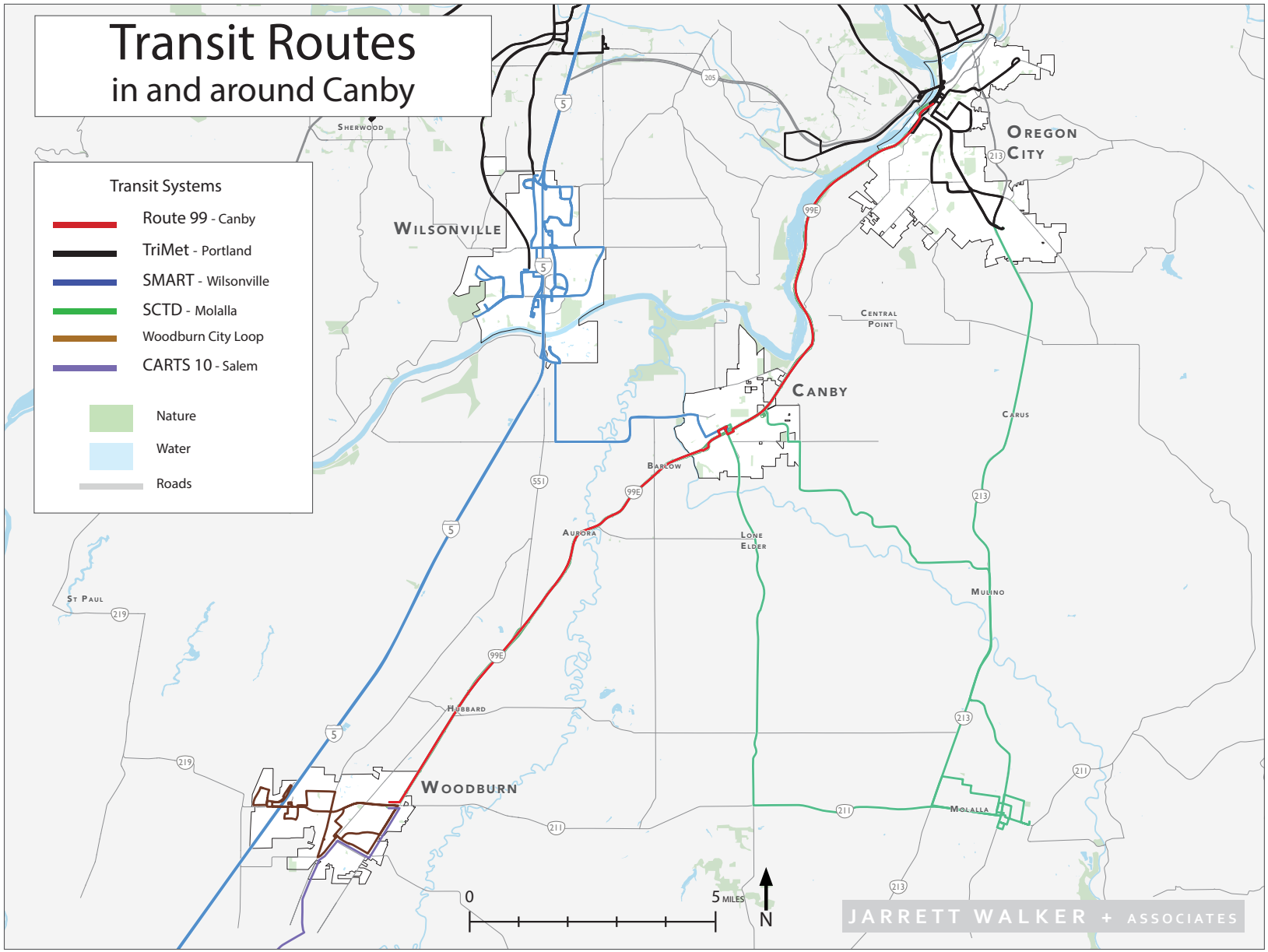


Figure 2: This map shows all of the fixed route transit in the region around Canby, color-coded based on the agency that provides it.

or the ends of Route 99.

Demand Responsive Transit

Demand responsive transit responds to individual demands for service, within a defined geographic area. People may request a ride to and from places of their choosing, at a time of their choosing. Service can be "curb-to-curb" or even "door-to-door." Riders often share the transit vehicle with other people who are making trips around the same time, to or from nearby places.

The fares for Canby's demand responsive services are the same as for fixed routes ($1). Reservations must be made in advance, so that CAT can schedule buses and drivers, and combine multiple trip requests onto a single vehicle. (The process of taking trip requests from customers and creating vehicle routes each day is not so different from the process used by package delivery companies like UPS or FedEx.)

There are two types of demand-responsive transit operating in Canby:

ADA PARATRANSIT

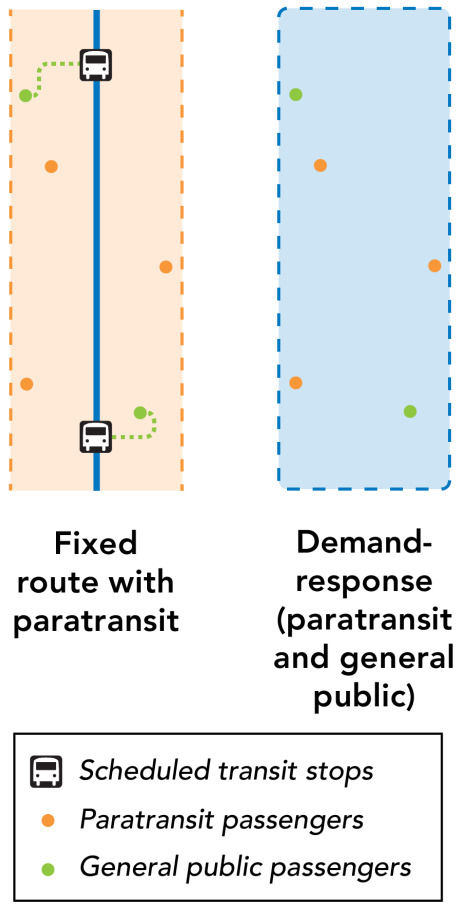
Some of CAT's demand responsive service is ADA paratransit, and it is meant to serve people whose disabilities prevent them from using local fixed routes. The Americans with Disabilities Act of 1990 established that all fixed route transit must be complemented by paratransit. The ADA paratransit must be provided to and from places within 3/4 mile of a local fixed route, during the same hours of operation as the local fixed route. ADA paratransit is not required of "express" routes, which has consequences we will describe later in this report.

CAT's obligation to provide ADA paratransit is currently tied to two services:

- The "local" segment of Route 99.[1]
- TriMet's local fixed routes inside Oregon City.

This latter obligation actually comes from an agreement that the City of Canby and TriMet made in 2002, when Canby pulled out of the TriMet district.[2] This is TriMet's

Figure 3: At left, a fixed route goes to fixed stops. Able-bodied passengers (green dots) walk to the stops. People who cannot access the stops because of a disability (orange dots) are eligible to be picked up by ADA paratransit. At right, a demand-response service picks up both types of passengers, when and where they request it.



1. The definitions of "local" and "express" routes are very important, but federal guidance is a little bit vague. Routes that run many times a day, don't leave a city, make closely-spaced stops, and deviate to local destinations are generally considered "local."

2. In 2002, Canby agreed that customers with disabilities would be given direct paratransit service to and from places within Oregon City, rather than having to transfer between Canby and TriMet paratransit buses at the Oregon City Transit Center (where customers with disabilities traveling beyond Oregon City make the transfer to TriMet paratransit).

ADA obligation, but by mutual agreement, Canby has taken it over.

GENERAL PUBLIC DIAL-A-RIDE

Unlike ADA paratransit, dial-a-ride is available to any member of the general public, no matter their age or ability. However, dial-a-ride is still required to be accessible to wheelchairs and other mobility devices.

CAT provides general public dial-a-ride within the Canby city boundaries. Like Route 99, dial-a-ride is not available on weekends or major holidays. People can request a trip at a certain time, but if CAT does not have space available, CAT may offer them a different time to travel. CAT is allowed to decline requests for dial-a-ride service if the service is fully booked, to a degree that is not allowed with ADA paratransit.

Legally, ADA paratransit and general public dial-a-ride are distinct services, operating under different rules. However, in Canby, as in most small towns, paratransit and general public dial-a-ride customers ride together on buses. The reservation process is the same for both groups. The costs are very similar, and passengers' experiences are similar. As you will see later in this report, most of the performance data we cite is for the two services, combined.

Combining general public dial-a-ride and paratransit services together is normal for a city Canby's size, and can improve efficiency.

The rules and standards are different for the two types of service. For example, general public dial-a-ride is offered on a "space-available" basis, and customers requesting trips can be turned down. Paratransit customers cannot be turned down in the same way.

CAT is required by law to provide ADA paratransit because of the local transit service Canby (and TriMet) are providing. CAT is not required to provide general public dial-a-ride; it is optional.

What causes transit ridership?

In this report we will refer to transit ridership, by which we mean the number of people getting on any given transit service.

The causes of high transit ridership vary only slightly from one town to the next. There are certain causes that are fairly universal, and we will present them here, so that the reader can keep them in mind when thinking about whether and how to increase ridership on CAT's services.

Transit ridership arises from:

- Frequent, long-duration services, that are there for people *when* they need to travel, following patterns of:
  - Density
  - Walkability
  - Linearity, and
  - Proximity
- With additional incentives provided by very long distances, high driving costs, or high parking costs.

How often a transit service must come to qualify as "frequent" depends on the market it is serving. Within a city or town, where people can easily walk, cycle, drive themselves or get a ride from someone else, transit must come often to compete for their business. In a small city like Canby, even 15 minutes would be a long time to wait for the bus, because most people have other options that will get them there in less time.

For longer trips, between cities, there are much bigger impediments to getting a ride from a friend, or cycling, or even driving oneself, and so people are generally willing to plan their life more around the bus schedule. A bus that goes to a neighboring city every hour could be considered "frequent" enough.

(When thinking about frequency and waiting time, remember that waiting doesn't just happen at the start of the ride – it also happens at the end. If your bus comes once an hour, it may force you to choose between being 10 minutes late to work or 50 minutes early. This is a problem with low-frequency service that even real-time arrival technologies cannot solve.)

The geographic and land use conditions that contribute to high transit ridership are crucial, though they are not controlled by the transit agency. The diagram on the following page illustrates their effects.

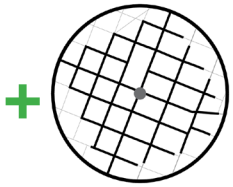
Four Geographic Indicators of High Ridership Potential

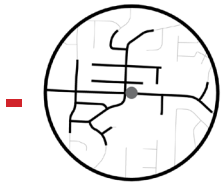
DENSITY *How many people, jobs, and activities are near each transit stop?*

+ Many people and jobs are within walking distance of transit.

- Fewer people and jobs are within walking distance of transit.

WALKABILITY *Can people walk to and from the stop?*

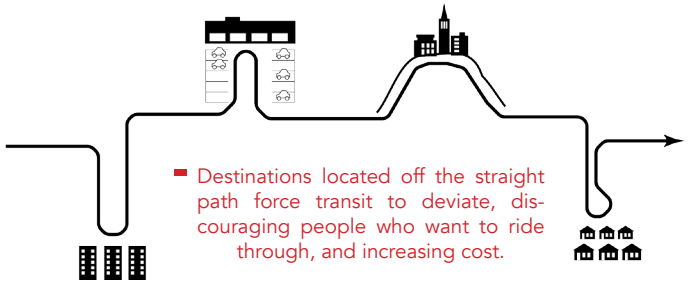




+ It must also be safe to cross the street at a stop. You usually need the stops on both sides for two-way travel!

LINEARITY *Can transit run in reasonably straight lines?*

+ A direct path between any two destinations makes transit appealing.



- Destinations located off the straight path force transit to deviate, discouraging people who want to ride through, and increasing cost.

PROXIMITY *Does transit have to traverse long gaps?*

+ Short distances between many destinations are faster and cheaper to serve.

- Long distances between destinationss means a higher cost per passenger.

Figure 4: These four factors have a big influence over transit ridership, but are not controlled by transit agencies.

Transit's conflicting goals

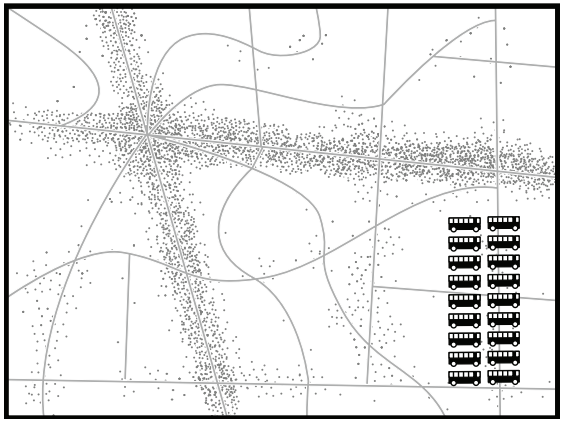
There are two basic categories of goals that transit can serve:

- Goals that are reached through **high ridership**, i.e. high productivity.
- Goals that are reached despite low ridership, but arise from **coverage and access.**

Many transit agencies have adopted goals like *"We will serve everyone"* and *"We will run efficiently and maximize ridership."* Yet these two goals are in conflict, due to basic math and geography.

In the fictional town illustrated on the following page, the little dots are dwellings and buildings and other land uses. The grey lines are roads. Most of the activity in the town is concentrated around a few roads, as it is in most towns.

If the transit agency's only goal were to generate ridership, it would focus on providing just a few routes, with very frequent service for many hours each day. In the "Ridership Goal" network, all 18 buses are running on just two routes on the two major roads. Service along the busiest and densest corridors, is relatively frequent.

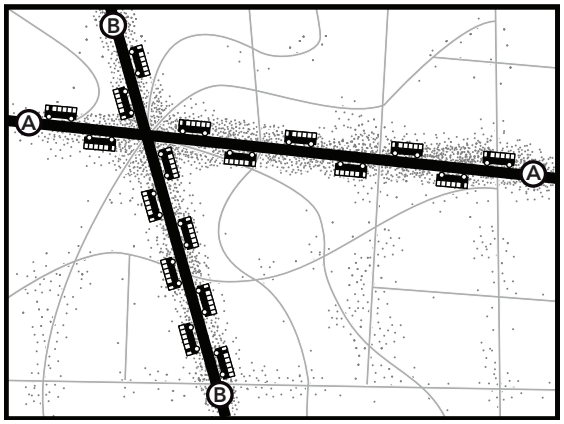


Imagine you are the transit planner for this fictional town. The dots scattered around the map are people and jobs; the streets shown are ones on which transit can be operated. The buses are the resources available to run transit.

Before you can plan the transit routes, you must first decide what you want transit to do.

Ridership Goal

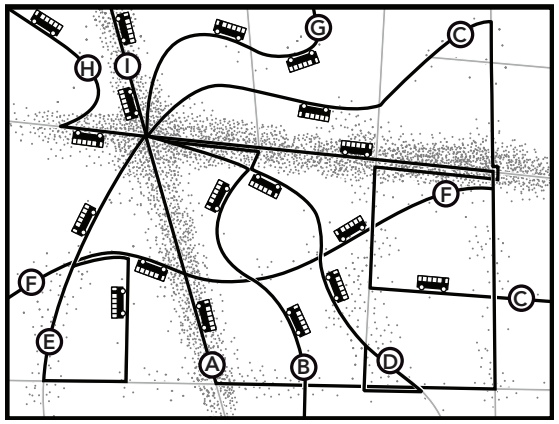
"Think like a business"



This transit network is designed to generate high ridership as efficiently as possible. The transit agency has thought like a business, picking the best transit markets and providing a competitive level of service there.

Coverage Goal

"Access for all"



This network is designed to provide some access to the transit system for all people. The transit agency has divided its resources among many routes, none very frequent, but everyone has some minimal service nearby.

If, on the other hand, the agency's only goal were to cover its service area completely, then it would spread out services everywhere, as in the network at right. The agency's 18 buses are split among 9 different routes.

All of these routes run infrequently, so wait times are long, even on the busiest and densest corridors. But every street in the area has at least one bus route on it, so every resident is near some transit service.

In these two scenarios, the town is using the same number of buses. *These two networks cost the same amount to operate.* Yet they achieve starkly different goals.

Service	Operating Cost per Hour	Boardings per Hour (Productivity)	Operating Cost per Boarding
Route 99	$58.78	9.8	$6.02
Dial-a-ride and ADA paratransit	$58.78	2.4	$24.73

Figure 5: Basic performance information for CAT's two types of service, from the last fiscal year (2015-2016). The fare for both types of service is $1.

Choices for Canby

This same type of choice is present in Canby. In most small towns, the way to attract the highest ridership relative to cost is to provide frequent connections over long distances. Route 99, which does this, attracted 9.8 boardings per hour in 2016.

In contrast, local circulators that don't come very often tend to attract low ridership. However, they provide access for people who have the time to wait, or who can't easily walk.

Dial-a-ride services also attract low ridership relative to their cost. This is because a bus and driver are not physically able to handle more than a few unique trips per hour.

Canby's dial-a-ride and ADA paratransit service achieved just 2.4 boardings per hour, serving a modest level of demand, in April of 2016.

The performance of existing Canby transit services presents the city with a choice between increasing ridership, or maintaining coverage of the entire city (either using dial-a-ride, or a circulator route). Within a fixed budget, Canby cannot move in both directions at once.

This choice can also be framed in terms of local circulation vs. intercity service, since local circulators generally attract lower ridership than intercity routes.

The rest of this report explains the performance of existing services, shows why their performance raises this choice, and presents a pair of future alternatives to help people think about how Canby should make that choice.

Market and Needs Assessment

This chapter presents maps showing some basic information about the demographics of the city of Canby, and nearby towns.

Density of Residents and Jobs

Density is one of fundamental prerequisites for high transit ridership. The more people in the area around a bus stop, the more potential riders at that stop.

Residential density is obviously important, since most trips start or end at home, but employment density reveals places that are the destinations for many types of trips: not only commutes to work, but also trips to shopping, services and recreation.

Together, residential and employment density show us the places where transit stops have potential for high ridership. Residential and employment density, within the city and in the region, are shown in the maps on the four following pages.

Low-Income Residents

Transit is often asked to pay special attention to the needs of people in poverty, particularly when pursuing a coverage goal. People with limited incomes also have an added incentive to use transit, making them a potentially strong market for high-ridership transit.

The map on page 20 shows where people in poverty live within the city of Canby.

Younger and Older Residents

The map on page 21 shows where residents under the age of 18 or over the age of 65 are concentrated within Canby.

Similar to people in poverty, seniors are another subset of the population transit is often expected to focus on, though seniors tend to be less segregated into certain neighborhoods and towns than are low-income people.

Seniors and young people also have extra incentives to use transit, because they are often unable or unwilling to drive themselves places. Depending on where they are located, seniors and young people can contribute to a strong market for high-ridership transit.

Note that there is a large senior residence (Hope Village) at the south edge of town, on 13th Avenue. It does not appear dense, on this density map, because it is surround by low-density developments or undeveloped land.

Residents by Race/Ethnicity

The map on page 22 shows all Canby residents as dots, color-coded based on their race or ethnicity.

As of the 2010 Census, about 21% of residents in the City of Canby were Hispanic or Latino.

We can see from this map that Hispanic people live all over town, but tend to live closer to 99E than white (or Asian) residents, and are particularly concentrated south of the highway between Ivy and Redwood Streets. This neighborhood actually shows up on all the density maps: it is dense with jobs (and, relatedly, shopping and services), with low-income residents, and with young or old residents.

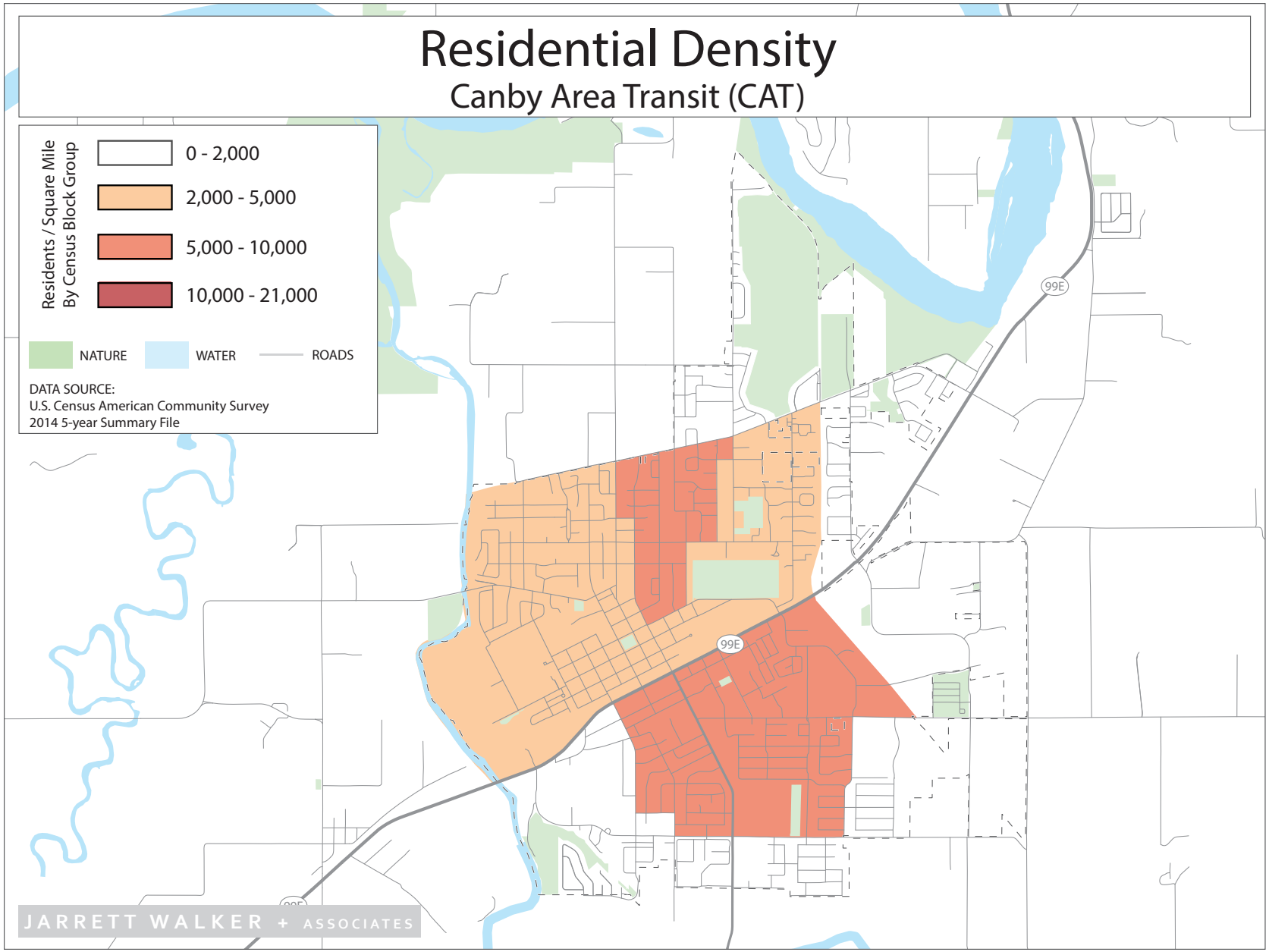


Figure 6: This map shows the number of residents per square mile within the city. In denser neighborhoods, more people are walking distance from any given bus stop.

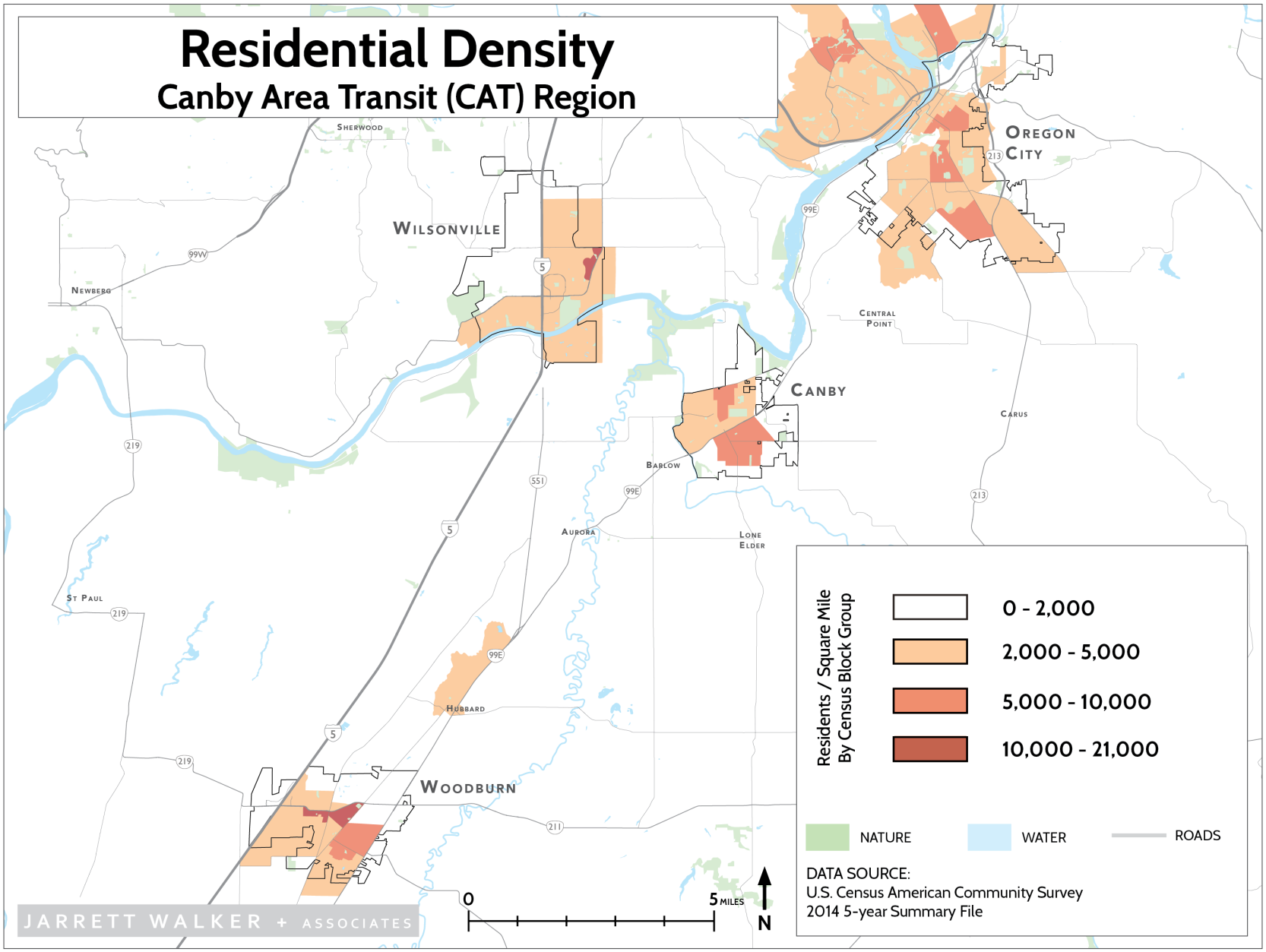


Figure 7: This map shows the number of residents per square mile in the region around Canby. In denser neighborhoods, more people are walking distance from any given bus stop.

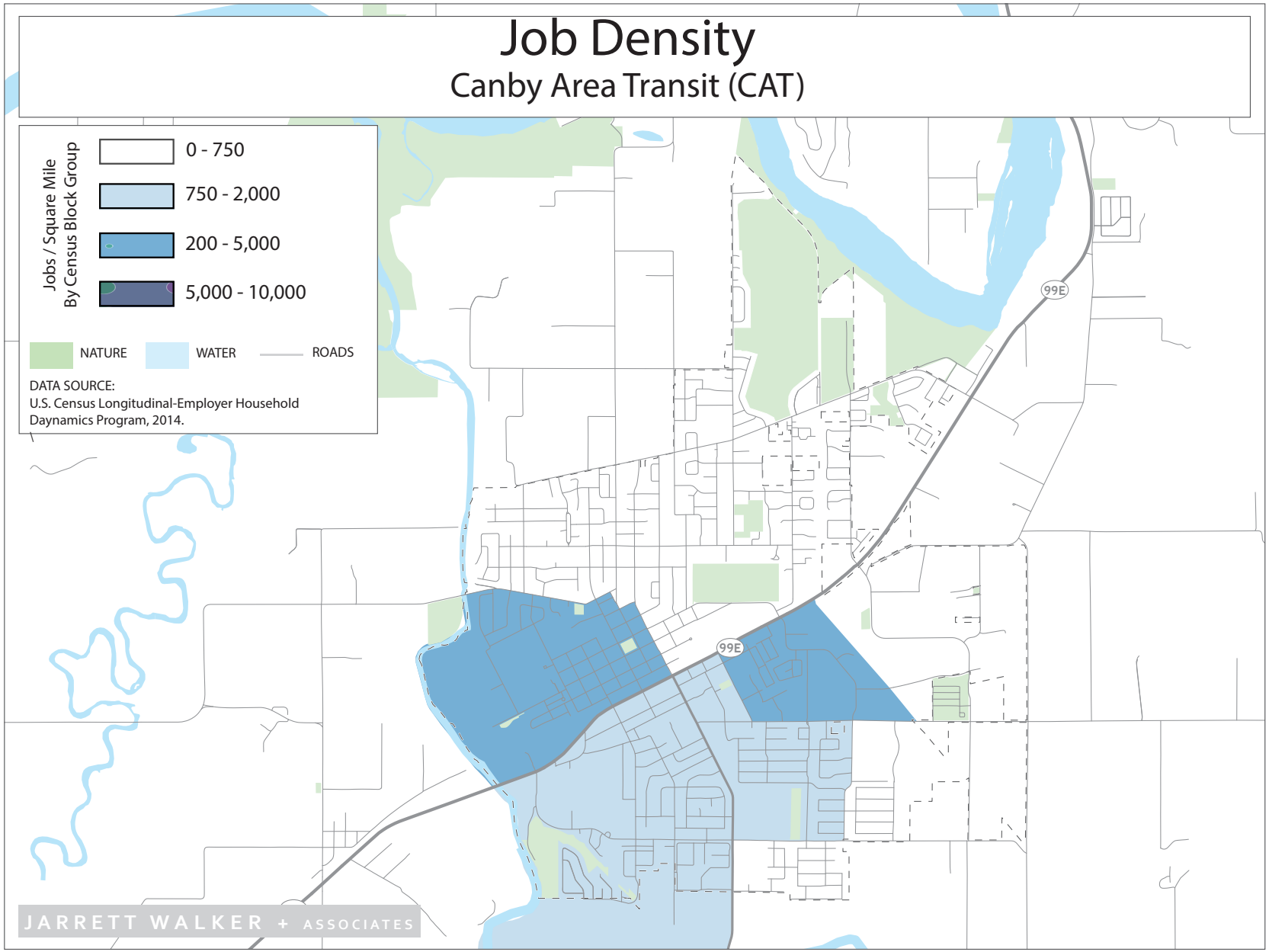


Figure 8: This map shows the number of jobs per square mile within the city. Jobs represent not only employment, but also services and activities that may people wish to travel to.

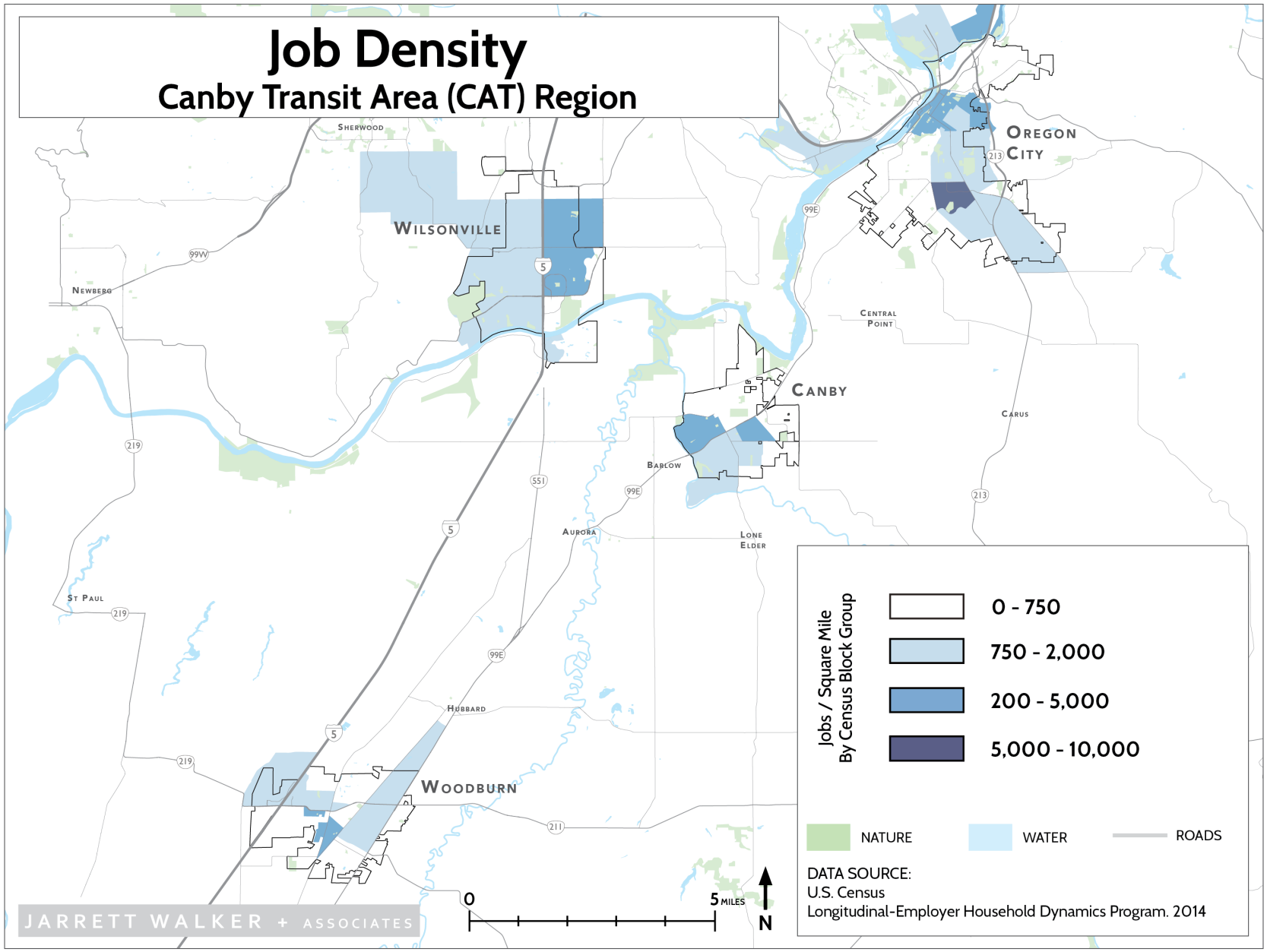


Figure 9: This map shows the number of jobs per square mile in the region around Canby. Jobs represent not only employment, but also services and activities that may people wish to travel to.

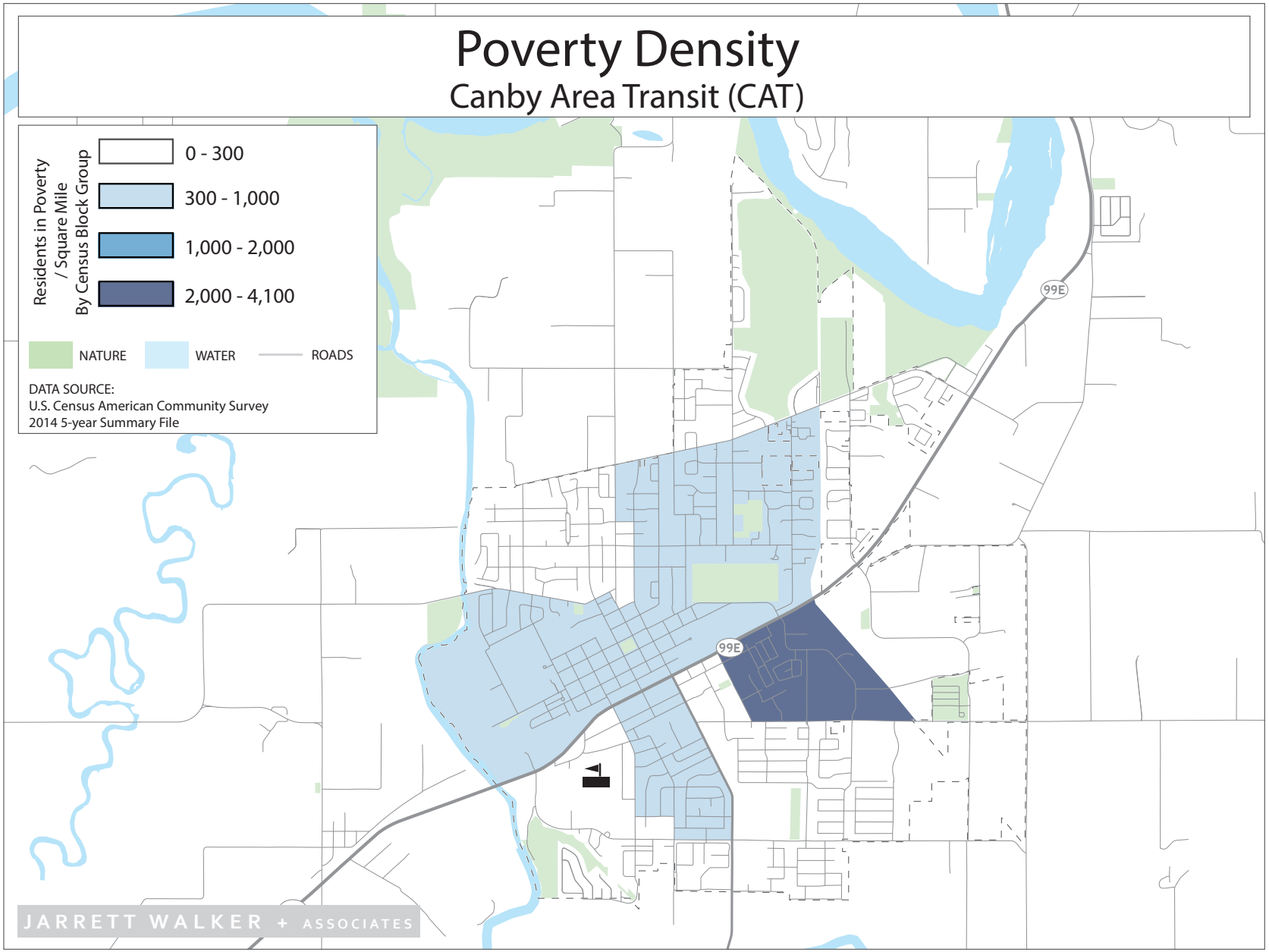


Figure 10: This map shows the number of low-income residents per square mile within the city. Low-income residents often represent a particularly strong market for transit, because they have an incentive to pursue lower-cost transportation options. When transit service is changed, low-income residents are protected from disproportionately negative impacts, by civil rights legislation.

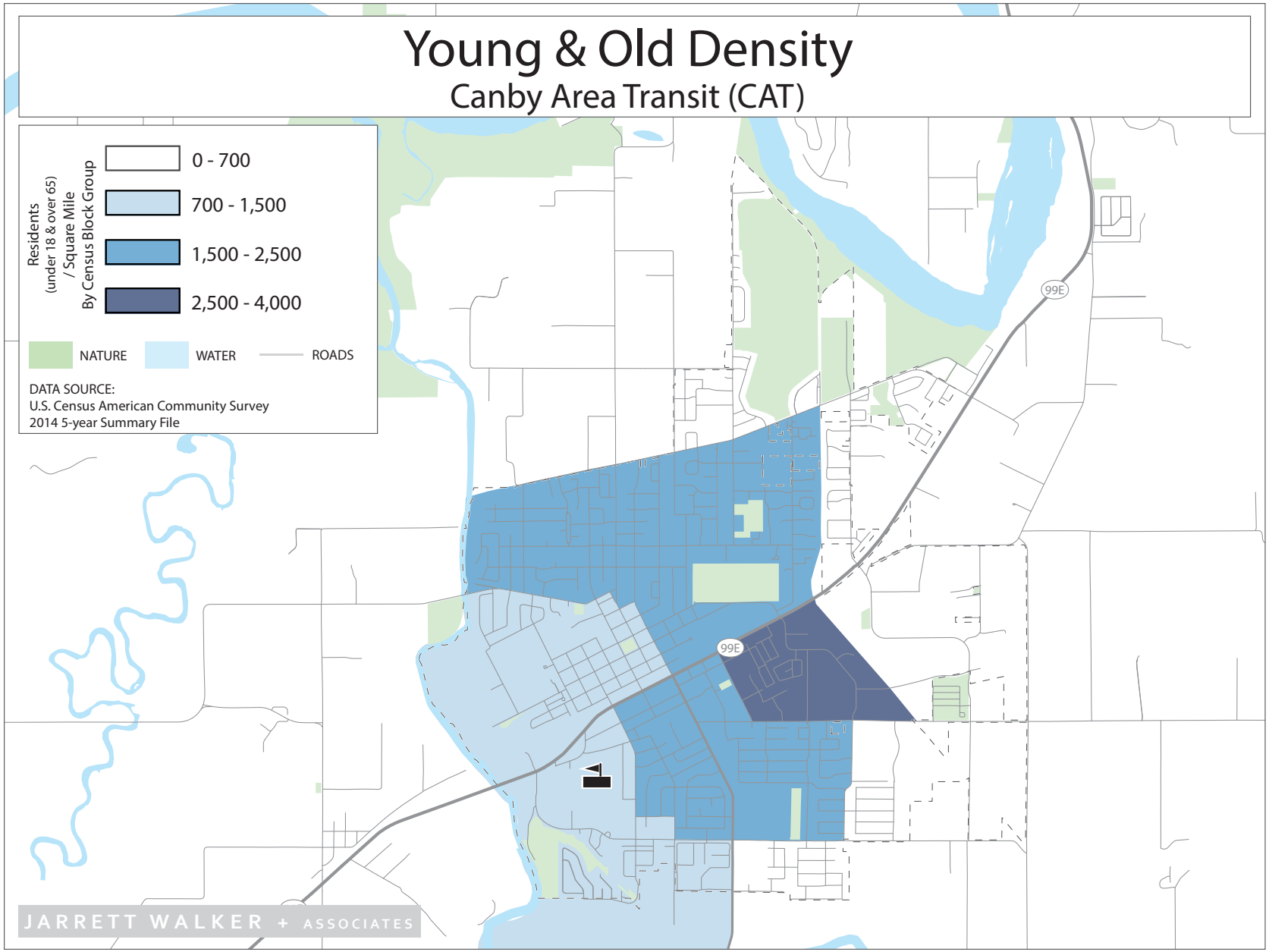


Figure 11: This map shows the number of young and old residents per square mile within the city. Both groups often represent a strong market for transit, and also sometimes a severe need for transit.

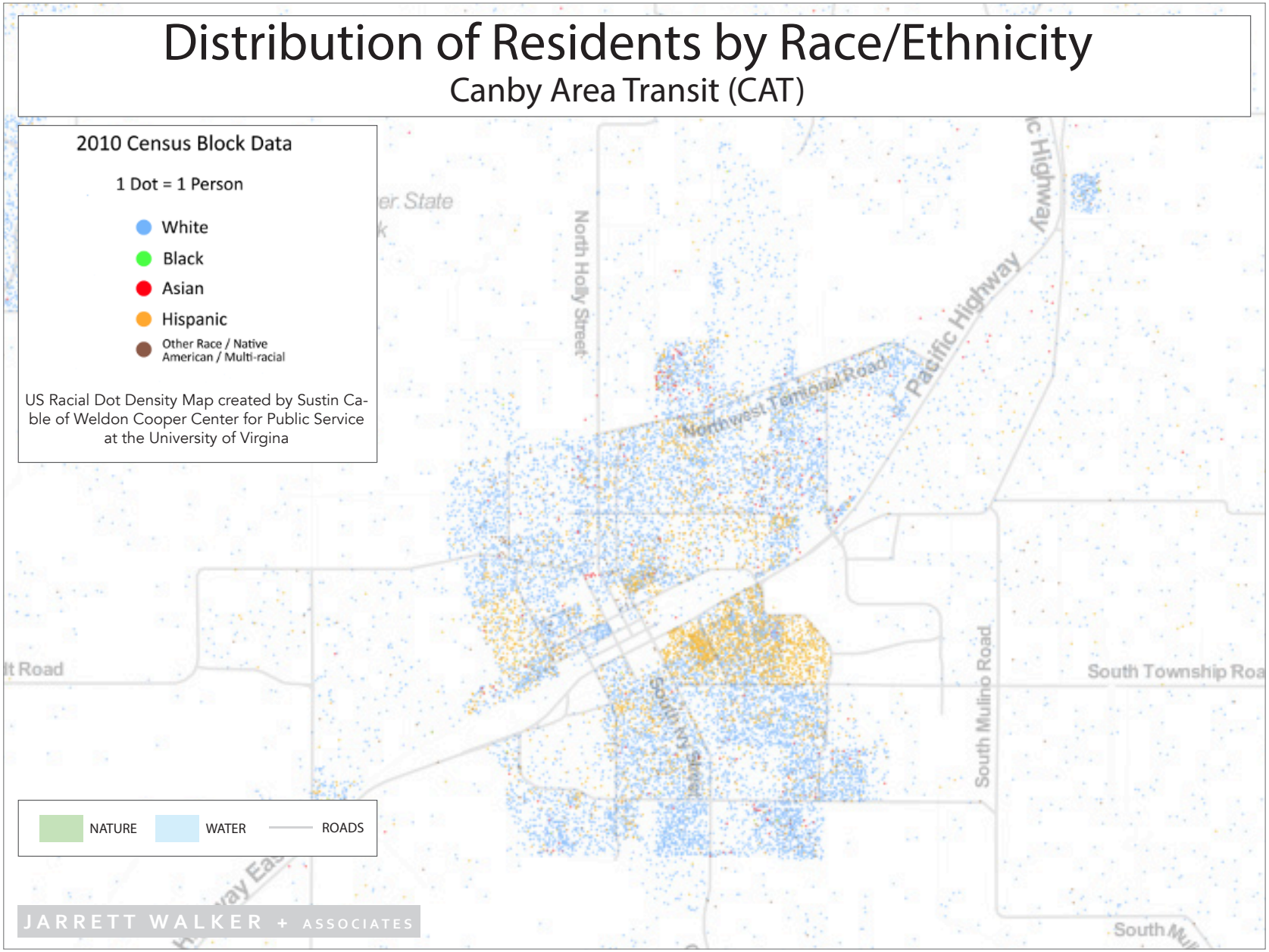


Figure 12: This map shows every Canby resident, color-coded by race or ethnicity. When transit service is changed, minority residents are protected from disproportionately negative impacts, by civil rights legislation.

Commuting Patterns

The commute to work is just one of the many trips people make every week. It tends to be longer than other trips. It is also, most people would agree, one of the most important trips people make.

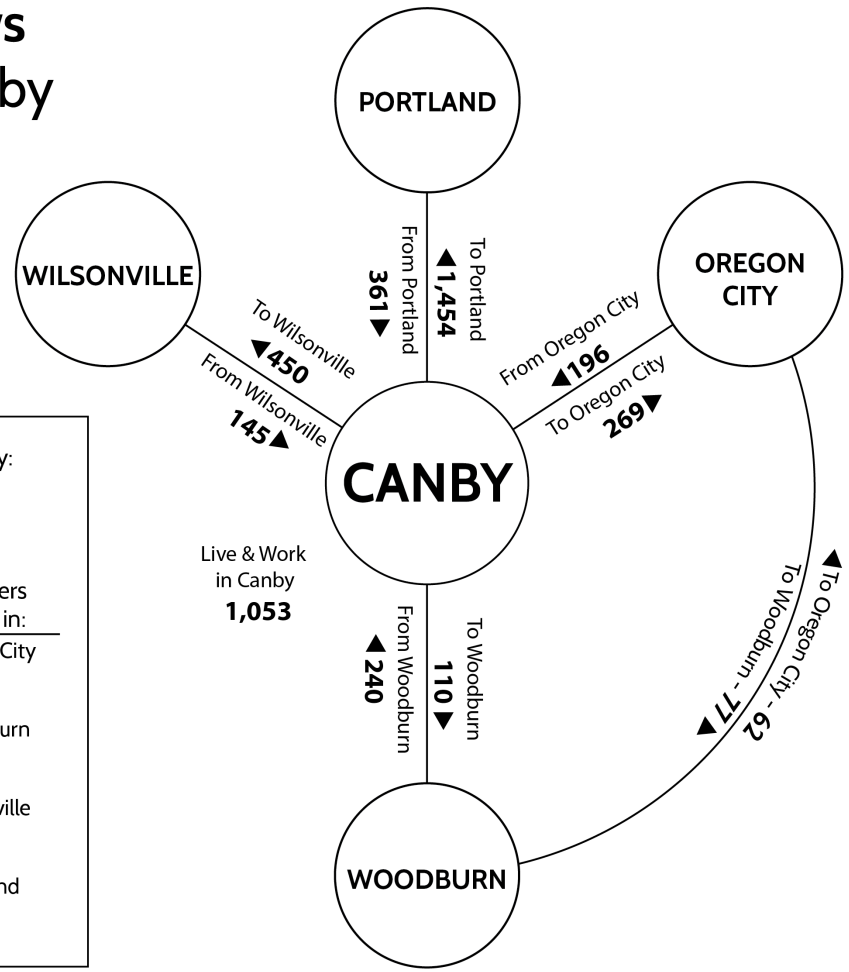
The diagram at right shows the number of people commuting (by any mode) into and out of Canby.

It is not surprising to see so many Canby residents commuting to the Portland area. The number of people commuting to and from Woodburn is a little lower than those commuting to and from Oregon City (though of course a much greater number continue beyond Oregon City into the Portland area).

A large number of Canby residents commute to Wilsonville. However, on closer inspection of the data, we see that they are mostly traveling to higher-income jobs. Given their levels of compensation and the ease of parking in Wilsonville, there would be little incentive for most workers making this commute to use transit.

Note that connections to transit services reaching Washington County and Salem are available in Wilsonville and Woodburn, respectively.

Commute Flows in and out of Canby



People both living and working in Canby:

1,053

(19.2% of all Canby workers)

Canby residents commuting out:	Canby workers commuting in:
To Oregon City 269	From Oregon City 196
To Woodburn 110	From Woodburn 240
To Wilsonville 450	From Wilsonville 145
To Portland 1,454	From Portland 361

Source:
U.S. Census. Longitudinal-Employer Household Dynamics Program. 2014.

Figure 13: The flow of commuters - by any travel mode - into and out of Canby.

History and Trends

Recent History

CAT was formed in 2002, when the City withdrew from the TriMet service district, and began providing its own transit services.

In its early years, CAT was able to provide:

- Saturday and Sunday service, and then later, just Saturday service.
- A bus to Oregon City every half hour (on weekdays).
- Local routes that circulated within Canby.
- Free rides on all transit services.

By 2012, these four features of the transit system had been lost. Saturday service was cut in 2009. A fare was instituted in 2012.

Fixed route service within the city and to other cities was cut over the years, but most severely in 2011. That year, all fixed routes circulating within the city were eliminated, and the frequency of service to Oregon City and Wilsonville was reduced.

Canby has paid a reasonable rate for every hour of transit service it provides, and still does. (Service is provided by a private contractor, MV Transportation. CAT pays MV for each hour of fixed route or dial-a-ride driving they provide.) The service cuts made in 2011 were not due to "inefficient" operations. The cost of delivering an hour of transit service in Canby is reasonable and low, so the agency gets service onto the street quite "efficiently." Rather, the service cuts represented a recognition by CAT staff that they simply could not provide as much service as the city had hoped, when it exited the TriMet district in 2002.

Since 2012, CAT has been able to add a small amount of service to Route 99, to improve the timing of trips to Oregon City and Woodburn.

None of this is to say that Canby could not restore frequency to Oregon City; or Saturday service; or local routes. Such restorations are certainly possible.

Within a fixed budget, however, these restorations could only be made if some other service were reduced. These very trade-offs will be addressed in the "Future Alternatives" chapter, below.

Service	Hours of Service in 2015-2016	% of Total
Route 99	7,646	54%
Dial-a-ride and ADA paratransit	6,553	46%

Figure 14: Today, about one half of CAT service is provided as Route 99, and the other half as demand responsive service (dial-a-ride or paratransit). This ratio used to be quite different. As shown in Figure 15, there used to be 2-3 times as much fixed route service as demand responsive service.

Amount of service provided

The graph at right shows how much service CAT has provided each year, since its creation in 2002.

Service provided is described in terms of "service hours." A service hour represents one hour of a driver and a bus, on the road, available to passengers, either as a fixed route or dial-a-ride. There are other costs to providing transit, such as administration and maintenance and purchasing buses. However, the biggest part of transit's costs has to do with labor, and because people are paid by the hour, it has to do with the number of hours of service provided.

There are three types of service shown in this graph:

- Fixed route, which today represents only Route 99, but before 2011 included local circulators within the city.
- ADA paratransit, which was available only to people with disabilities.
- A combined service providing general public dial-a-ride and ADA paratransit. This general public dial-a-ride was added to the paratransit service in 2011, to make up for the elimination of the local circulators.

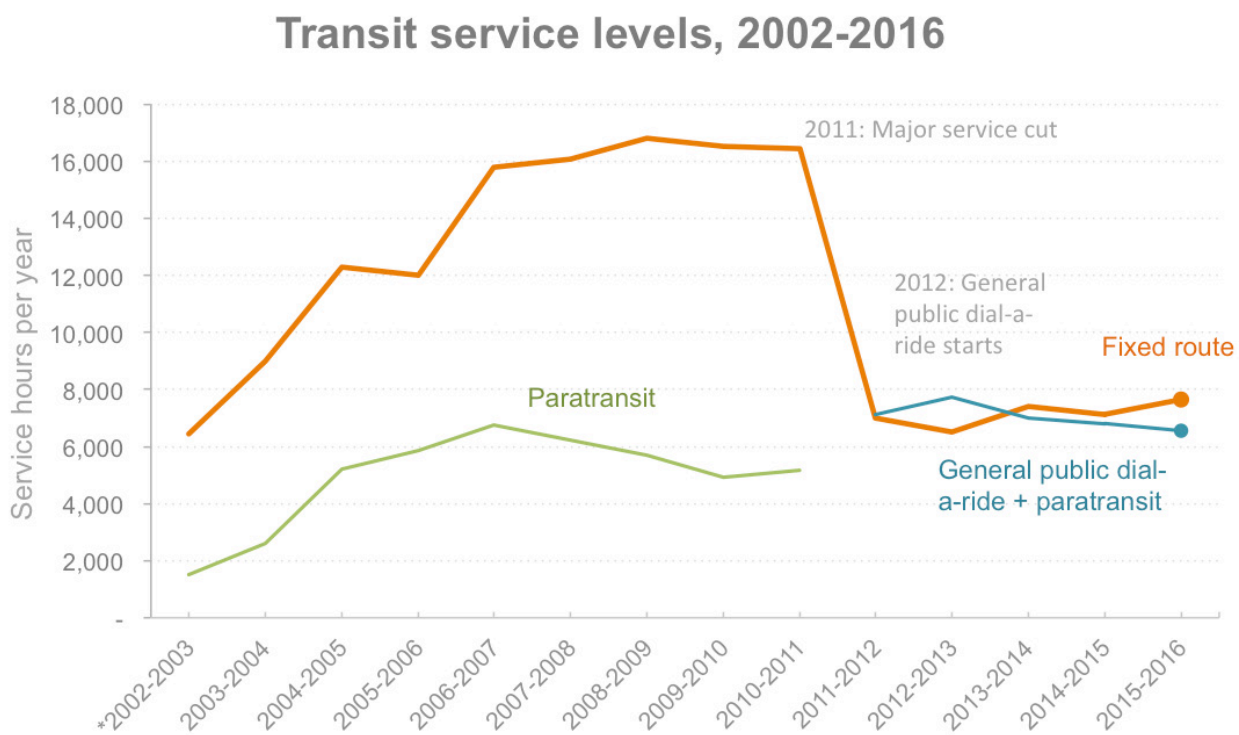


Figure 15: Transit service levels since 2002, for the three different types of service CAT has provided over the years. Today, the amount of service provided to the fixed route and dial-a-ride/paratransit is about equal.

Since 2012, CAT has made some small increases in service on Route 99, causing the orange line to go up slightly. Meanwhile, there has been a slight decrease in demand for ADA paratransit, perhaps due to the closure of some workplaces for people with disabilities. Because the supply of dial-a-ride and paratransit is responsive to the demand, this slight decrease in demand shows up as a slight downward trend in the service level, shown in blue.

Ridership

The graph at right shows the total ridership per year on different types of CAT services, since CAT's founding in 2002.

On fixed routes (shown in orange), Saturday service was cut in 2009, which may explain the small drop in ridership between 2009 and 2011. A severe service cut, to local and intercity service, was made in 2011, causing a big drop in ridership. Finally, a fare was introduced in 2012, and it is normal for transit services to lose some ridership when they start requiring fares.

In 2011, CAT's ADA paratransit service (in green) was turned into a combined general public dial-a-ride and ADA paratransit service. Ridership on demand responsive services increased (as shown by the slight growth from the green to the blue line, at right).

Ridership can tell us how much of an impact a service is having on the life of the city. For example, it is clear from this graph that many fewer people use transit in Canby today than at its peak in 2007-2008. We can also tell that even today, fixed routes move far more people than do dial-a-ride and ADA paratransit.

However, sheer ridership totals do not help us evaluate the performance of a service compared to alternatives. To do that, we need to know not just how much ridership is achieved, but at what cost. Ridership divided by cost, or boardings per service hour, is an easy way to express a service's "efficiency" or "productivity."

The graph on the following page shows the changing productivity of these services over time.

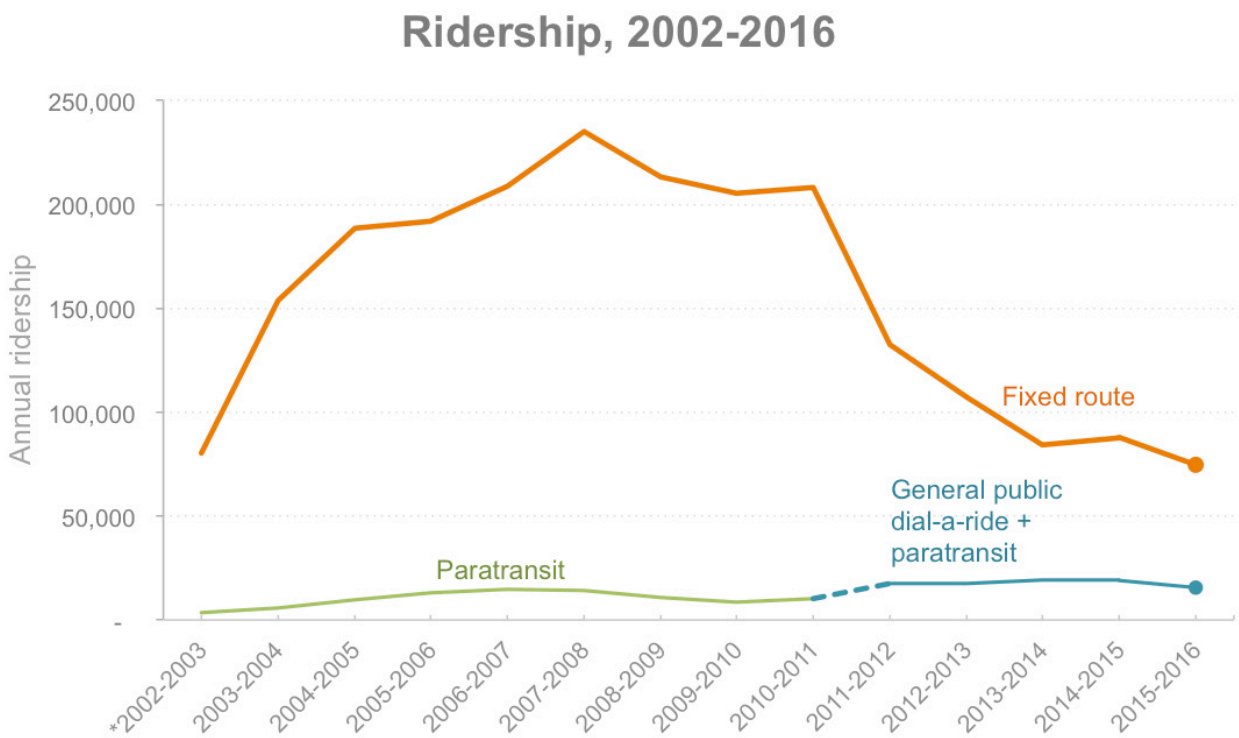


Figure 16: Fixed route ridership has tracked the supply of fixed route service (shown in Figure 15), dropping a great deal after service cuts in 2011. The introduction of a fare in 2012 likely caused a further drop. Since then, ridership has declined slowly, consistent with the trends in other small towns. Meanwhile, ridership on demand responsive services has grown slowly since 2002, but has always been far lower than fixed route ridership.

Productivity

The graph at right shows the productivity (ridership relative to cost) of CAT's different service types.

This graph essentially combines the previous two graphs, which showed how much service was provided and how much ridership achieved.

Fixed route transit has much more potential for ridership relative to cost than dial-a-ride and ADA paratransit, simply because of what each service does. A bus or van driving around, picking up and dropping off people at individual locations of their choosing, struggles to do that for more than 5 people per hour. Yet a bus driving a fixed, scheduled route can easily handle 40 people boarding it per hour.

This is why CAT's fixed routes are and have always been much more productive than ADA paratransit and dial-a-ride. Not only does Route 99 have more riders than dial-a-ride, it handles more riders every hour than dial-a-ride (or taxis, or Uber and Lyft type services) could ever handle.

Curb-to-curb services like ADA paratransit or dial-a-ride provide a completely different level of service to individuals than do fixed routes. Their objectives are different, and curb-to-curb services never achieve the productivity of fixed routes.

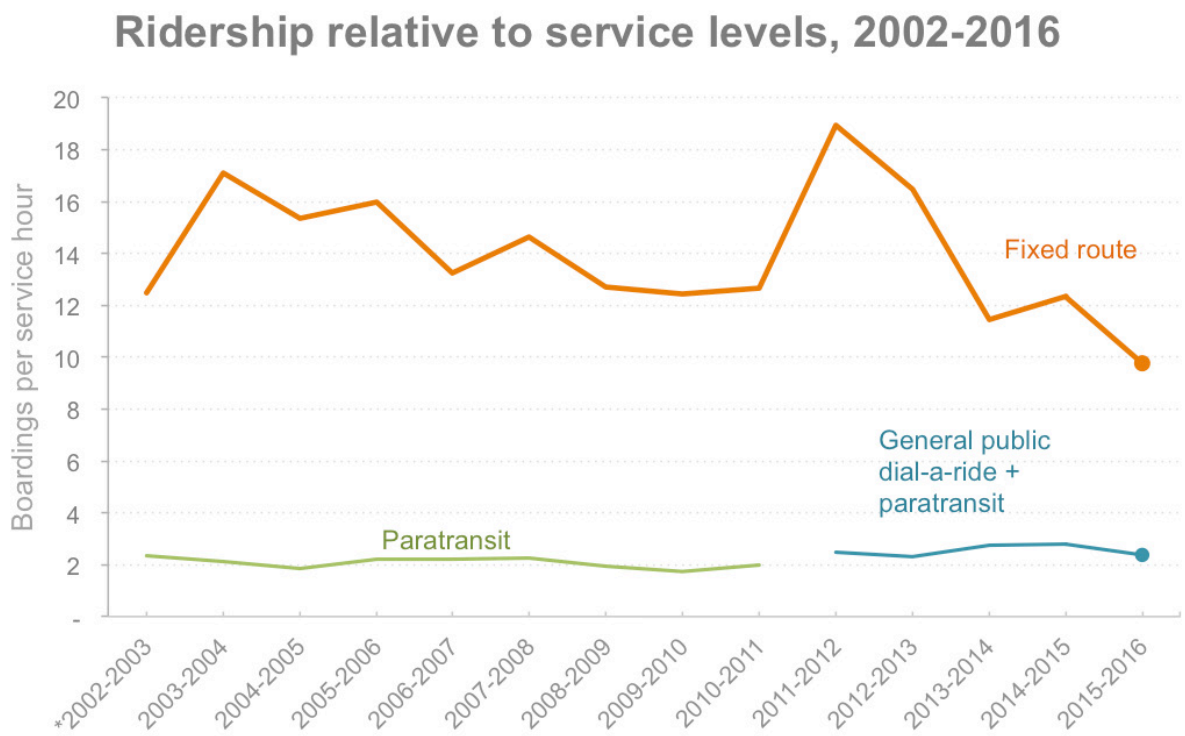


Figure 17: Productivity, or ridership relative to cost, has declined slightly on CAT's fixed route services, since 2002. Demand responsive services have much lower productivity, which has remained fairly flat.

Since 2012, productivity on Route 99 has been declining (in the last fiscal year it was 9.8 boardings per hour), even while service levels have stayed flat or increased slightly. This may be largely due to the introduction of a $1 fare in 2012, which typically reduces productivity in any system. At the same time, rising employment, low interest rates and low gas prices have brought the cost of driving down to an all-time low.

The productivity of dial-a-ride and ADA paratransit service has remained fairly flat since 2012. In the last year it was 2.4 boardings per hour.

Current Costs and Revenues

The tables at right show the costs of providing transit service in Canby, and the revenues that pay for that service.

Canby's transit is more than half-funded using local payroll taxes. This may generate a basic expectation among transit stakeholders that transit should help large numbers of workers access jobs in Canby, and shoppers access retail businesses.

Expenses for Canby Area Transit (Fiscal Year 2015-2016)	
Bus drivers, supervisors and dispatchers	$834,887
Maintenance and purchase of buses, fuel (Includes the purchase of three buses.)	$623,416
Administration, management and City overhead	$449,311
Office space and bus storage yard	$58,857
Other miscellaneous costs of providing service	$84,622
Total expenses	$2,051,093

Revenues for Canby Area Transit (Fiscal Year 2015-2016)	
Canby payroll tax	$1,284,333
State and federal grants	$1,004,064
Fares and miscellaneous	$80,147
Total revenues	$2,368,544

Figure 18: CAT's costs and revenues from fiscal year 2015-2016 are here divided into some general categories. Labor makes up the biggest cost, and fares a very minor source of revenue, as is usual.

Near Future

In the near future, we can foresee some potential changes to which CAT will need to adjust.

Highway 99 corridor study

Salem-Keizer Transit (SKT) will soon begin a transit study of the 99E corridor, from Oregon City to Salem.

In a recent planning process of its own, SKT decided (based on the input of its stakeholders) to focus more of its regional CARTS services on corridors such as Salem-Woodburn, and focus less of its resources on dial-a-ride or within-town services.

The Highway 99E corridor study led by SKT will be an opportunity for Canby to discover what intercity connections to Salem are possible, what they might cost, and what role Canby could potentially play in a partnership with SKT.

Federal transit funding

Canby's transit service is currently funded by federal grants, as well as local payroll taxes. The next federal transportation bill will be authorized by Congress and will be subject to all of the usual political forces that affect federal funding legislation.

Increasing hourly costs

The productivity graph on the previous page showed ridership relative to the hours of service CAT has been providing. However, the cost of an hour of service can change from year to year. This changes the number of hours of service CAT can provide, for a given dollar budget.

CAT purchases service, by the hour, from a private contractor. MV Transportation has held the contract since 2011, and it expires in June 2017. CAT will soon be asking private companies to offer bids on providing transit service.

The current cost of service, under the contract with MV, is $58.78 per hour. The cost has been increased incrementally as the original 2011 contract has been amended by CAT and MV. The current cost is very reasonable – it is similar to the hourly costs of neighboring agencies like Salem-Keizer Transit and Wilsonville SMART, and much lower than the hourly cost of TriMet service.

Unfortunately, hourly costs are expected to increase in the near future. This is partly due to increasing health care costs and to growing employment rates.

However, a big contributor may be the increase in minimum wage passed by Oregon legislators in 2016. This increase will not just increase wages for the lowest-paid employees, but also for other employees, as companies and organizations adjust their entire wage scales to keep them fair (among employees at different levels) and competitive.

How much hourly costs might increase is unknown, but it is prudent to assume that it will by more than standard year-to-year inflation.

If hourly costs increase, but payroll tax receipts and grant amounts do not increase, CAT will not be able to purchase as many hours of service. This means that, even with constant revenues in 2017-2018, CAT may need to provide less service.

Existing Ridership and Performance

How should we measure the performance of a transit service? By thinking about its purpose in the community, and finding data that tells us whether it is achieving that purpose.

Today, it is not clear what the purposes of various CAT services are, though through this process we will ask the community to provide greater clarity.

If the purpose of a service is to reduce transportation costs, reduce congestion, get workers to jobs, get students to school, or reduce carbon emissions, then such a purpose is served by high ridership. We would measure progress towards such purposes by measuring ridership relative to cost (productivity), and by noting whether any of these target populations are using the service in large numbers.

If, on the other hand, a service's purpose is to provide lifeline access to medical care, or to make sure that every neighborhood has access to some minimal service, those purposes are served by ample access and coverage, but not necessarily by high ridership. We would measure how many people and places have access to service, whether or not they use it.

If the purpose of a service is to provide highly personalized, customized transportation for a small number of people, then we would look at how well the average individual rider is served, regardless of how few riders are served.

Finally, no matter what purpose is being served, most people will be interested in knowing what it costs to achieve that purpose.

Most people probably think of Route 99, dial-a-ride and ADA paratransit as serving one or more of these purposes. We will describe their performance, below, in terms of ridership relative to cost, cost per boarding, coverage, and quality of individual experience.

Route 99

In Canby, Route 99 achieves the highest ridership relative to cost, about 9.8 boardings per hour.

For the sake of comparison, 9.8 boardings per hour is in the middle of the range of productivities delivered by Salem-Keizer Transit's regional services (the CARTS routes). It is very low compared to the average productivity of a TriMet bus line. It is in the upper part of the range of productivities delivered by Wilsonville SMART's city routes.

We do not have data showing us the productivity of Route 99 by time of day or by stop. However, we do know how many boardings are made on the two major segments of the route.

The table in Figure 19 shows boardings per round trip made by the Route 99 bus. There is more frequency on the Oregon City segment of the route (as illustrated in Figure 1 on page 6), and there are far more boardings. This suggests that the underlying demand for transit service, and potential for ridership, is similar on the two segments.

Route 99 connects a number of other services that can help people travel among

Route 99 Segment	Daily Bus Round Trips	Average Daily Boardings (April 2016)	Boardings per Bus Round Trip
Canby–Oregon City	20	220	11.0
Canby–Woodburn	8	75	9.4

Figure 19: Boardings on the two segments of Route 99 are not equal, but once they are compared to the level of service offered on each segment, we can see that the two sides of the route have roughly equal productivity.

the region's cities:

- In Oregon City, a frequent TriMet bus line (33) going to Milwaukie and the Orange Line light rail.
- In Oregon City, a less-frequent TriMet bus line (35) going straight to downtown Portland (via Macadam).
- In Oregon City, local TriMet lines service Oregon City, West Linn and Gladstone.
- In Woodburn, Salem-Keizer Transit's CARTS 10 route, with four trips per day to Salem, and onwards to other Polk and Marion County towns.
- In Canby, service to Mollala.
- In Canby, to Wilsonville's Route 3, which makes eight trips a day, during rush hours only. From Wilsonville, at limited times, people can access transit to Salem or to Washington County.

The connections Route 99 makes with these other services are "untimed," so people may have a long wait to make most transfers. We do not have data on how many people transfer between Route 99 and other routes.

Dial-a-ride and ADA paratransit

In general, demand-responsive services achieve low ridership relative to cost. The most productive services achieve 4-6 boardings per hour, above which few demand responsive services cannot function reliably.

Service	Hours of Service Supplied (FY '15-'16)	Boardings (FY '15-'16)	Boardings per Hour (Productivity)
Route 99	7,647	74,685	9.8
Dial-a-ride and ADA paratransit	6,553	15,575	2.4

Figure 20: The productivities of CAT's fixed route (Route 99) and demand-responsive services (dial-a-ride and paratransit) in the last fiscal year. Fixed routes are nearly always vastly more productive than demand-responsive services.

However, the productivity of CAT's dial-a-ride and ADA paratransit service is not near that upper limit. This service achieved 2.4 boardings per hour in the last fiscal year (which ended in June 2016). This is fairly low, compared to other towns of Canby's size.

However, dial-a-ride is never expected to achieve high ridership relative to cost. Its purpose is almost always to provide coverage over a wide area, and to help people who cannot walk to a fixed route stop access the fixed route or other destinations. Towards these purposes, CAT's dial-a-ride and ADA paratransit services are quite successful. Within the time window that it is offered, 100% of residents and jobs in Canby are covered by dial-a-ride, and the agency is able to provide 100% of the trips requested by the public and paratransit customers alike, almost always at the time requested. (However, people do request rides earlier and later than CAT operates, and those requests cannot be met.)

The map on page 34 shows where people were dropped off and picked up by CAT dial-a-ride/paratransit service, during the entire month of April 2016. Trips requested by customers with a disability (i.e. ADA paratransit trips) are shown in green; those requested by members of the general public are shown in purple.

While this map shows boardings dots all over the city, we can see that the greatest demand is for trips to and from the senior facilities on the south side of town, downtown, and large shopping centers.

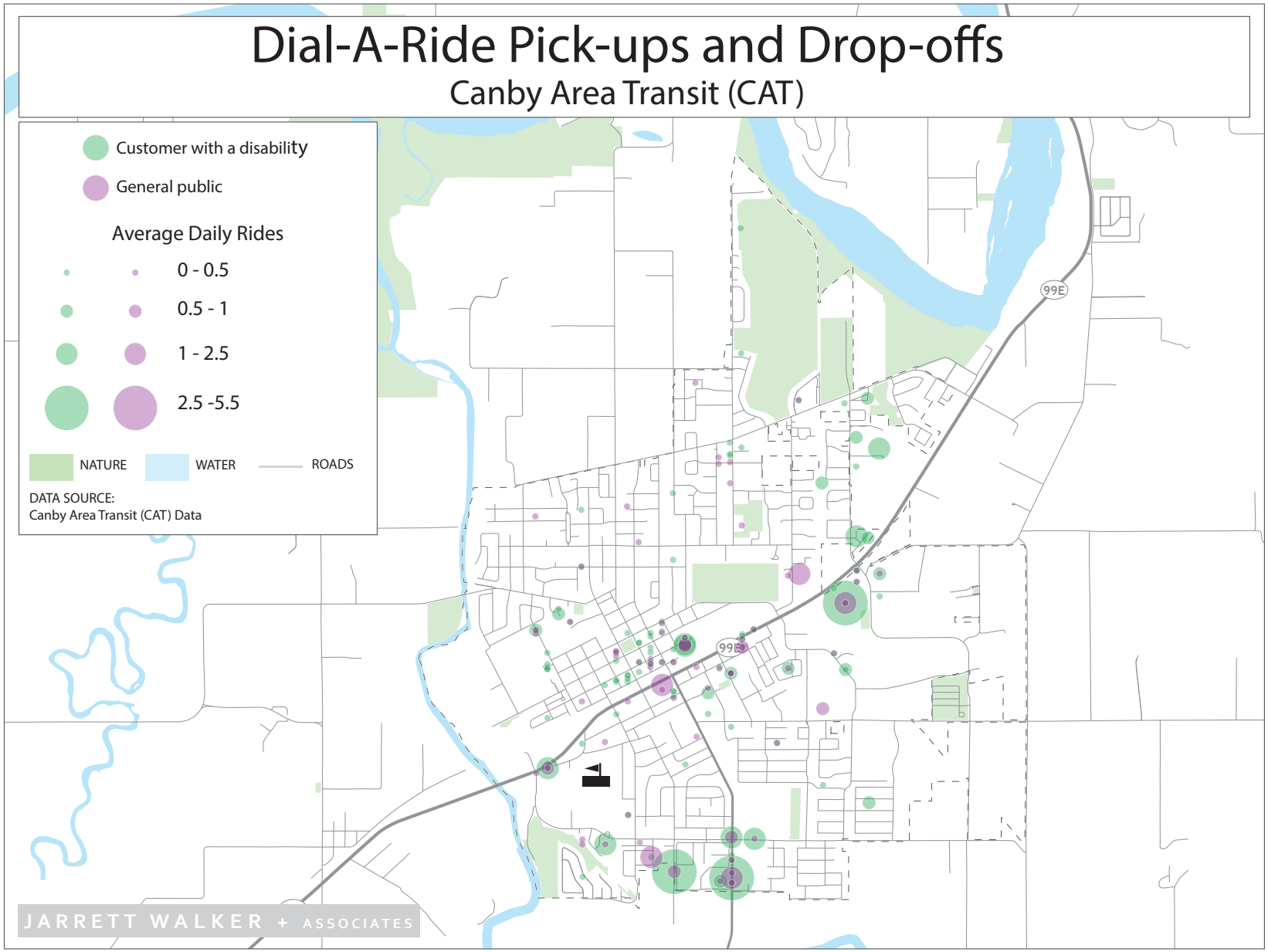


Figure 21: This map shows where people were picked up and dropped off by CAT's dial-a-ride and paratransit services in April 2016, within the city of Canby. (Dial-a-ride is for the general public, and paratransit is for people with disabilities, but the two services are often provided with the same vehicle.)

Figure 22: This map is similar to the map on the previous page, but also shows Oregon City. Paratransit customers are eligible for rides to and from certain Oregon City destinations, per Canby's agreement with TriMet.

The maps on page 35 show the same data, but for both Canby and Oregon City. Customers with disabilities (shown in green) are entitled to transport to and from Oregon City for essential services (under Canby's current agreement with TriMet). This is an ADA paratransit service, because it is only open to customers with disabilities.

We can see that the biggest destinations for these paratransit trips are the Community College, the medical center and the downtown Transit Center (where transfers to TriMet paratransit allow people to reach the rest of the region).

The other potential purpose of dial-a-ride may be to offer a higher-quality and more individually-tailored transit experience to riders. Public transit means, by definition, sharing a vehicle with other people, whose trip destinations and purposes may be different from one's own. On a demand-responsive service, riders may often have this experience. The fewer rides are grouped onto a single vehicle, however, the more the demand-responsive customer experience comes to resemble a taxi ride. (And the lower the productivity, and higher the cost per rider.)

By examining one week of dial-a-ride/paratransit trips, from April 2016, we were able to estimate how individually-tailored this service is to riders. We found that 27% of trips in that week were shared. In other words, if you called CAT and requested a ride that week, there was a 3-in-4 chance that you would end up on the vehicle by yourself, and the service would be more like a taxi ride. There was a 1-in-4 chance you would end up on the vehicle with other people. In some cases these other people would be your neighbors or friends, or some other group that reserved a ride together.

CAT has made an effort to increase the proportion of trips that it serves as shared trips, in order to improve productivity and reduce costs per rider (and total costs). This effort has taken the form of a free "Shopper Shuttle," which makes regularly scheduled trips to shopping areas, but will pick up riders at the place of their choosing.

The diagram on page 37 shows all of the individual trips made on CAT's dial-a-ride and ADA paratransit service, on April 4, 2016. It allows us to visualize how trips are (or are not) grouped into single vehicles.

Along the left-hand vertical axis, the six vehicles dispatched that day are listed. At right, the chain of trips they delivered is shown, with the pick-up location in grey and the drop-off in red. As you move from left to right in this diagram, you go from earlier to later in the day.

We can see that some trips are on the same bus at the same time, and going to a common destination. For example, on the bus called "27' Arboc" a group of riders was taken to the Canby Christian Church at 10:18 am.

We can also see many other trips that were delivered singly, more like a taxi service.

We can see that most trips are very short, taking just a few minutes; their colored lines are very short. We can see a few trips that are much longer than others. On this day, those trips were to Clackamas Community College, in Oregon City, and they were all made singly.

The amount of grouping that CAT can achieve on its dial-a-ride and ADA paratransit service will have an impact on its productivity, and therefore on the cost per passenger. Because the productivity is currently low, the cost per passenger is high, as shown the table on page 38.

CAT's new Shopper Shuttle service is a strategy for providing the same number of trips on dial-a-ride and ADA paratransit, but doing so more efficiently at lower cost.

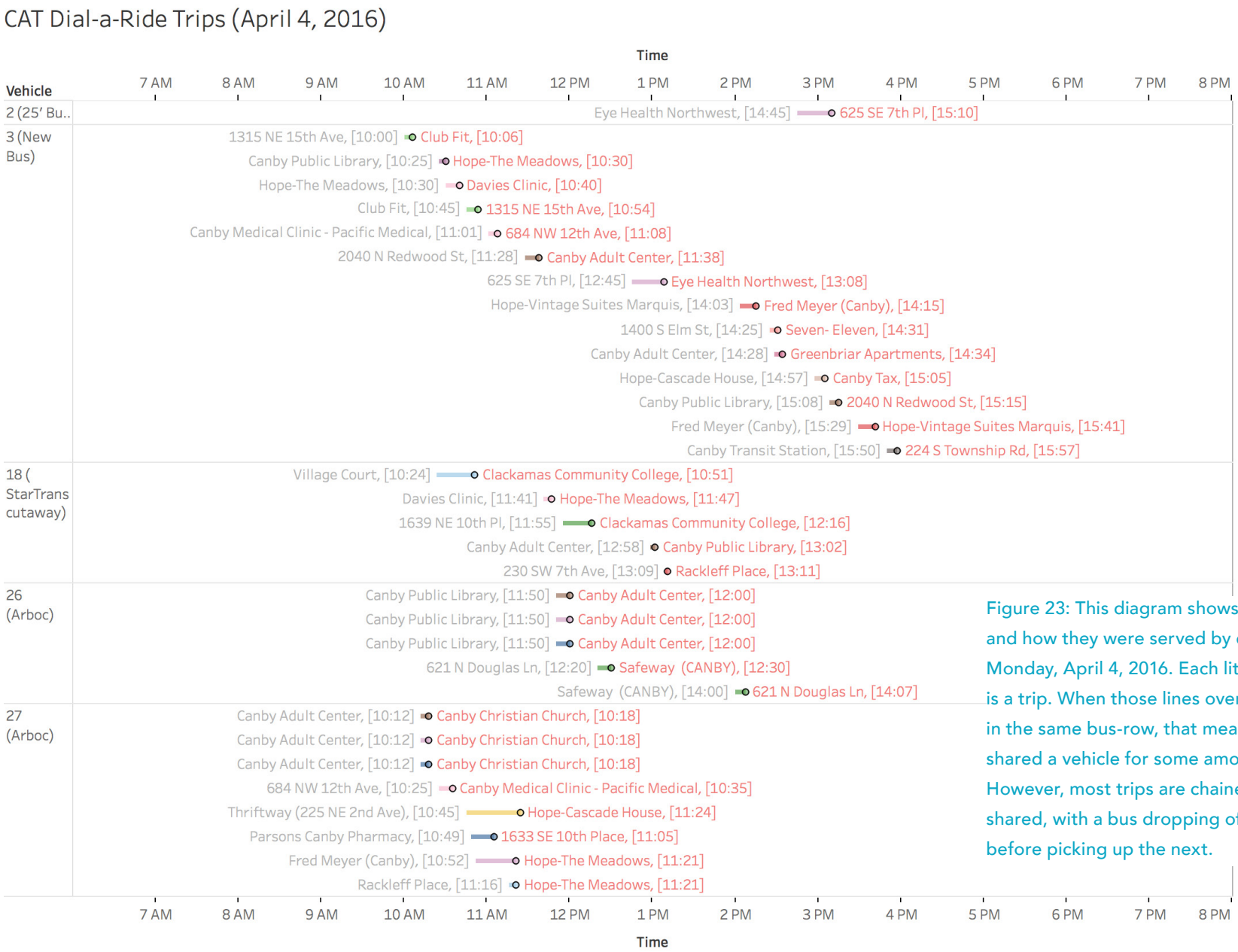


Figure 23: This diagram shows individual trips, and how they were served by each vehicle, on Monday, April 4, 2016. Each little colored line is a trip. When those lines overlap one another, in the same bus-row, that means two riders shared a vehicle for some amount of time. However, most trips are chained, rather than shared, with a bus dropping off one passenger before picking up the next.

There are additional strategies that CAT could pursue in order to improve DAR efficiency, without serving fewer trips.

A separate question, which is more important for the community to consider, is whether the transit system for Canby should invest so much service (and budget) in dial-a-ride and ADA paratransit, which will always get much less ridership than fixed routes, no matter how efficient they become.

Operations Contract

CAT's contract for operations covers driving, supervision and dispatching for the fixed route and demand responsive services. The contract is currently held by MV Transportation, though it will go out for bid again in 2017.

In the current contract, MV is paid for service hours provided. At the end of each month, MV tallies up the number of hours of bus service provided on Route 99, dial-a-ride and ADA paratransit, multiplies it by $58.78 (the contractor's current rate), and bills Canby for the total.

MV has an agreement with its operators' union about the work conditions that will be maintained at CAT. This agreement does not involve CAT, but does affect the way that MV delivers service for CAT.

In the current agreement between MV and the operators' union, MV commits to maintaining 5 full time positions for its operators, on CAT services. Those full time positions can be made of a mix Route 99 and demand responsive service, so operators don't necessarily just drive one or the other type of service.

Service	Operating Cost per Hour	Boardings per Hour (Productivity)	Operating Cost per Boarding
Route 99	$58.78	9.8	$6.02
Dial-a-ride and ADA paratransit	$58.78	2.4	$24.73

Figure 24: This table shows the cost to CAT per one-way ride provided on the two main types of service.

The combination of MV's agreement with operators, and CAT's agreement with MV, creates a situation in which MV has no financial incentive to make efficient use of drivers on dial-a-ride and ADA paratransit service. This may be why productivity is low (2.4 boardings per hour) and most trips are solo. If dispatchers know that drivers need to be "on the clock" for a certain amount of time anyway, there is no reason for them to try and fit more passenger trips into fewer service hours. (There are numerous strategies that dispatchers and agencies can use to improve the efficiency of demand responsive services.)

This provision in the MV's labor agreement originates from a time when Canby had much more service. It may have been perfectly reasonable and no impediment to efficiency back then, but more recently it has probably contributed to the low productivity of dial-a-ride and paratransit.

Because CAT will soon be requesting new proposals for contracted service, CAT can now clearly define work requirements, and set in place standards that will improve efficiency and productivity.

Service Standards

As described above, fixed route and demand responsive services are capable of delivering very different levels of productivity, cost per passenger, coverage and individualized service. The way that transit agencies measure the performance of their services is not by constantly comparing them to one another, but by setting "service standards" and comparing their

performance to those standards.

For example, an agency operating a fixed route like Route 99 might set a productivity standard of 10 boarding per hour, and then manage the service in order to meet that standard. Similarly, an agency might set a productivity standard of 3 boardings per hour for general public dial-a-ride, and then manage the service to achieve that level of productivity.

Service standards can be set for other types of performance like operating costs per passenger, on-time performance, crowding, and trip request denials.

Service standards are helpful in many ways. They provide guidance for transit managers and planners, as to what community values should drive service decisions. They can help an agency ensure that it is getting the desired performance from a contracted service provider. They can also help set public expectations for service, so that people understand why certain planning or management decisions are made.

CAT plans to begin using service standards for these purposes in 2017. In this Transit Master Plan process we will use public input to develop future service standards for CAT.

Barriers to Access

There are a few major barriers to accessing either fixed route or demand-responsive services in Canby. The most significant are mentioned here.

Language

Dial-a-ride and ADA paratransit service require a phone call to discuss the requested reservation, and sometimes a conversation with the driver too. This means that these demand-responsive services are naturally harder to use for people who do not speak English with confidence, or at all.

In contrast, a scheduled fixed route can be understood and used repeatedly, with few or no words exchanged between the passenger and transit staff.

While we do not have data on the race or ethnicity of fixed route and demand-responsive service riders, anecdotal evidence suggests that CAT's demand-responsive services are mostly used by people who speak English with confidence, with a few exceptions.

CAT has recently made changes to reduce this barrier. CAT now requires all dispatchers to use an interpreter service when taking calls from people who do not speak English. CAT also promotes dial-a-ride using both English and Spanish materials, and at multicultural events.

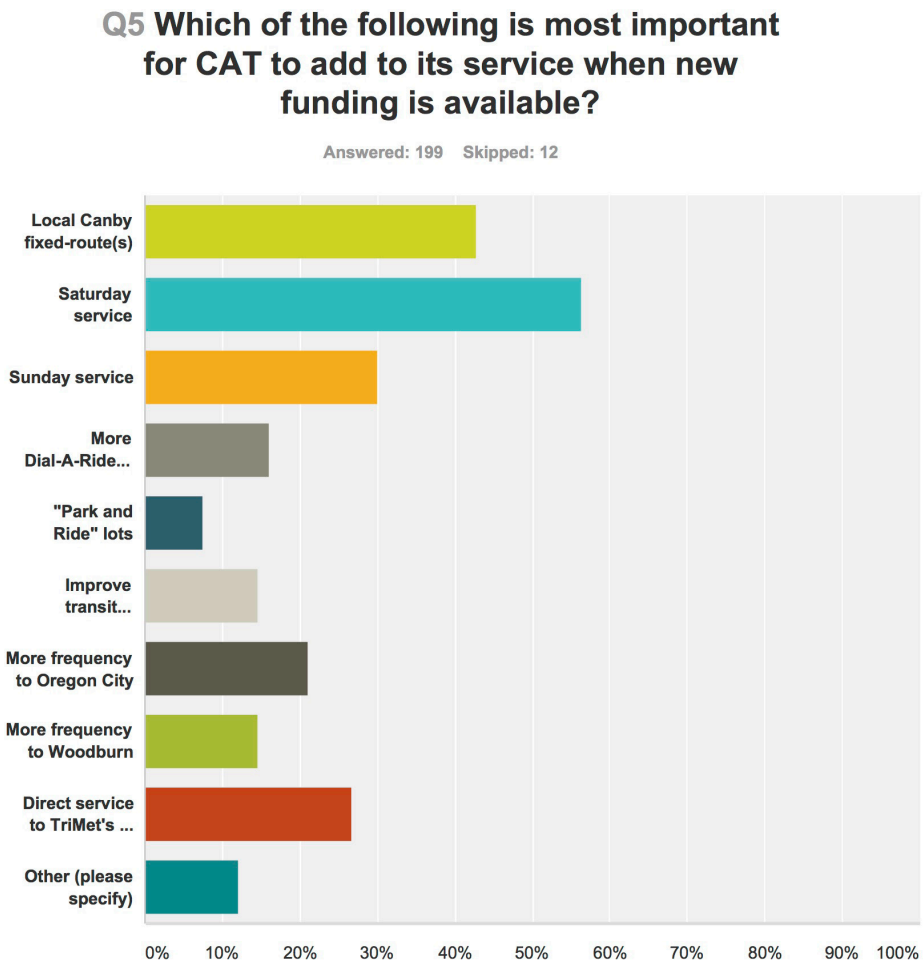
However, this particular difference in how people of different races and ethnicities use the CAT system may influence people's opinions about which service is relevant in their own lives, and which is more important for the community.

Weekends

CAT does not operate on weekends. This means that most people who work in the service industry, which is "all hands on deck" on weekends, cannot rely on transit for their trip to work. People in many other situations would also value weekend service. Once somebody has to own a car for the weekends, they may as well use it during the rest of the week too, especially when gas is cheap and parking is free. The lack of weekend service on CAT is surely keeping weekday ridership lower than it could otherwise be.

Weekend service is consistently one of the most asked-for additions to CAT service.

Weekend service would be very costly to add, because not only would some weekday service have to be shifted to



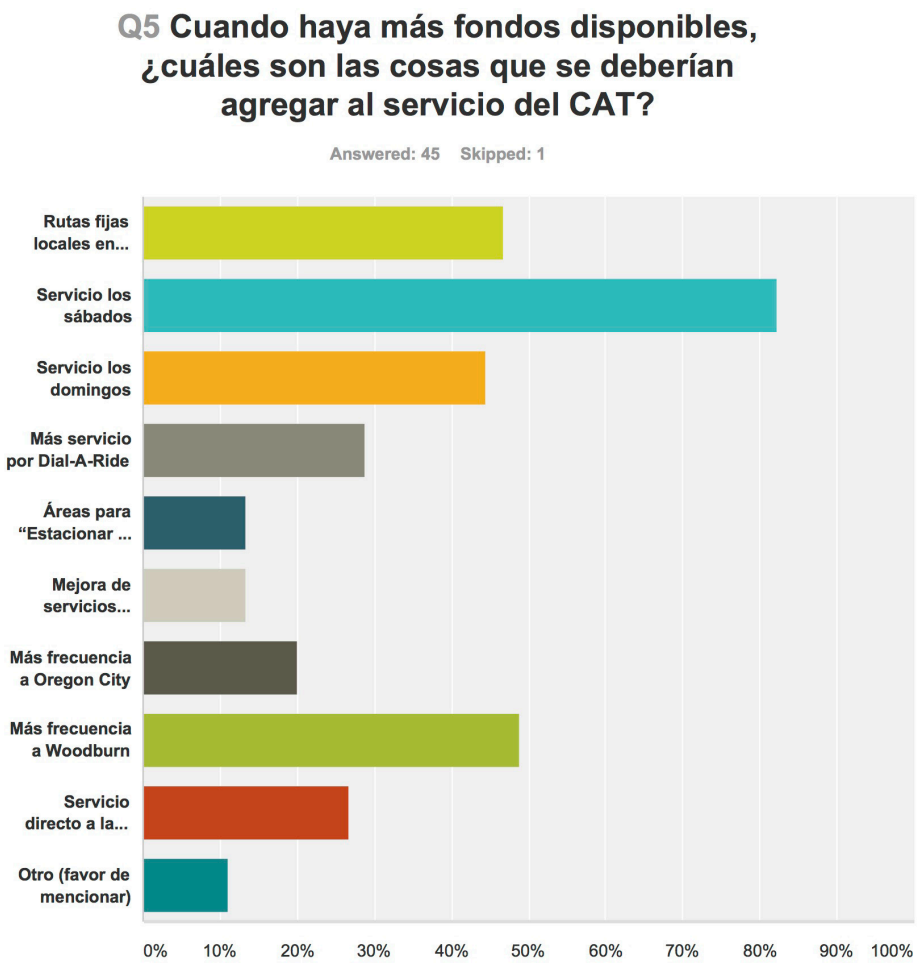


Figure 25: In a 2013 survey of Canby residents and workers, there were some interesting differences in the responses gathered from English and Spanish speakers. Spanish speakers were more likely to say that Saturday and Sunday service should be added, and that there should be more frequent service to Woodburn. Spanish speakers were also slightly more likely to say that dial-a-ride should be increased, though anecdotal information suggests that few dial-a-ride users are Hispanic today.

weekends, but also the fixed costs of dispatching, supervision, mechanics, and building use would need to be added for the weekends. This is why many small town transit agencies cut weekend service in budget crises, as Canby did in 2009.

The addition of weekend service was the top priority for respondents to a 2013 survey, as shown in Figure 25 on page 40.

Complexity

A smaller barrier to access may be the complexity of current Route 99 service. The daily pattern of service is not predictable or memorable. The route makes a number of deviations within the city. The schedule includes some trips that are really buses returning to the garage, and are not very useful for riders. All of these factors probably make the Route 99 schedule harder to read, understand and memorize for most people. A simpler schedule, that people can keep in their minds, would make it slightly easier for people to try riding Route 99 for the first time.

Future Alternatives

Focus on Key Choices

There are numerous changes that Canby could consider making to its transit services.

In order to make good use of the time that members of the public, transit stakeholders and decision-makers will contribute to this Transit Master Plan process, we are focusing on a small set of potential changes:

- Whether the current balance of investment in demand response services (dial-a-ride and paratransit) compared to fixed-routes (like Route 99) is right for Canby, or whether CAT should increase the productivity and efficiency of its demand-response services to free up some resources for fixed routes.
- If people desires a greater investment in scheduled, fixed-route transit, then...
  - ...Whether it is more valuable to restore a local, circulating route within the City of Canby, or...
  - ...To increase intercity services (like Route 99).

These changes are related to one another, because we are assuming that CAT's revenues are fixed in the next few years. This means that service cannot be increased or improved in one area, without a decrease in another area.

Because these choices are related to one another, we are presenting not only potential changes, but also *trade-offs*, to the community. We are not asking only *"What do you like?"* but also, *"What are you willing to give up in order to get it?"*

These particular changes were selected because:

- They are currently discussed among stakeholders as key issues for CAT.
- They are practical and could be implemented, in the next few years, as long as CAT's funding remains stable.
- They relate to the community's deepest-held values for transit. None is technically better than any other. This means that reasonable people may disagree about them.

At the end of this chapter, we note other potential changes that CAT and the community may want to consider in future planning cycles.

Dial-a-ride and ADA Paratransit Efficiency

Both of the changed Alternatives (1 and 2) assume that CAT improves the efficiency and productivity of demand-responsive services.

In the last year, CAT served 15,575 one-way trips using an average of 27.4 hours of demand responsive service per day. (Recall that CAT pays a contractor for transit operations by the hour, so the hours of service are directly related to cost.) In the two changed Alternatives (1 and 2), we assume that CAT could serve the same number of trips in a future year, using an average of 20 hours of service per day.

This would mean that CAT dial-a-ride and ADA paratransit were handling 3.1 boardings per hour, instead of the current 2.4 boardings per hour, assuming no reduction in the number of trips served. This is within the range of reasonable productivities for demand-responsive services in towns the size of Canby, even accounting for the obligation to make some long trips to Oregon City for paratransit customers. However, this increase in productivity would require some changes to internal procedures, which are already being contemplated by CAT.

This change would likely cause more dial-a-ride and ADA paratransit passengers to share vehicles. The service would be less like a taxi, and more like a public transit service, for more people's trips. This would

cause some trips to get slightly longer, as people have to ride along to the pick-up or drop-off location of someone else's choosing. However, because Canby is such a small town, the additional travel time would be small.

We have included this change in both of the changed Alternatives, because without this change, no increase in any other transit service is possible. If the community does not want to see more shared trips and more productivity on dial-a-ride and ADA paratransit services, and wants to keep the status quo, then the range of potential changes to fixed routes is very small.

In summary, we expect that CAT demand responsive services could continue to serve as many people and trips as they do today, at a lower cost. CAT would do so by making some behind-the-scenes improvements that improve efficiency, and by scheduling more riders into shared trips.

The savings from this change could be used in different ways, and that is the choice we wish to put before the community:

- Should the savings be used to create a local, one-way, once-per-hour Canby circulator? Or...
- Should the savings be used to increase intercity service, between Canby and neighboring cities?

On the following pages, we describe the two changed Alternatives (1 and 2) that illustrate this choice, and summarize each Alternative in a table. The table above describes existing CAT services (illustrated as "Alternative 0" on page 49) so that the reader can compare Alternatives 1 and 2 to the existing system.

Alternative 0: Existing Services		
Name	Description	Operating Cost (Hours)
Local route	No local route.	--
Dial-a-ride	Available within Canby, to the general public. (Though operates as a combined service with ADA paratransit.) Twice a day, a free Shopper Shuttle groups passengers for rides to local shopping centers.	27.0
ADA Paratransit	Available within Canby, and to certain Oregon City destinations. People with a disability that prevents them from accessing a fixed route stop are eligible for ADA paratransit.	
Route 99	20 daily round trips to Oregon City, 8 daily round trips to Woodburn during rush hours. Departure times are not regularly-spaced throughout the day.	29.5
	Total:	56.5

Figure 26: This table summarizes existing CAT services, for comparison to the tables describing Alternatives 1 and 2, on the following pages.

Alternative 1: Local Fixed Route

A diagram illustrating Alternative 1 is shown on page 50.

In this Alternative, CAT would add a circulating fixed route. Dial-a-ride and ADA paratransit would still be available, for travel within Canby and for trips to certain destinations in Oregon City. The amount of intercity service would be the same as today, but the Route 99 schedule could be re-written to be more clear and memorable.

Local circulator

When CAT was first created, in 2002, one of the changes people were most excited about was the creation of local services within the city. TriMet had, previously, only provided intercity service, linking Canby to the Portland Metro area.

The loss of the local services in 2011 was a blow to Canby's vision for itself, and sharply reduced fixed route transit ridership (as can be seen in the ridership graph on page 27).

Even with the assumed reduction in dial-a-ride and paratransit costs, and a small reduction in Route 99 costs, there is only a very modest budget available for a local circulating route. There is only enough budget to provide a route that comes once per hour, and circulates one-way-only.

This means that if people miss their bus, they have a long wait until the next one. It also means that they must ride all the way around the loop for every round-trip they make.

Because most people do not like long waits, and do not like riding out-of-direction in a loop, circulators like this one nearly always get very low ridership. They do not succeed in competing for most people's trips compared to the other options: walking, cycling, driving, getting a ride from a family member or a friend.

We expect that ridership on this one-way,

Alternative 1: Local Fixed Route		
	Level of Service	Operating Cost (Hours)
Local route	A once-per-hour, one-way loop, running from 8:00 am to 6:00 pm, within Canby.	10.0
Dial-a-ride	General public dial-a-ride within the city of Canby. Dial-a-ride is completely accessible to people with disabilities. However, it is available on a first-come first-served basis, and may sometimes be full at the time when someone requests it.	20.0
ADA Paratransit	Available within Canby, and to certain Oregon City destinations, from 8:00 am to 6:00 pm.	
Route 99	Hourly service to Oregon City all day, half-hourly service to Woodburn during rush hours only. (This equals 19 daily round trips to Oregon City, 8 daily round trips to Woodburn.) This is very similar to existing Route 99 service, with a more clear and memorable schedule, though with one fewer trips to Oregon City each day.	26.5
	Total:	56.5

Figure 27: This table summarizes the services CAT would provide in Alternative 1, and their daily operating costs.

hourly loop route would be low. This loop represents less useful service than the two-way routes CAT operated prior to service cuts in 2011. This loop would go fewer places, for fewer hours of the day, and would require people to travel out-of-direction on every round trip they make.

However, even if ridership on this loop would be low relative to other fixed routes (like Route 99), would it be higher than ridership is today on dial-a-ride? It might well be, in which case shifting service hours from dial-a-ride to this local circulating route could make a modest improvement in CAT's overall ridership.

Dial-a-ride and ADA paratransit

In Alternative 1, in-town transit service is provided by the local circulator. A local fixed route is required to be complemented by ADA paratransit, by federal law. People with disabilities would be able to ride paratransit to and from places within Canby, as they do today, during the hours of operation of the local circulating route. CAT could also continue to offer general public dial-a-ride, on a space available basis, as well as paratransit.

In this Alternative, Canby would continue to offer ADA paratransit service to certain Oregon City destinations.

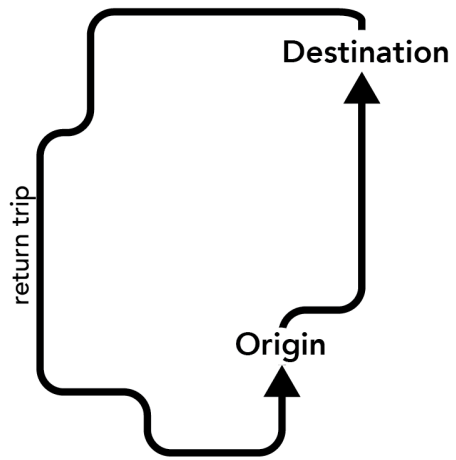


Figure 28: One-way loops require people to ride around the entire loop, either on their going trip or their return.

Today, the hours of paratransit service are tied to the hours of "local" service on Route 99. In this Alternative, there would no longer be a "local" segment of Route 99. Route 99 would be considered an "express" service, which means that it would not trigger an ADA paratransit requirement under federal law (the Americans with Disabilities Act). Instead, ADA paratransit would be provided to support the local circulating fixed route. This means that the hours of operation of paratransit service would be linked to the hours of service on the local fixed route.

As in Alternative 2, the efficiency of the demand response services would be increased. Instead of using 27 hours of service per day, these services would use 20 hours per day. As a result, CAT would move 3.1 people per hour on its dial-a-ride and paratransit services, rather than 2.4 people per hour as they do today. This improvement in efficiency is within the normal range for small towns. The experience for riders would change in small ways: they might be asked to travel at slightly different times than they prefer, and the would certainly share the vehicle with other riders more often than they do today.

Route 99

In Alternative 1, there is a small reduction in service on Route 99. Instead of 20 daily round trips to Oregon City, there are 19 daily round trips. The number of daily trips to Woodburn (8) would not change.

Because of this small reduction in scheduled trips, and because of improvements in the efficiency of the schedule, the cost of Route 99 in this Alternative would be slightly lower than today (26.5 daily service hours instead of 29.5). These small savings are used to pay for part of the cost of the local circulator fixed route.

In order to improve travel times for

passengers on Route 99, save operating cost, and make Route 99 clearly an "express" route, a few of Route 99's local deviations within Canby would be eliminated. The deviations into shopping center parking lots would no longer be made on Route 99. (People could use the new local circulator route to access more places than Route 99 would take them directly.) However, Route 99 would still leave the highway in the center of town, to serve the Transit Center (in both directions) and to serve Locust Street (westbound).

Even without adding service, Route 99 could be scheduled to make better connections with neighboring transit systems. However, a single route cannot be timed to connect with *all* neighboring systems, so some choices would need to be made about what to prioritize: connections to Salem (in Woodburn), or to Wilsonville (at the Canby Transit Center), or to TriMet's direct bus to Portland (in Oregon City).

Alternative 2: More Intercity Service

A diagram illustrating Alternative 2 is shown on page 51.

In this Alternative, CAT would increase the hours of operation and the number of daily trips to both Oregon City and Woodburn. There would be no local fixed route, but the city would still be served with general public dial-a-ride. ADA paratransit would be offered only to and from certain Oregon City destinations.

Route 99

In Alternative 2, savings from more efficient dial-a-ride and ADA paratransit operations would be used to increase frequencies on Route 99.

Route 99 would go to Oregon City every hour, all day (for a longer duration than in Alternative 1). During rush hours, Route 99 would go to Oregon City every 30 minutes. This would be a total of 23 daily round trips between Canby and Oregon City, instead of today's 19 trips.

Route 99 would go to Woodburn every hour, all day long, instead of running only during rush hours (as it does today, and in Alternative 1). This would be a total of 14 daily round trips between Woodburn and Canby, instead of today's 8 trips.

This higher frequency would make connections with Wilsonville SMART's Route 3, in downtown Canby, easier for travelers to make without a long wait.

As in Alternative 1, Route 99 would make fewer deviations within the city of Canby, but would still deviate off the highway to reach the Transit Center and a bus stop on Locust Street.

There is a simple variation to Alternative 2, which is that some of this fixed route service could be used to provide midday trips to Wilsonville, instead of to Woodburn or Oregon City.

Dial-a-ride and ADA paratransit

In Alternative 2, travel to various destinations within the city of Canby would be provided by general public dial-a-ride and paratransit, just like it is today.

However, this service would no longer be mandated by federal law, because there would be no local fixed route service for which paratransit is required as a complement. Today, the hours of ADA paratransit service are tied to the hours of "local" service on Route 99. In Alternative 2, there

would no longer be a "local" segment of Route 99. Route 99 would be considered an "express" service, which means that it would not trigger a paratransit requirement under federal law. There would also be no local circulating fixed route to trigger such a requirement. CAT would then have more flexibility in setting the hours of operation and the capacity of its in-town dial-a-ride.

ADA paratransit would still be available to certain Oregon City destinations (including the Oregon City Transit Center, for transfers to TriMet paratransit) for people with disabilities.

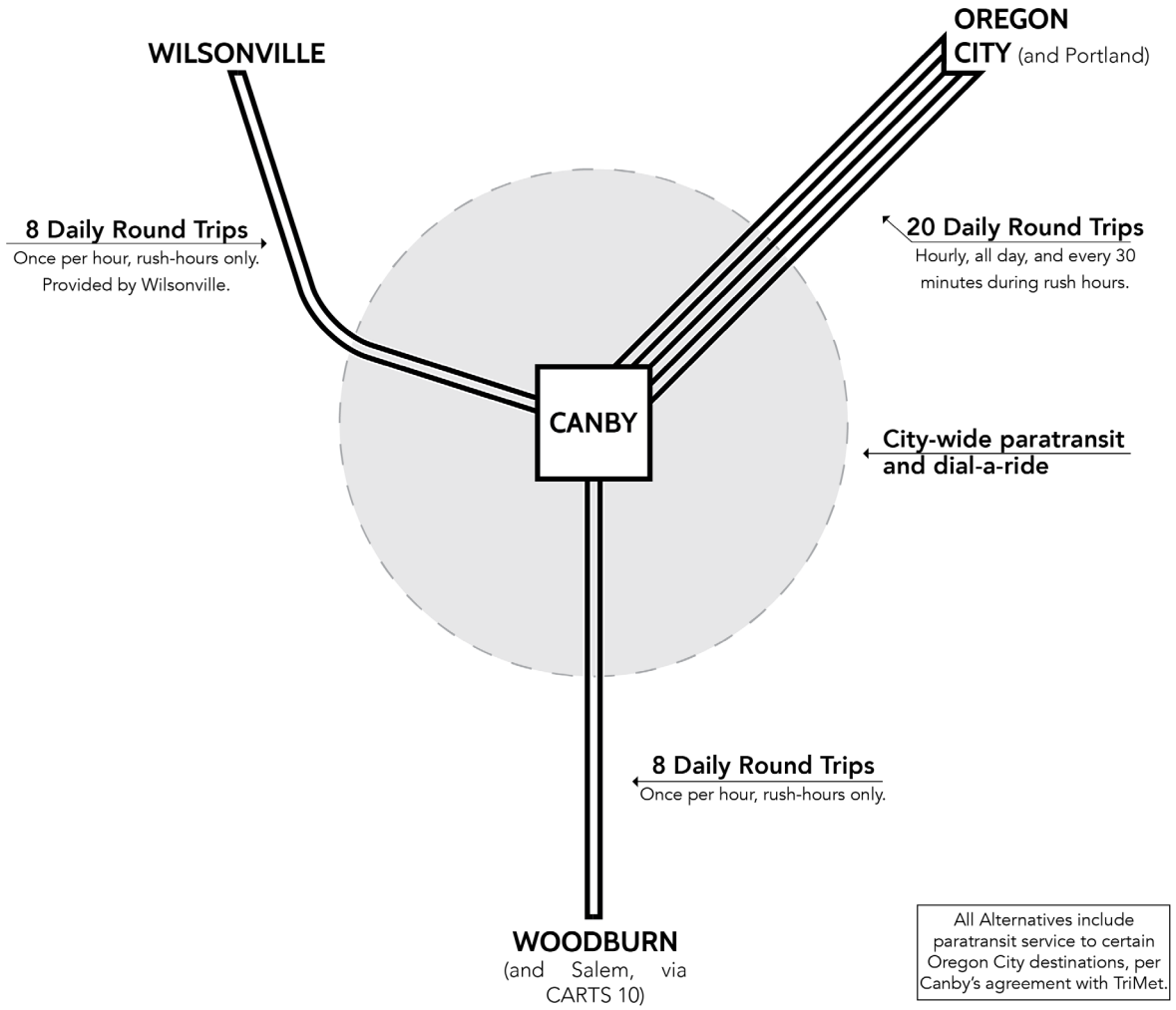
As in Alternative 1, the efficiency of the demand response services would be increased. Instead of using 27 hours of service per day, these services would use 20 hours per day. As a result, CAT would move 3.1 people per hour on its dial-a-ride and paratransit services, rather than 2.4 people per hour as they do today. This improvement in efficiency is within the normal range for small towns. The experience for riders would change in small ways: they might be asked to travel at slightly different times than they prefer, and the would certainly share the vehicle with other riders more often than they do today.

Alternative 2: More Intercity Service		
	Level of Service	Operating Cost (Hours)
Local route	No local route.	--
Dial-a-ride	General public dial-a-ride within the city of Canby. Dial-a-ride is completely accessible to people with disabilities. However, it is available on a first-come first-served basis, and may sometimes be full at the time when someone requests it.	20.0
ADA Paratransit	Available for trips to and from certain Oregon City destinations. People with a disability that prevents them from accessing a fixed route stop are eligible for ADA paratransit.	
Route 99	Hourly service to Oregon City all day, half-hourly during rush hours. Hourly service to Woodburn all day. 23 daily round trips to Oregon City. 14 daily round trips to Woodburn. It is also possible to add trips to Wilsonville at midday, and add fewer trips to Route 99.	36.5
	Total:	56.5

Figure 29: This table summarizes the services CAT would provide in Alternative 2, and their daily operating costs.

Figure 30: This diagram represents CAT's existing services. About half of resources are spent providing dial-a-ride and paratransit (within Canby, and to certain Oregon City destinations). The other half are spent on CAT's only fixed route, Route 99, between Oregon City and Woodburn. The City of Wilsonville provides fixed-route service between Wilsonville and Canby, during rush hours only.

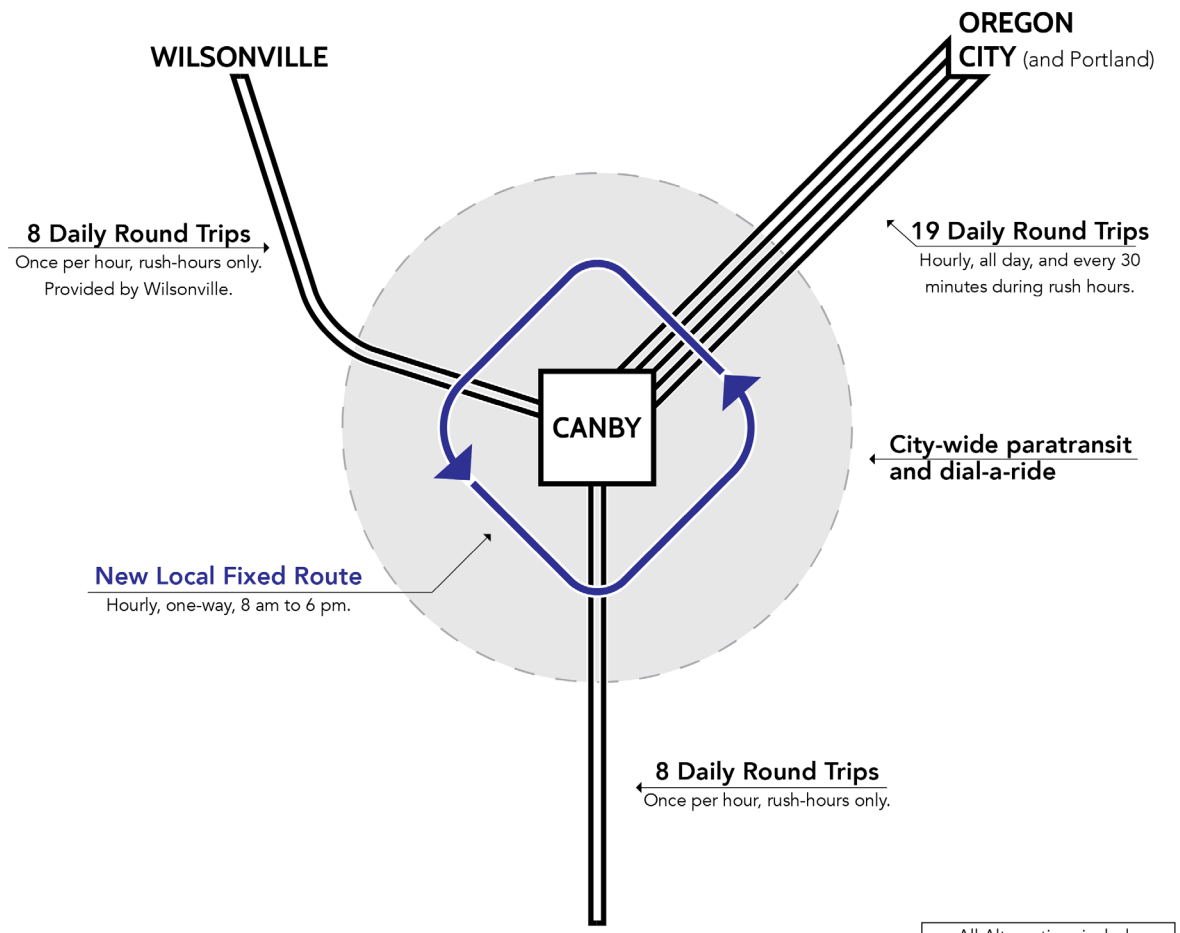
Alternative 0: Existing Services



All Alternatives include paratransit service to certain Oregon City destinations, per Canby's agreement with TriMet.

Figure 31: In Alternative 1, CAT would take savings from dial-a-ride and ADA paratransit efficiencies, and invest them in a local, one-way, every-60-minutes circulating route. Like Alternative 2, the total operating costs would be similar to today's.

Alternative 1: Local Circulator

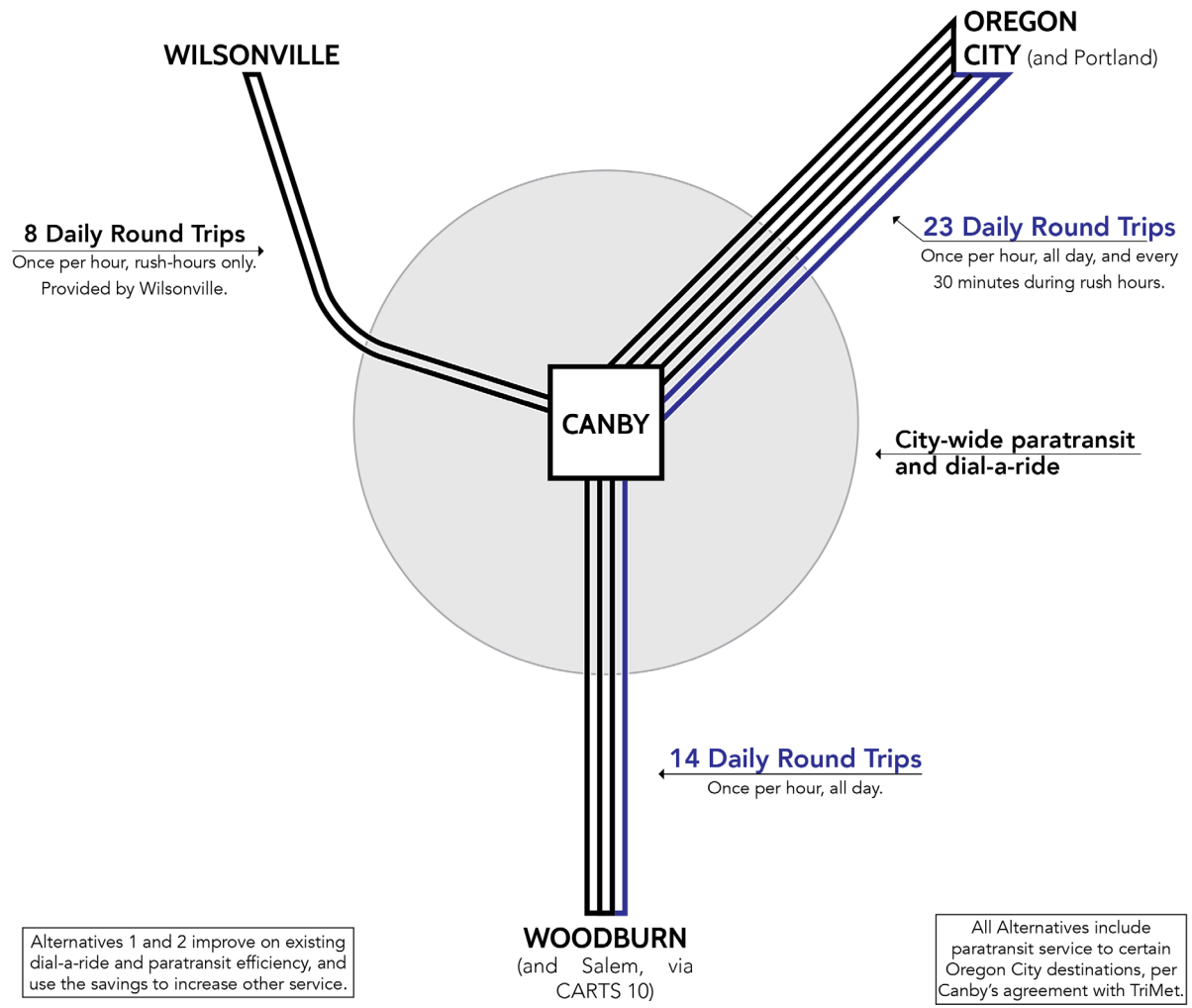


Alternatives 1 and 2 improve on existing dial-a-ride and paratransit efficiency, and use the savings to increase other service.

All Alternatives include paratransit service to certain Oregon City destinations, per Canby's agreement with TriMet.

Figure 32: In Alternative 2, CAT would take savings from dial-a-ride and ADA paratransit efficiencies, and invest them in more intercity services, such as more trips to Oregon City and Woodburn every day. Like Alternative 1, the total operating costs would be similar to today's.

Alternative 2: More Route 99 Service



Alternatives 1 and 2 improve on existing dial-a-ride and paratransit efficiency, and use the savings to increase other service.

All Alternatives include paratransit service to certain Oregon City destinations, per Canby's agreement with TriMet.

Weekend Service

In the two Alternatives described above, we have focused on one potential trade-off: that between increasing intercity service, and restoring some local circulating service.

There are other changes that CAT and its stakeholders should consider in the future, though we are not asking stakeholders to focus on them in this Transit Master Planning cycle. Weekend service is chief among them, and is surely on most stakeholders' minds, and for those reasons we will address the topic in this Choices Report, rather than in the later Final Report for this Transit Master Plan.

The lack of weekend service – not just in Canby, but also in the Salem area, and in other Willamette Valley transit systems – presents a huge barrier to transportation for many people.

Weekend service is highly valued for its economic purposes, as it allows workers to access jobs every day, not just on weekdays. As the U.S. and Oregon economies continue to move away from traditional 9-to-5 industries and towards service sectors, more and more people commute to work on the weekends (and in the evenings). If transit isn't there for someone's commute every day that they work, it isn't useful. Even when CAT offered Saturday service, transit still wasn't there for every work day

Weekend service is valued for its social purposes, as it allows people to shop, socialize, worship, play and visit, even if they cannot or do not want to drive.

Weekend service has been named by Canby residents as a top priority for new investment, above either a local fixed route or increased service on Route 99 (as shown in the survey response charts on page 40).

The reason that weekend service is not considered in the Alternatives designed for this Transit Master Plan process is that there are big start-up costs to restoring weekend service. Large weekday service cuts (to Route 99, dial-a-ride and ADA paratransit) would be needed to pay not only for additional service hours on weekends, but also for the "start-up" costs of having dispatchers, supervisors and mechanics standing by on weekends, and having CAT facilities open and operating. CAT staff estimate that these cuts are so large as to be currently unthinkable in the community.

Given the importance of weekend service, to social and economic outcomes alike, we expect it to continue to be a high priority for Canby stakeholders, and recommend that CAT maintain an ongoing conversation within the city about how to add weekend service in the future.

Measuring Impacts to Key Populations

People with low incomes and non-white people are protected by specific federal and state rules, when it comes to transit service (which is funded with federal dollars). Changes to transit service may not have disproportionately negative impacts on low-income and minority people.

During this first "Choices" phase of the Transit Master Plan process, the focus is on the Alternatives. The Alternatives are intentionally designed to be approximate, to aid in a community conversation about values and priorities. Their impacts therefore cannot be precisely measured.

Later in this project, when a Draft Transit Master Plan is developed, its potential impacts on (and benefits to) different key populations will be evaluated and reported to the public, and used to refine the Plan itself.