

RESOLUTION 1276

A RESOLUTION ADOPTING THE 2017 TRANSIT MASTER PLAN FOR CANBY AREA TRANSIT

WHEREAS, Resolution 750 adopted the May 2001 Canby Transit Plan as the guiding plan for developing and implementing transit service; and

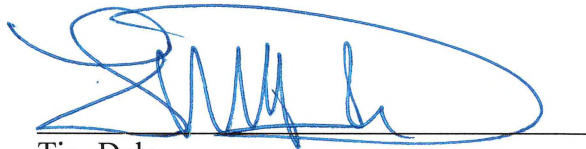
WHEREAS, the updated 2017 Transit Master Plan for Canby Area Transit has been developed with extensive input from a diverse set of Canby stakeholders; and

WHEREAS, the updated 2017 Transit Master Plan for Canby Area Transit represents the values of the Canby community and technical best practices;

NOW, THEREFORE, IT IS HEREBY RESOLVED by the City Council of the City of Canby that the updated 2017 Transit Master Plan for Canby Area Transit is hereby adopted as the guiding plan for changing, maintaining and improving Canby Area Transit's public transit services. Modifications and additions may be required over time as conditions change.

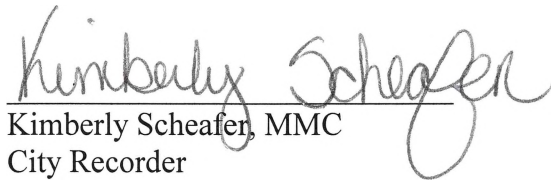
This resolution will take effect on November 15, 2017.

ADOPTED this 15th day of November, 2017, by the Canby City Council.



Tim Dale
Council President

ATTEST:



Kimberly Scheafer, MMC
City Recorder

Volume II: Transit Master Plan

For Canby Area Transit

JARRETT WALKER + ASSOCIATES

OCTOBER 25, 2017

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Planning Team

This Transit Master Plan was prepared by a team of City of Canby staff and consulting transit experts, working together in 2016 and 2017. They included:

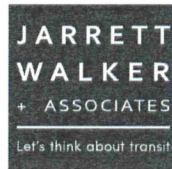
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Heather Menninger, Principal



Funding

This Plan was made possible by a grant from the Oregon Department of Transportation.

Summary

This report is Volume II of a new Transit Master Plan for the City of Canby.

Volume I of the Plan was called the “Choices Report.” It summarized how existing Canby Area Transit (CAT) services are working, and it described a key choice for Canby’s transit stakeholders and decision-makers:

If additional funding becomes available, which should CAT do first: add more frequency to Route 99 (to Oregon City and Woodburn/Salem), or add a small local circulator route within Canby?

There is no technically correct answer to this question. It is a choice that relates to people’s needs and values. To answer this question, CAT and its transit planners turned to the community.

The community was consulted through:

- Direct outreach at events, local businesses and on buses
- Paper and web surveys, in English and Spanish
- A bilingual stakeholder workshop at the library, attended by a diverse group of community members

- Meetings with the City’s Transit Advisory Committee
- Meetings with City Council

Based on the guidance received in these ways, plus the technical knowledge of the transit planning team, this Plan recommends the following changes to CAT services, in priority and chronological order:

PHASE 0

Make dial-a-ride and ADA paratransit services more efficient, so that the same number of people can be served at slightly lower cost to the City. This phase is already underway.

PHASE 1

Add some frequency to Route 99, using funds saved in Phase 0. It may also be appropriate at this time to add structure to the premium paratransit service between Canby and Oregon City.

PHASE 2A

Add Saturday trips on Route 99.

PHASE 2B:

Add a local circulator route within Canby, on weekdays.

PHASE 3

Add more weekend service on Route 99 (e.g. Sunday and/or holiday service). OR,

add weekend service within Canby (as general public dial-a-ride service, or a local circulator with ADA paratransit).

New Funding

When we began this Plan in 2016, we assumed that no additional transit funding would be available in the next few years. This meant that Canby would have to improve efficiency in order to add either Route 99 or local circulator service.

Since then, the Oregon Legislature established a new statewide fund for transit. Canby expects to start receiving this funding in 2018, though the amount and the requirements that come with it are not yet known. New funding will allow CAT to move through the phases of this Plan more quickly than originally thought.

Resumen

Este borrador es el Volumen II de un nuevo Plan maestro de Tránsito para la Ciudad de Canby. Volumen I del Plan fue llamado el "Informe de Opciones." Aquel resumía cómo están funcionando los servicios existentes del Área de Tránsito de Canby (CAT), y describe una opción clave para Canby:

Si se dispone de fondos adicionales, ¿que debe hacer CAT primero: Añadir más frecuencia a la ruta 99 (a Oregon City y Woodburn/Salem), o añadir una pequeña ruta de circulador local dentro de Canby?

No hay una respuesta técnicamente correcta a esta pregunta. Es una elección que se relaciona con las necesidades y valores de la gente. Para responder a esta pregunta, CAT y sus planificadores de tránsito se dirigieron hacia la comunidad. La comunidad fue consultada a través de:

- Información y encuestas en eventos, negocios locales y en buses
- Encuestas en papel y por internet, en inglés y español
- Un taller bilingüe de accionistas en la biblioteca, al que asistieron un grupo diverso de miembros de la comunidad
- Reuniones con el Comité Consultivo de Tránsito de la Ciudad

- Reuniones con el Concejo Municipal

Basándose en la orientación recibida de este modo, además del conocimiento técnico del equipo de planificación de tránsito, este plan recomienda los siguientes cambios en los servicios CAT, en orden prioritario y cronológico:

Fase 0

Haga que el dial-a-Ride y los servicios de paratransito de ADA sean más eficientes, de modo que el mismo número de gente puedan ser atendidas en un costo levemente más bajo para la ciudad. Esta fase ya está en marcha.

Fase 1

Agregar cierta frecuencia a la ruta 99, usando los fondos ahorrados en la fase 0. También puede ser apropiado en este momento para agregar más estructura al servicio de paratransito Premium entre Canby y la ciudad de Oregon.

Fase 2a y 2b

Fase 2a: Añadir viajes durante los sábados en la ruta 99.

Fase 2b: Añadir una ruta de circulador local dentro de Canby, los días laborables.

Fase 3:

Añadir más servicio de fin de semana en la ruta 99 (ej. Domingo y/o servicio de días festivos).

O, añadir servicio de fin de semana dentro de Canby (como servicio público de dial-a-ride, o un circulador local con paratransito ADA).

Nueva Financiación

Cuando iniciamos este Plan en el 2016, asumimos que ningún financiamiento adicional de tránsito estaría disponible en los próximos años. Esto significaba que Canby tendría que mejorar la eficiencia con el fin de añadir la ruta 99 o el servicio de circulador local.

Desde entonces, la legislatura de Oregon estableció un nuevo fondo estatal para el tránsito. Canby espera comenzar a recibir este financiamiento en 2019, aunque la cantidad y los requisitos que vienen con él todavía no se conocen. Los nuevos fondos permitirán que CAT se mueva a través de las fases de este plan más rápidamente de lo que se pensó en un principio.

1

How We Got Here

This is Volume II of the Canby Transit Master Plan. For a description of Canby's existing transit services, recent history, and key choices for the future, please read *Volume I: Transit Choices Report*, available to download from the [Canby Area Transit website](#).

Key Choice

In the winter and spring of 2017, Canby Area Transit (CAT) engaged the public, stakeholders, and the City Council in a discussion of a major choice about the future of transit in the city:

If additional funding becomes available, which should CAT do first: add more frequency to Route 99 (to Oregon City and Woodburn/Salem), or add a small local circulator route within Canby?

This choice will soon become relevant if CAT improves the efficiency of its dial-a-ride and ADA paratransit services, or when CAT starts receiving additional operating funds (as has recently been decided by the Oregon Legislature).

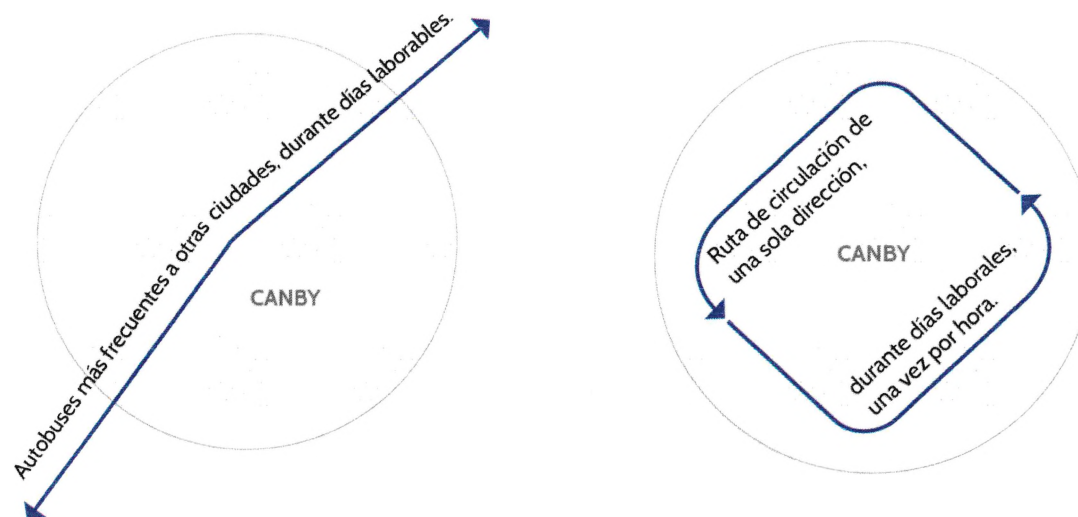


Figure 1: Canby transit stakeholders were asked which was more important to them: more frequent service on intercity bus routes like Route 99 (at left), or a local one-way circulator route within the city (at right). These graphics were used in the web and print surveys, which were also available in English.

Public Input

The policy and prioritization recommendations in this Plan are substantially informed by input from a wide variety of people:

A group of 36 stakeholders spent four hours in a bilingual training and workshop focused on this choice. In a poll at the end of the workshop, 11 of them said they believed the City should prioritize investments in a new local circulator, whereas 17 said more frequency on Route 99 should be the top priority.

175 people took a bilingual survey, in print or online. Of these people, 63 preferred a local circulator, and 100 preferred more service on Route 99.

The most common free-form comment in the surveys was a request for weekend service.

The Transit Advisory Committee recommended unanimously to City Council that a phased improvement plan be adopted, in which the first step would be increased service on Route 99. (A longer description of this phased plan is in Chapter 2.)

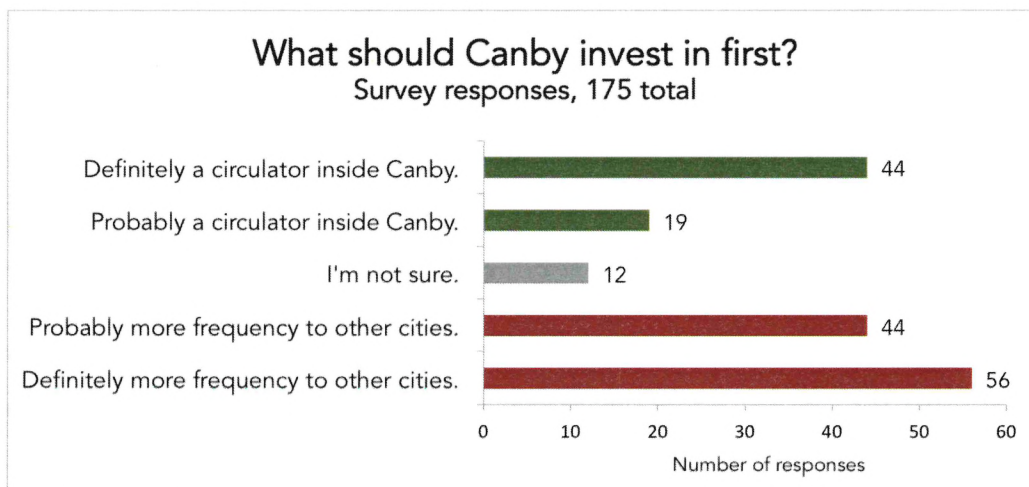
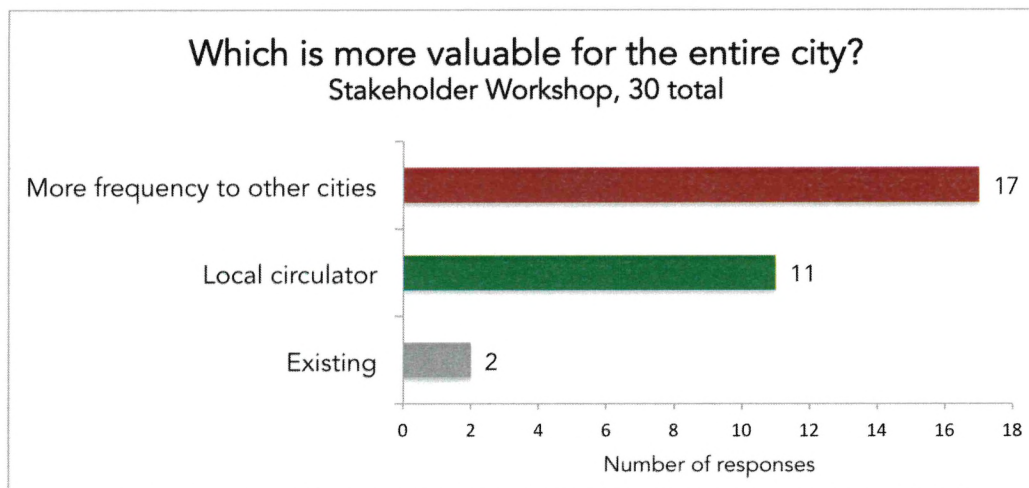


Figure 2: Input from diverse sources showed consistent support (though not unanimous support) for investing in more frequency on intercity transit routes before restoring a local circulator.

The people consulted in the development of this plan were diverse, representing:

A wide range of ages,

Non-riders and current CAT riders alike,

Riders of dial-a-ride, paratransit and Route 99 (as well as other neighboring transit systems),

Canby residents, workers, business owners and managers; and

Both Anglos and Hispanics.

No single “interest group” or demographic group dominated this process, and there was a range of opinion on this key choice within each demographic group. In the end, the public input was not unanimous but was broad, thoughtful and consistent across venues and groups.

Recent Changes

Since the start of this planning effort in 2016, a number of changes have taken place:

- The Oregon Legislature established a new Statewide Transit Investment Fund (STIF) in July 2017.
- The City sought bids on the operation of its transit services, selected MV Transportation (the previous contractor), and signed a new agreement with MV, effective July 1, 2017. The agreement included a higher payment rate per hour of service provided, and a predictable escalation of that rate over the term of the contract.
- The new agreement with MV also includes provisions to improve the efficiency of dial-a-ride and paratransit services, and shift any savings from those services into Route 99. MV and CAT staff have already begun to work together towards that end.

The new statewide transit fund established in July 2017 is called the State Transportation Improvement Fund (STIF). The STIF will collect payroll taxes (at a rate of 0.1%) from employers and employees around the state starting in July of 2018, and distribute them to transit providers

around the state for transit operations. The distribution rules and process are somewhat complex and not yet fully developed.

Canby Area Transit can reasonably expect to receive some increased amount of funding as a result of the STIF, as early as fall 2018, and no later than January 2019 (by which date ODOT staff must have the program up and running).

All of these changes are positive for CAT. They increase the likelihood that CAT will be able to implement the Phases 0 and 1 of this plan in the near future.

2 Phasing and Priority Improvements

In this chapter, recommendations for all of the modes of transit that CAT provides or could provide are organized into priority phases. Those transit modes include intercity fixed route, general public dial-a-ride, Americans with Disabilities Act (ADA) paratransit, and a potential future local circulator. These phases are based in part on the relative importance of changes, derived from public input, and in part on the practical sequencing of certain changes.

Phase 0: Technical changes

This first phase is called “Phase 0” because it involves technical improvements, about which few stakeholders are likely to have strong opinions. Phase 0 lays the groundwork for later phases. The major results of Phase 0 will be an improvement in dial-a-ride and paratransit efficiency, and the writing of a new, simpler schedule for Route 99.

Dial-a-ride and ADA paratransit

CAT can improve dial-a-ride and paratransit efficiency by delivering the same number of dial-a-ride and ADA paratransit trips, to the same number riders as use the services today, for a slightly lower cost.

Service cost can be measured in the number of “service hours” provided by MV and purchased by CAT. A service hour equals one bus and one driver on the road or at the ready, for one hour. The number of boardings per service hour is called “productivity,” and is reported for CAT’s two major types of service, in the table above.

A close look at data from April 2016 revealed that CAT and MV delivered 2.4 transit boardings by dial-a-ride and paratransit customers for every hour of service provided.¹ The performance target for Phase 0 is an increase in productivity of dial-a-ride and paratransit to 3.1 boardings per hour of service.

Increasing the number of people served from 2.4 to 3.1 per hour would likely require asking more riders to share a vehicle with one another, and sometimes (for non-time-sensitive trips) to travel at a different time. Other efficiency improvements would be made “behind the scenes” and would not affect existing riders. These improvements, changes and other operational

1. To learn more about how existing services work and perform, download *Volume I: Choices Report*.

Service	Hours of Service Supplied	Boardings	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 3: The productivities of CAT’s fixed route (Route 99) and demand-responsive services (dial-a-ride and paratransit) in fiscal year 2015-2016. Fixed routes are nearly always many times as productive than demand-responsive services.

recommendations, are described in detail in Chapter 4.

As CAT and MV increase the number of riders served per hour, the number of hours of service required to maintain the paratransit and dial-a-ride programs can be reduced. These service hours can then be shifted to Route 99, to increase frequency or span of service, as described in Phase 1.

CAT has already begun Phase 0, even before the writing of this Plan. By making improvements to the nature of the operating agreement with MV, CAT has improved the incentive structure that rewards MV for efficiency, and has improved the basis for collaboration between MV and CAT.

Route 99 schedule

The existing Route 99 schedule is complex and difficult to follow. Even without increasing the frequency or span of Route 99, CAT could revise the schedule so that trip times are more memorable and predictable throughout the day.

However, Route 99 service is currently provided by drivers who also provide dial-a-ride and paratransit trips during the day. Thus changing the Route 99 schedule will cause MV to create new work shifts for operators. This should be done with an eye towards improving dial-a-ride and paratransit efficiency, as described above.

In the summer of 2017, Cherriots (the Salem-Keizer area transit provider) and CAT began a planning project for the larger Highway 99E corridor. A key outcome of this project will be improved connections between Canby and Salem. Today, Route 99 and Cherriots 10X both stop in Woodburn, and a person can theoretically transfer from one to the other. However, wait times for that transfer are very long, and as a result few people find it useful. (A map of Route 99 and Cherriots 10X, along with other regional services, is shown on page 14.)

Fast and reliable “pulses” or “timed

connections” are possible when the buses from two different routes arrive at the same stop at the same time, and dwell together for a few minutes so that passengers can transfer in both directions. A “timed connection” in or near Woodburn is one possible outcome of the Highway 99E Corridor Plan.

It may also be possible to make some timed connections at the Canby Transit Center, between Route 99 and Wilsonville’s Route 3X.

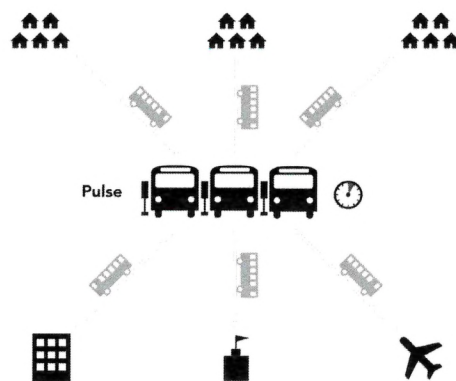


Figure 4: In a “pulse” or timed connection, buses on two or more routes meet at the same time and place so that customers can quickly transfer among them. The possibility that a pulse could make travel between Canby and Salem easier will be studied in a Highway 99E plan that is now underway.

The writing of a new Route 99 schedule will take into account this goal of an improved Canby-to-Salem connection. However, making timed connections, as described above, is easier on more frequent routes, because there are more times each day when the connection could take place. Increasing the frequency of Route 99 service, in and after Phase 1, will make it easier for Canby to provide a good connection to Salem and to other cities in the region.

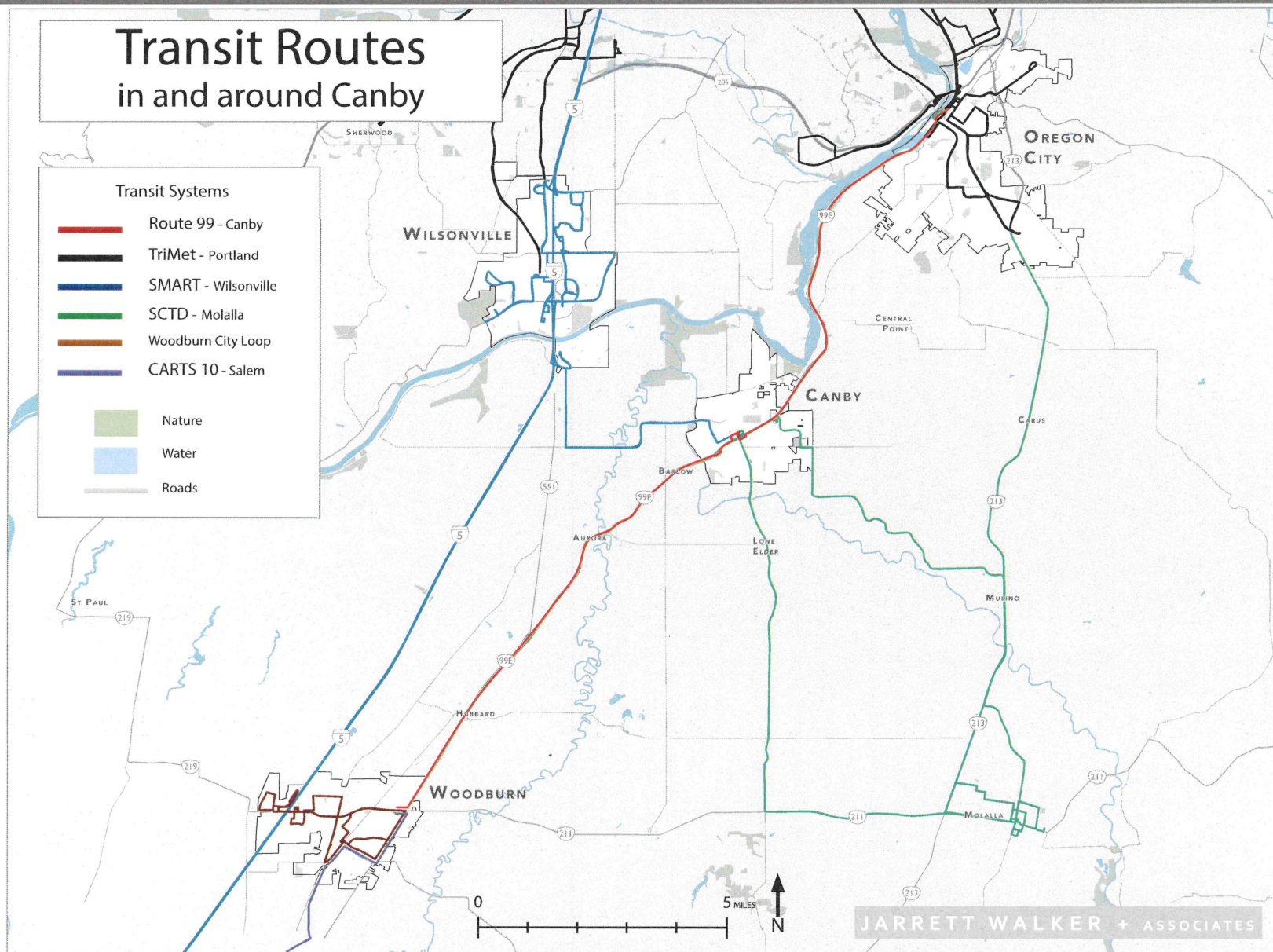
The conceptual schedule at right demonstrates how Route 99 could be made more predictable and legible, without requiring additional service hours. In this schedule:

- There is hourly frequency to Oregon City all day, and half-hourly frequency during rush-hours.
- There is hourly service to Woodburn during rush hours.
- Departure and arrival times repeat approximately every 30 or 60 minutes, so people can easily keep the schedule in their heads.
- However, a consequence of this “tidying-up” of the schedule is that there would no longer be midday trips to Woodburn, and there would no longer be midday trips to the southwest end of town, near Safeway.

It is unlikely that CAT will need to implement this schedule, because CAT expects to save some service hours from dial-a-ride and paratransit efficiencies, and expects to receive additional funding from the state starting in 2019. The conceptual schedule that more likely resembles what will be implemented is shown on page 16.

Figure 5: This conceptual schedule for Route 99 would make departure and arrival times more even and predictable, without requiring any additional budget.

Budget Neutral Conceptual Route 99 Weekday Schedule							
Weekdays only; Makes all local stops in addition to those listed here Uses existing Route 99 budget only (29.5 service hours per day)							
Northbound				Southbound			
Major stops:				Major stops:			
Woodburn Bi-Mart (depart)	Canby TC (arrive)	Canby TC (depart)	Oregon City TC (arrive)	Oregon City TC (depart)	Canby TC (arrive)	Canby TC (depart)	Woodburn Bi-Mart (arrive)
		4:55 AM	5:15 AM	5:20 AM	5:40 AM	5:53 AM	6:15 AM
		5:55 AM	6:15 AM	6:20 AM	6:40 AM	6:53 AM	7:15 AM
6:20 AM	6:42 AM	6:25 AM	6:45 AM	6:50 AM	7:10 AM		
		6:55 AM	7:15 AM	7:20 AM	7:40 AM	7:53 AM	8:15 AM
7:20 AM	7:42 AM	7:25 AM	7:45 AM	7:50 AM	8:10 AM		
		7:55 AM	8:15 AM	8:20 AM	8:40 AM	8:53 AM	9:15 AM
8:20 AM	8:42 AM	8:25 AM	8:45 AM	8:50 AM	9:10 AM		
9:20 AM	9:42 AM	8:55 AM	9:15 AM	9:20 AM	9:40 AM		
		9:55 AM	10:15 AM	10:20 AM	10:40 AM		
		10:55 AM	11:15 AM	11:20 AM	11:40 AM		
		11:55 AM	12:15 PM	12:20 PM	12:40 PM		
		12:55 PM	1:15 PM	1:20 PM	1:40 PM		
		1:55 PM	2:15 PM	2:20 PM	2:40 PM		
		2:55 PM	3:15 PM	3:20 PM	3:40 PM*	4:05 PM*	4:27 PM
		4:05 PM	4:25 PM	4:30 PM	4:50 PM	5:03 PM	5:25 PM
4:32 PM	4:54 PM	4:35 PM	4:55 PM	5:00 PM	5:20 PM		
		5:06 PM	5:27 PM	5:32 PM	5:52 PM	6:05 PM	6:27 PM
		5:35 PM	5:55 PM	6:00 PM	6:20 PM		
5:30 PM	5:52 PM	6:05 PM	6:25 PM	6:30 PM	6:50 PM	7:03 PM	7:25 PM
		6:35 PM	6:55 PM	7:00 PM	7:20 PM		
6:32 PM	6:54 PM	7:06 PM	7:27 PM	7:32 PM	7:52 PM		
7:30 PM	7:52 PM						
		7:35 PM	7:55 PM	8:00 PM	8:20 PM		



Phase 1: Increase Route 99 frequency, add structure to premium paratransit, continue outreach to Hispanic community

Phase 1 can begin either when CAT and MV have saved some service hours in the dial-a-ride and paratransit programs, or when additional resources become available (for example from an increase in payroll tax receipts by the City, or an increase in state funding).

Route 99

The northern and southern halves of Route 99 are similarly productive, meaning they move a similar number of people relative to the level of service provided. This suggests that CAT should add frequency to both halves of the route, because that higher frequency will benefit a similar number of existing and future riders on both halves of the route.

It will be valuable for CAT to define Route 99 as a “commuter express,” to avoid large new ADA paratransit obligations in the future. FTA guidance on what makes

a route a “commuter express” is vague and somewhat dated. However, two elements of the definition are clearly relevant to Route 99: The distances between commuter express stops are expected to be fairly long (1/2 or 1 mile apart, rather than the 1/8 or 1/4 mile spacing that is common for local routes), and a commuter express should make few deviations from a straight path.

The best time for CAT to make these changes to Route 99 will be when the frequency or span are improved. That way, riders who may be asked to walk a little farther, or cross the street (as a result of stop consolidation) may be compensated for that inconvenience with shorter waits and more choice in when they can travel.

It may be a good idea to delay some stop-consolidation or deviation-elimination until capital dollars are available to improve those stops where passengers are asked to gather. Again, riders who are negatively impacted by a longer walk or a road crossing may be compensated with a more comfortable waiting environment.

The conceptual schedule on the next page demonstrates how Route 99 could be made more predictable and legible, and how more frequency could be added. It would require the addition of about 7 service

hours per day (on top of the 29.5 service hours per day required for the 2016/2017 schedule). In this enhanced schedule:

- There is hourly frequency to Oregon City all day, and half-hourly frequency during rush-hours.
- There is hourly service to Woodburn all day (unlike in the budget-neutral schedule shown on page 13).
- Departure and arrival times repeat approximately every 30 or 60 minutes, so people can easily keep the schedule in their heads.
- There is service to the southeast side of Canby, near Berg Parkway, all day (unlike in the budget-neutral schedule shown on page 13).

In Chapter 5, we describe how the conservative estimate of funding that should come from the new state source (“STIF”) in 2019 would purchase about 6 service hours per weekday in that year. This suggests that CAT could implement this “Enhanced” Route 99 schedule with state funding, plus one service hour of efficiency savings from dial-a-ride and paratransit.

If CAT can save more than one service hour per day from dial-a-ride and paratransit, then it would become affordable

to lengthen the service day on Route 99, so that people can travel to Oregon City or Woodburn later at night or earlier in the morning.

This schedule is “conceptual” in two ways:

- CAT is now participating in a Highway 99E Corridor Study. This study is likely to recommend some schedules for CAT’s Route 99 and Cherriots’s Route 10X, that would work together to make for a reliable trip from Canby to Salem.
- This schedule shows times at major stops only. Times at minor stops, and the exact routing of Route 99 within Canby, will be determined at a later date, after the aforementioned 99E Corridor Study.

The concept presented in this schedule for public review is the general pattern of frequency among the cities served by Route 99.

Figure 6: In this conceptual schedule, there would be more trips per day to Woodburn and Oregon City, and at more consistent frequencies, all day. It would require about 7 more service hours per day than the existing Route 99 schedule.

"Enhanced" Route 99 Weekday Schedule: More Budget Required							
Weekdays only; Makes local stops in addition to those listed here Requires ADDITIONAL Route 99 budget (36.5 service hours per day)							
Northbound				Southbound			
Major stops:				Major stops:			
Woodburn Bi-Mart (depart)	Canby TC (arrive)	Canby TC (depart)	Oregon City TC (arrive)	Oregon City TC (depart)	Canby TC (arrive)	Canby TC (depart)	Woodburn Bi-Mart (arrive)
		4:55 AM	5:15 AM	5:20 AM	5:40 AM	5:53 AM	6:15 AM
		5:25 AM	5:45 AM	5:50 AM	6:10 AM		
		5:55 AM	6:15 AM	6:20 AM	6:40 AM	6:53 AM	7:15 AM
		6:25 AM	6:45 AM	6:50 AM	7:10 AM		
6:20 AM	6:42 AM	6:55 AM	7:15 AM	7:20 AM	7:40 AM	7:53 AM	8:15 AM
		7:25 AM	7:45 AM	7:50 AM	8:10 AM		
7:20 AM	7:42 AM	7:55 AM	8:15 AM	8:20 AM	8:40 AM	8:53 AM	9:15 AM
		8:25 AM	8:45 AM	8:50 AM	9:10 AM		
8:20 AM	8:42 AM	8:55 AM	9:15 AM	9:20 AM	9:40 AM	9:53 AM	10:15 AM
				10:20 AM	10:40 AM	10:53 AM	11:15 AM
9:20 AM	9:42 AM	9:55 AM	10:15 AM				
10:20 AM	10:42 AM	10:55 AM	11:15 AM	11:20 AM	11:40 AM	11:53 AM	12:15 PM
				12:20 PM	12:40 PM	12:53 PM	1:15 PM
11:20 AM	11:42 AM	11:55 AM	12:15 PM				
12:20 PM	12:42 PM	12:55 PM	1:15 PM	1:20 PM	1:40 PM	1:53 PM	2:15 PM
				2:20 PM	2:40 PM	2:53 PM	3:15 PM
1:20 PM	1:42 PM	1:55 PM	2:15 PM				
2:20 PM	2:42 PM	2:55 PM	3:15 PM	3:20 PM	3:40 PM	4:05 PM*	4:27 PM
				4:30 PM	4:50 PM	5:03 PM	5:25 PM
3:20 PM	3:42 PM	4:05 PM	4:25 PM	5:00 PM	5:20 PM		
		4:35 PM	4:55 PM	5:32 PM	5:52 PM	6:05 PM	6:27 PM
4:32 PM	4:54 PM	5:06 PM	5:27 PM	6:00 PM	6:20 PM		
		5:35 PM	5:55 PM	6:30 PM	6:50 PM	7:03 PM	7:25 PM
5:30 PM	5:52 PM	6:05 PM	6:25 PM	7:00 PM	7:20 PM		
		6:35 PM	6:55 PM	7:32 PM	7:52 PM		
6:32 PM	6:54 PM	7:06 PM	7:27 PM				
7:30 PM	7:52 PM			8:00 PM	8:20 PM		
		7:35 PM	7:55 PM				

Premium Paratransit to Oregon City

There is an opportunity to improve the efficiency of CAT's paratransit services to Oregon City, while still meeting Canby's obligation to TriMet, and TriMet's obligation under the American with Disabilities Act.

The transit trip from Canby to an Oregon City destination, using fixed-route buses (such as Route 99 and TriMet lines) would take someone between 50 and 90 minutes, plus time waiting at their destination because so often the transit schedule would get them there much earlier than desired. The FTA requires that ADA paratransit services take a person no longer to get to their destination than it would take them on fixed-route transit.

Given that the fixed route trip to Oregon City takes so long, CAT has considerable flexibility in how premium paratransit to Oregon City is delivered. Today demand for this service is fairly low, but costs per passenger are very high. CAT can implement a few changes that would help to limit the growth of these costs in the future, and improve the productivity of the service in the short term. These potential strategies are described at greater length starting on page 29.

Engaging diverse stakeholders

CAT engages with Latino and Hispanic community members in Canby by reaching out to local non profit organizations (such as Bridging Cultures) tabling at public events, conducting surveys in Spanish as well as English, and publishing service announcements in Spanish and English.

In order to engage the public in this Plan, we built on CAT's previous practices and reached a larger and more diverse set of stakeholders than ever before in Canby. (Our effort and the results are described in detail starting on page 47.)

CAT staff will continue to work with the community members and organizations for implementation of the Plan. CAT has a Civil Rights Program, addressing Title VI of the Civil Rights Act of 1964 and describing how CAT will engage with people with limited English proficiency. This Program will be updated by early 2018.

In addition to continuing its current practices, we recommend that CAT:

- Develop an engagement and marketing plan specifically focused on Hispanic and Latino stakeholders and potential transit riders.
- Reach out to the individuals who

attended the stakeholder workshop or took a survey, and invite them (in their native language) to comment on any service changes.

- Hire bilingual outreach staff to make phone calls, visits and presentations, if necessary.
- Work with Bridging Cultures and its "Concilio" advisory council to spread the word about coming changes.
- Maintain and grow the database created for this project, in order to track stakeholders and understand their community connections and their preferred language for engagement.
- If in the near future, before the next Transit Master Plan update, pose any major "Key Choices" that arise to the community, using the bilingual and multicultural outreach strategies that were effective in this process, and new strategies identified in the aforementioned engagement plan.
- Work with MV to recruit dispatch and/or customer service staff who are fluent in Spanish, or invest in training for existing staff who are willing to improve their Spanish language skills.

Most of these efforts would involve one-time or permanent costs. However, they would be a valuable investment in CAT's

relationship with the community and in the cohesiveness of the city as a whole.

Phase 2: Addition of Route 99 weekend service, or a local circulator (unfunded)

If yet more resources become available, either through efficiencies or from new revenue sources, CAT may wish to make improvements beyond Phase 1.

Once CAT has increased service on Route 99, it is not clear whether the investment that would be most important to the community would be adding weekend service on Route 99 (likely starting with Saturdays), or adding a local circulator route on weekdays. The public was not consulted on this particular choice as part of this process.

While people who work service jobs are generally required to work both Saturdays and Sundays, providing Saturday service alone is still valuable. Saturday service allows people who work during the week to run errands or socialize on one of their days off; allows young people to socialize and travel to jobs; and reduces the number of times a week service workers have to get a ride from a friend or pay for a taxi. Adding

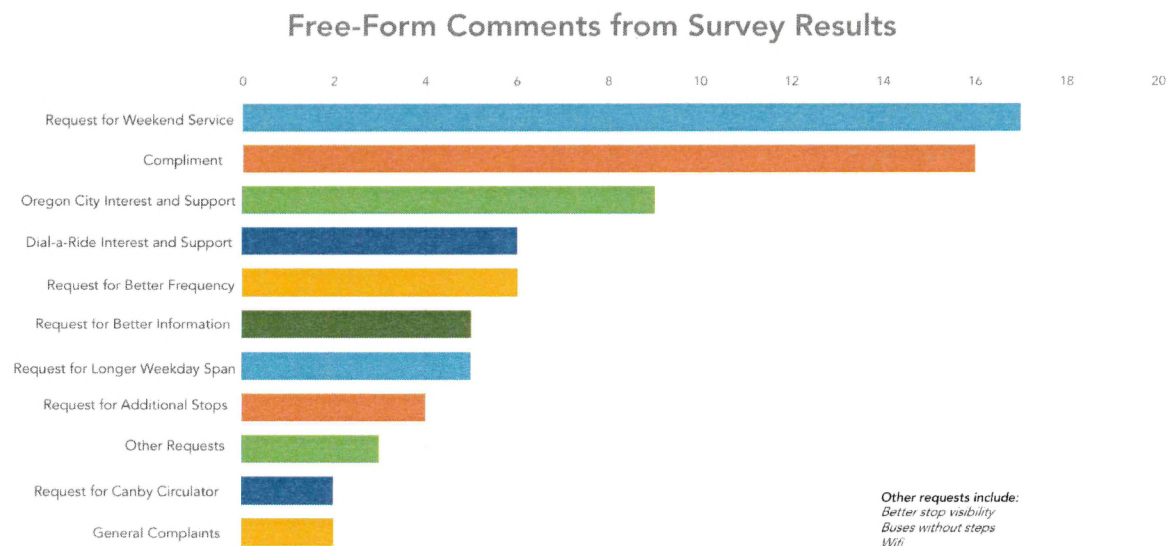


Figure 7: In web and print surveys, the most common response to the open-ended question “Is there anything else you want CAT to know?” was a request for some type of weekend service (top bar).

Saturday service is a reasonable step towards offering service every day, even if the biggest ridership payoff isn’t likely to accrue until both Saturday and Sunday service can be provided.

The smallest and more affordable step in Phase 2 would be the addition of Route 99 service on Saturdays. This could cost as little as 14 service hours per week, plus overhead costs associated with providing maintenance and supervision on Saturdays. However, adding Saturday service of any kind would require a revision to CAT’s

contract with MV Transportation, so the cost of purchasing those Saturday service hours from MV is unknown.

The addition of a local circulator, in contrast, might cost 50 service hours per week (though it could cost less if it replaced, rather than supplemented, local dial-a-ride).

Phase 2a: Addition of Route 99 weekend service

A desire for weekend service was repeatedly and strongly expressed by stakeholders at the workshop, people who took the survey, and community groups reached by the planning team. Among survey respondents who made a free-form comment, the most common request by far was for weekend service. In 2013, CAT gathered public requests for transit improvements, and then as now the top request was for weekend service (specifically, Route 99 service on Saturday).

Operating any transit on Saturday will require CAT to “turn on the lights” for an additional day each week, since the agency is currently closed on Saturdays, Sundays and holidays. The cost of weekend service is thus not only the cost of service hours (which represent drivers and buses), but also the cost of supervision; of an on-call mechanic; and possibly of customer service.

(Because Route 99 would be an “express” bus, the City would not be obliged to provide ADA paratransit on the weekends, until and unless a deliberate decision were made to do so, as in Phase 4 below.)

Canby’s neighbors may decide to spend

additional transit funds on weekend service on regional routes, such as Cherriots Route 10X from Salem. Currently, neither Cherriots nor Wilsonville SMART provide weekend service near Canby, though SMART does operate a route from Wilsonville to SW Portland on Saturdays (Route 2X). If that changes, it might affect how CAT prioritizes investments in weekend service on Route 99 (Phase 2a) or in a local circulator on weekdays (2b, below).

Phase 2b: Addition of weekday local circulator, potentially replacing general public dial-a-ride

Even though it was a lower priority for Canby stakeholders than increasing Route 99 service, there is still substantial interest in having a local route circulating within Canby.

The minimum useful span of such a circulator would be approximately 10 hours. (A shorter span would make it nearly impossible for anyone to commute both to and from an 8.5-hour job shift.) At the cost of 10 service hours per day, then, Canby could have a one-bus, one-way loop that services substantial parts of the south side, the Transit Center, and possibly a small part of the north side.

This is a minimal level of local service, for a number of reasons:

A 10-hour span is very short. While it would be fine for young people in school, for people who do not work on weekdays, and for retired people, it would not be very useful for people commuting to daytime jobs. It would especially not be useful for people working in retail jobs, since their shifts would likely begin or end outside of the service period. Likewise, it would not run for enough hours to allow someone to use Route 99 plus the local circulator to commute to and from jobs in Salem, Oregon City or Portland.

The loop would be one-way. This means that for every person’s round trip, they would have to ride the loop the long way around. They may decide to simply walk, instead, for some trips.

The service would be infrequent. The bus would come every hour. Again, because the trip would take a long time, many people who are able to walk (or bike) would choose to do so and get there sooner.

The geographic areas of Canby that can be covered by an hourly loop are fairly limited. Street connectivity, especially on the north side, makes it particularly difficult to run such a loop close to everyone. This is why

the loop, at this lowest possible cost, would not be able to reach deep into the north side of town.

Between scheduled stops, the route may need to deviate in order to pick up ADA passengers and take them to their destinations. (Whether or not this is necessary depends on the supply of ADA paratransit service CAT has available.) This would add some variability to travel times for riders of the circulator.

What is described above is a much shorter route than was served in 2010 by the one-way green and blue routes, as shown in the map at right.

If Canby wanted to implement circulator routes as long as the previous blue and green routes, but costing just 10 service hours per day, those routes would have to be very infrequent, coming every 90 or 120 minutes.

Of course, the limited one-way loop that today seems possible in Phase 2b could be improved with additional funding:

- The span of service could be made longer, so that it runs earlier in the morning or later in the evening.
- The loop could be operated two-way, which would double its cost (from 10 to

Map of Transit Service in Canby in 2010

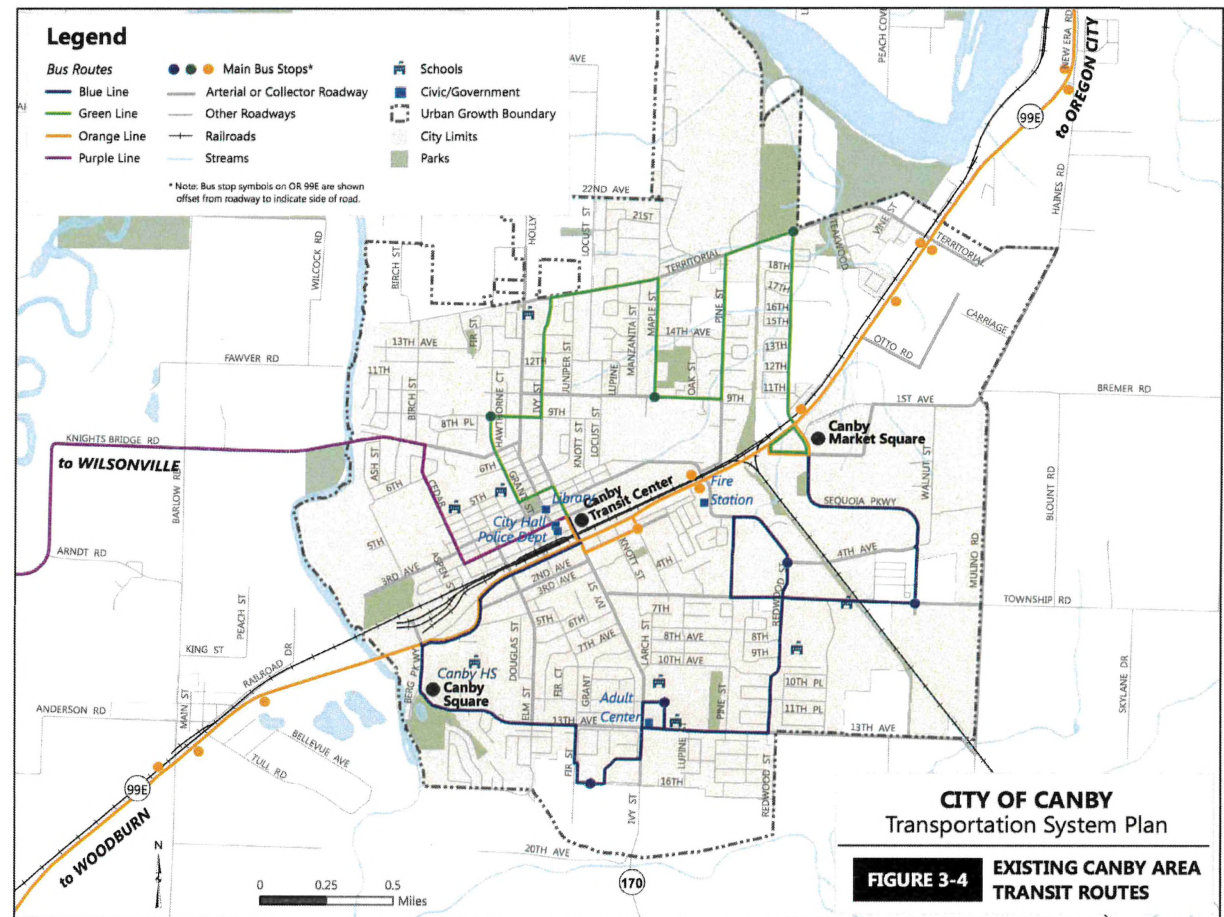


Figure 8: The two one-way routes that Canby operated in 2010 are shown on this map (taken from the 2011 Transportation System Plan) in blue and green. If CAT is able to restore a local circulator route in Phase 2b, it could not be as long or as frequent as these 2010 routes were, unless significant additional funding were found.

20 service hours per day). (As shown in the drawing on the next page, a one-way loop can make for long, circuitous rides.)

- The frequency of the loop could be increased. This would also double its cost, for example if the frequency were set at every 30 minutes instead of every 60 minutes.
- More of Canby could be covered by a larger loop, such as with the old 2010 blue and green loops, in the map in Figure 8. This would require more service hours, but also requires quite a bit of riding out-of-direction for passengers, since longer and more circuitous loops make people's trips on the bus longer.

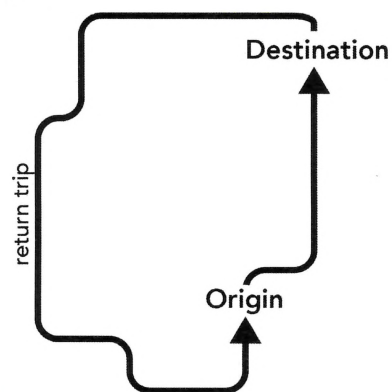


Figure 9: One-way loops require people to ride around the entire loop, either when they are going or when they are returning.

It would also be possible to design two separate loops, serving the north and south sides of Canby and meeting at the Transit Center, as in the 2010 blue and green loops. This would cost 20 service hours per day, for 60-minute frequency on each. Making additional improvements - like longer daily spans of service, or making them two-way routes - would trigger the same cost increases described above.

The addition of a circulator route within Canby would trigger requirements under the Americans with Disabilities Act. These could be satisfied by paratransit, or by other service strategies like a deviated-fixed route combined with general public dial-a-ride.

GENERAL PUBLIC DIAL-A-RIDE AND A LOCAL CIRCULATOR

The restoration of a local circulator could also trigger a public conversation in Canby about whether dial-a-ride service is maintained, in addition to the local circulator, or whether one replaces the other.

Canby's dial-a-ride program currently offers origin-to-destination service for anyone within the Canby UGB, not only people with disabilities. General public dial-a-ride was started when the 2010 blue and green local circulator routes were cut, in 2011.

ADA paratransit, which is a shared ride service, would be required to complement a local circulator route. General public dial-a-ride would not.

The costs of operating a local circulator, plus ADA paratransit, plus general public dial-a-ride may exceed Canby's budget for local services, even if substantial new revenue becomes available. It is likely that Canby would need to choose to operate only two of the three services.

We recommend that if in the future CAT becomes able to restore a local circulator, a new detailed service plan is made for that service. Such a plan should include public consultation, and should take into account:

- The amount of operating budget that is available for local circulation.
- Ways that land use, development and streets have changed since 2010.
- How the local service would connect with an updated Route 99 express.
- The capital investments that would be needed in stops or sidewalks, along a future circulator route.

Phase 3: Local weekend service (unfunded)

If yet more funding becomes available in the future, Canby may wish to add local circulator service on one or both weekend days.

Local weekend service could be provided using the local circulator route, if one has been operating on weekdays; or using dial-a-ride.

If a local circulator route is operated on weekends, ADA paratransit will be required during all of the hours when the local route is operating, at significant operating cost. (In contrast, adding a circulator on weekdays would have a minimal effect on ADA paratransit costs, since ADA paratransit is already provided citywide.)

As in Phase 2a, the ultimate goal should be to have local transit service every day (on Saturdays, Sundays and holidays). However, the most reasonable first step towards every-day service is the addition of Saturday service.

3 Improving Service Productivity

There are a few of ways that CAT and its contract operator (now, as in the previous contract, MV Transportation) can improve the productivity of its services and reduce the costs of delivering service. The greatest gains are to be found in the design and management of general public dial-a-ride and ADA paratransit, though some efficiencies may result from a new Route 99 schedule as well.

Improving the productivity of general public dial-a-ride and ADA paratransit would mean that the same number of riders and the same number of trips could be served using fewer hours of service, thereby saving resources.

This section describes some recommended strategies for CAT and MV to work on together. Most of these strategies should be started in Phase 0. The phasing of changes to all modes (dial-a-ride, ADA paratransit, premium paratransit, Route 99 and potential local circulators) is described in the previous chapter.

Change contract incentives

Until recently, CAT's contract operator was paid "gate to gate," meaning from when a bus and driver departed the garage until they returned. Instead, under the new contract (which took effect on July 1, 2017) the contractor is paid from first pickup to last drop-off, with any "slack" between trips of more than 30 minutes required to be off the clock. This will incentivize CAT and MV to schedule trips into more efficient driver blocks. In addition, the new operations contract states that MV Transportation and CAT will work together to achieve at least 3.1 boardings per hour on dial-a-ride and paratransit services.

The existing Route 99 schedule was written so that multiple drivers do small parts of the schedule, and then go off to provide a few dial-a-ride or paratransit trips, and then return to do another Route 99 run, and so on. The Route 99 schedule could actually be written so that it requires fewer drivers and simpler blocks, and only has modest interface with dial-a-ride and paratransit service. This can also be accomplished in Phase 0.

Fit the supply of service more tightly to demand

In the past, CAT dispatchers have mostly, though not always, been able to grant a rider's request for a trip at a particular time. This has been the case because the supply of drivers was fairly high relative to the demand from customers.

In the future, when the supply of drivers and buses is more tightly fit to daily dial-a-ride and paratransit demand, dispatchers will naturally do more negotiation with riders about the timing of their trip.

"Negotiation" means different things for different riders. For paratransit riders, FTA guidance is very specific about how a paratransit provider must serve a rider's trip relative to their requested time. A rider can request a trip scheduled for a particular arrival time, or a particular departure time, but not both. The provider is permitted a one-hour "negotiation window" before and after that requested time, within which the trip can be provided. In addition, the length of paratransit trips (from pick-up to drop-off) should not be "excessive" compared to the fixed-route trips those riders would otherwise take, were they able to access a fixed route.

Within all of these parameters, CAT

dispatchers negotiate an acceptable time for the paratransit customer to make their trip.

For general public riders of dial-a-ride, CAT has a great deal more flexibility in the scheduling of trips. Unlike paratransit, dial-a-ride is not a federal obligation, rather it is a discretionary service the City offers because it is valued by the community.

Dial-a-ride trips can be booked on a “space-available” basis. There is also more potential for CAT to “nudge” dial-a-ride customers to ride at times when demand is lower, sometimes using price incentives. The Shopper Shuttle that CAT already offers is a great example of this: the Shuttle is free, dependable and sociable, and also helps make dial-a-ride more productive. (The Shopper Shuttle can also be scheduled to fit between the extra Route 99 rush-hour service, so that fewer vehicles are needed to deliver both.)

Negotiating trip times can be difficult, though technology can help with the technical challenge. CAT uses software to track scheduled trips, but does not have the software that assembles trips into efficient routes and schedules (just as UPS and FedEx use software to create efficient routes for packages with varying delivery deadlines).

This type of software is used by all large and many small transit agencies. If licensing the software (and training dispatchers on its use) costs less than the software would save in the cost of dial-a-ride and paratransit service, then CAT should make that investment and integrate the software into dispatching practices.

Dispatching and scheduling software, however, works by optimizing all scheduled trips against available driver/vehicle shifts. Available driver/vehicle shifts (which represent the operating cost of service) are taken as an input by the software, rather than being given as an output. This means that improving productivity and efficiency cannot come from dispatchers and software alone. MV will also need to change driver shifts so that the software “knows” that some service hours are no longer available to dial-a-ride or paratransit (instead, they are used by Route 99).

CAT and MV staff will need to establish a regular review process in which they compare driver/vehicle shifts to demand, and look for opportunities to improve efficiency and thereby contribute to cost savings (or to freed-up service hours that can be used on Route 99).

Using software to schedule trips more tightly, and encouraging or asking people

to travel at different times than they initially request, will allow CAT dispatchers to create more shared rides. In April 2017, about 27% of rides happened with more than one person in the vehicle for any period of time. That means that 73% of rides were more like taxi rides. In order to achieve a productivity of 3.1 boardings per hour, CAT and MV will need to increase the percentage of trips that people make in the company of another customer.

Dispatch drivers more precisely, improve on-time performance

Today, CAT dispatchers schedule every ride for the quarter-hour, e.g. 12:15 or 12:30 pm, because they are creating the schedules “by hand.” In a small city like Canby, many trips take less than a quarter hour, and trips can be scheduled more precisely in order to more fully utilize the vehicle capacity that is available. Dispatching software can help to make this possible.

In addition, we observed that in April 2016 dispatchers were scheduling trips for the top of the hour (:00) more than at other times, suggesting that passengers’ requested pick-up times were often on the hour and were often accepted. This practice lead to a heavy loading of trips on the clock hour and sometimes the appearance of capacity issues. Instead of managing this peak demand with the deployment of an additional vehicle, as is done today, MV and CAT will need to manage this demand by negotiating different trip times with passengers, as described above.

It is essential that CAT dispatchers emphasize that riders will be picked up within a window rather than at a particular time. This should be made clear on the website, in the riders’ brochure, and verbally by dispatchers at the time of reservation, e.g. “Sir, your

vehicle will arrive between 10 o’clock and 10:20. Please be ready to board the vehicle as soon as it comes.” Describing a trip in terms of pickup (or drop-off) windows will give MV the needed flexibility to schedule more rides more tightly to match available drivers.

The chart at right shows how actual vehicle arrivals at pick-up locations compared to the 20-minute window during which the vehicle was scheduled to make the pick-up, for all trips in April 2016.

Blue bars are within the defined 20-minute pickup window. Within that period, 56% of pick-ups took place in the first ten minutes. Another 13% of pick-ups actually took place before that window even began (grey bars, to the left of the blue bars). (Such early arrivals can be distressing to some riders, since they may not be ready to leave home when the vehicle arrives, and misinterpret its arrival as an indication that they should be ready to go.)

13% of arrival at the pick-up location were early, before the 20 minute window even began. 44% were in the first half of the window. 24% of arrivals happened in the second half of the window. 6% happened after that 20-minute window passed.

The new contract between the City and MV specifies that dial-a-ride and paratransit services should achieve 95% on time performance. On-time performance for any given trip is measured based on either that trip's pick-up time or its drop-off time, whichever the customer requested. 95% on time performance will mean that on 95% of trips, the scheduled end of the trip (either

Actual Arrival vs. Scheduled Arrival

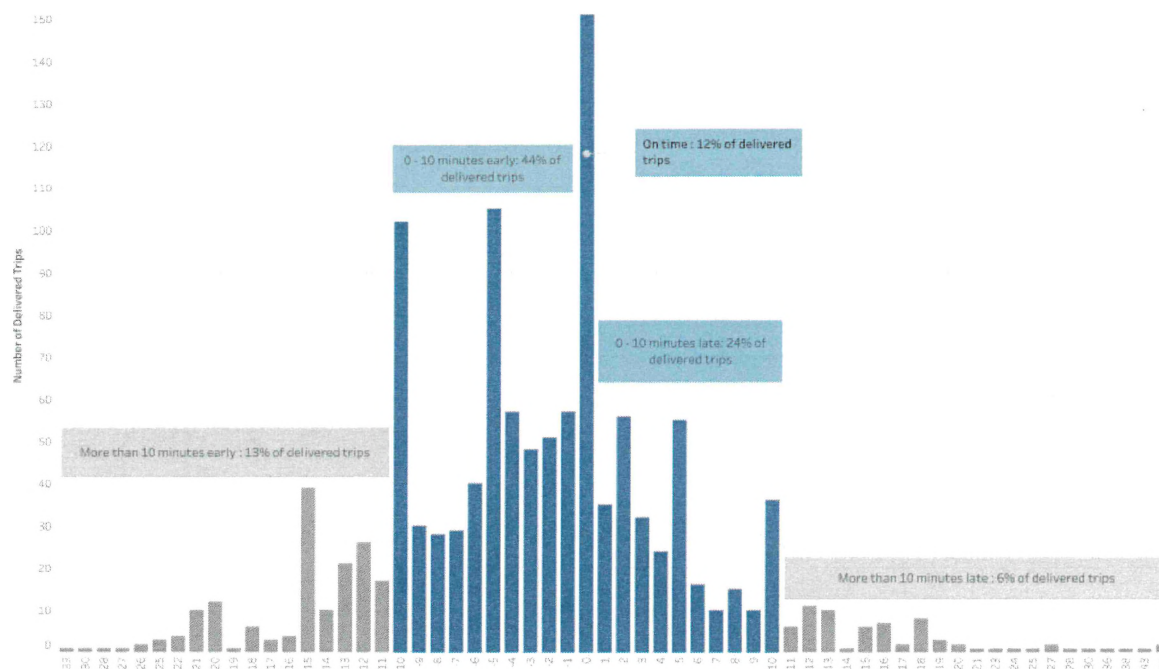


Figure 10: In this chart, each arrival of a driver at a pick-up location for a dial-a-ride or ADA paratransit trip is recorded for the month of April in 2016. The 20-minute pick-up window that was scheduled with the customer is shown in blue. Early arrivals (before the 20 minute window began) are shown in grey, to the left. Late arrivals are shown in grey, to the right. 13% of arrivals were early, and 6% of arrivals were late. However, this data is approximate, since drivers clearly rounded to the nearest 5-minute interval when reporting the on-time performance of each trip.

the pick-up or the drop-off) happened inside the 20 minute window promised, not before or after that window.

In the future, CAT should monitor on-time performance with particular attention to

early pickups, since those have been prevalent in the past.

Riders should also be coached on how to schedule a trip to work for their desired drop-off time. Rider education – through

brochures, the website and interactions with dispatch, among other strategies – is very important in changing how demand responsive services are requested and used, in managing customers' expectations, and in improving their satisfaction with the services.

The more that dial-a-ride, ADA paratransit and premium paratransit offer shared rides, rather than "taxi-style" rides, the more variation people will experience in their travel times to their destinations from one day to the next. Dispatchers can help people work backwards from their desired arrival time, preventing them from simply requesting a pick-up time based on how long the transit trip used to take them if what they really care about is a timely arrival at their destination.

Continue accepting same-day requests when space is available

CAT recently began to accept same-day requests on a space-available basis, for the same \$1 fare as for any other transit ride. Increasing the productivity of these services will mean that there is less often empty space available for day-of trip requests.

Once the supply of drivers and buses is more closely matched to demand, fewer

same-day reservations are likely to be available.

Even though it cannot be a reliable option for customers, adding a few riders into holes in the day's manifest can improve productivity and is valued by customers. Thus CAT should continue to permit same-day reservations while emphasizing to customers that they are made on a "space-available basis." In the future, CAT could also establish a higher fare for same-day reservations, as well as for other "premium" dial-a-ride and paratransit services.

Considerations for a future fare study are described at greater length on page 30.

Reduce expectations for "will call" or "call backs," or price as a premium service

Today, CAT will pick up a dial-a-ride or ADA paratransit customer as soon as they call, if they are at an appointment with an uncertain ending time. CAT staff report that this feature is used not only for medical appointments but also for nail salon appointments, shopping and other non-essential trips.

This "will-call" or "call-back" service is entirely discretionary. In the future, when there is no longer an excessive supply of

drivers and vehicles available each day, it will be harder to offer "will-calls." CAT should therefore stop offering it for non-essential appointments.

Establishing a directional pattern to premium paratransit trips between Canby and Oregon City may help reduce costs associated with "will-call" in Oregon City.

Note that most transit agencies offer no will-calls at all, except for dialysis appointments, because will-calls are so expensive and so disruptive to the efficient operation of on-demand transit. Canby is unusual in its offering of will-calls for any medical trips and for other kinds of appointments as well. Ways that Canby can reduce costs associated with will-call are:

- Only offer will-call for medical appointments.
- Require customers going to all other types of appointments to reserve a return-trip that is late enough to account for the possibility that their event or appointment will run late.
- Consider charging anyone at a non-medical appointment who receives a "will-call" pickup a premium fare. (This protects riders against the risk of being stranded, while still encouraging riders to schedule return trips whenever

possible.)

Add more structure to premium paratransit to Oregon City

Today, the paratransit service offered to Oregon City is premium. Most of the rides to Oregon City are not shared, so they are more like \$1 taxi rides than transit, and they are available at any time when Route 99 is running.

The existing premium paratransit service provided by CAT is indirectly fulfilling a legal obligation triggered by TriMet's local fixed route services in Oregon City. The obligation does not relate to CAT's Route 99, which is an intercity Express between Canby and Oregon City and does not trigger an obligation to provide paratransit between Canby and Oregon City. CAT agreed to provide this premium paratransit service in 2001, as part of the negotiated withdrawal from the TriMet service district.

When examining a week of data in April 2016, we observed that nearly every one-way trip made by a passenger required a two-way trip by a CAT vehicle. For example, if someone got a ride to Clackamas Community College in the morning, a CAT vehicle drove them there, and then drove back to Canby empty. During that week, there were 31 one-way

passenger trips between Canby and Oregon City, requiring 56 one-way trips by CAT vehicles. Only rarely was a vehicle driven between Canby and Oregon City with more than one passenger in it, and not once during the week did a vehicle make the drive with a passenger in both directions.

Dispatchers currently make an effort to group trips to and from Oregon City, but demand is low enough (barely more than 6 one-way trips per day) that people are unlikely to want to travel at the same time as another passenger. However, as noted earlier, making the same trips by fixed routes would take 50-90 minutes, not counting a long wait at the origin or destination, and paratransit is required to offer a comparable or better travel time. This means that CAT has considerable latitude in scheduling these premium paratransit rides to increase shared rides and therefore increase productivity.

One strategy for doing so might be to establish a directional pattern of service (but not a schedule). This means that buses would depart Canby northbound at certain regular times (e.g. at 6:30 am, 8:00 am, 9:30 am, and so on) and a customer would select a trip on which to make a reservation. Buses would depart Oregon

City southbound at other regular times (e.g. at 10:00 am, 11:30 am, and so on) and a customer would select their return trip time when they made their outbound reservation. (This would be different from a schedule, because if no customer reserved a trip in advance, then the bus wouldn't make the drive. Given the low level of demand, most of the available trips in a day would probably not get used, and the driver's time could be spent providing service within Canby.)

This directional pattern may reduce the number of vehicle miles required by premium paratransit by increasing the changes that a bus drives passengers in both directions. This would also be a way of reducing the high costs and unpredictability caused by "will-call" service, in which a customer who does not know when they will be finished with their appointment can call for a pickup when they are done. ("Will-call" service is not required for ADA paratransit, and most agencies provide it only for dialysis trips. "Will-call" service is another premium service that could in the future be provided for a premium fare, like same-day reservations and these trips to Oregon City.)

The demand for this premium paratransit service is currently fairly low. However, we

can expect demand to grow in the future, as the U.S. population ages and as Canby grows. Strategies like those described in this section may help prevent increases in the cost (to the City) of premium paratransit as demand increases.

Reduce peak vehicle requirements

To meet the increased productivity goals defined in this Plan, CAT will need to create a better fit between demand and supply, between times when riders are requesting trips and times when vehicle capacity is available. CAT will also need to somewhat reduce the overall supply of drivers and vehicles in the dial-a-ride and ADA paratransit programs (so that it can be shifted to the Route 99 service). This means more efficiently using the time available by nudging and negotiating customers' trips into those time slots where there is more vehicle capacity.

CAT should also sit down regularly with MV and determine when each day a vehicle can be taken out of service, perhaps just for 2 or 4 hours at the beginning or end of a shift, within union rules. As noted above, even sophisticated scheduling software cannot do this type of problem-solving and resource management.

This type of review by CAT staff will need

to happen regularly, more often at first (perhaps even daily, and then weekly) and then less often (perhaps bi-weekly or monthly) in perpetuity. Graphical expressions of how vehicles are being used, like the ones shown in this report and in *Volume I: Choices Report*, may help CAT understand how vehicles are being used each day. Comparisons of year-to-year demand patterns may help CAT and MV anticipate seasonal changes in demand.

It may also become possible to reduce the overall CAT peak vehicle requirement, i.e. the total number of vehicles needed to operate all services each day. Reducing CAT's peak vehicle requirement could reduce maintenance and vehicle replacement costs.

Develop a fare structure that relates to City costs, and passenger's ability to pay

Today, there is little relationship between CAT service cost and fares. As shown in the table below, the operating cost of dial-a-ride and paratransit services is many times the cost of fixed route service, but the fare for both services is \$1.

Customers who have a choice between riding Route 99 across town and riding dial-a-ride have no signal from CAT that they should choose to take Route 99 if they can.

While we do not have data on the difference in costs per passenger for premium paratransit vs. paratransit within Canby, it is obvious given the greater driving time involved that a trip to Oregon City costs the City much more than a trip within town. Yet the cost to the passenger is the same for both regular and premium paratransit

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 11: Operating costs and costs per rider for CAT's two types of service, from fiscal year (2015-2016). The fare for both types of service is \$1.

- \$1. In addition, the paratransit trip to an Oregon City destination is actually much cheaper than the fixed route trip: paratransit costs \$1 while the fixed route trip (on Route 99 and a TriMet local route) would cost \$3.50. Again, there is no signal to potential riders that premium paratransit is an expensive service to provide and should therefore be used sparingly compared to alternatives. Instead, riders understand that, if they have a choice of using the fixed route or paratransit, they should choose paratransit because it is cheaper (to them).

In the future, CAT should grow into a fare structure that better-reflects the costs of providing different services. Under this principle, more productive and lower-cost services (like Route 99) would have the lowest fare. A slightly higher fare would be used for less-productive and higher-cost services (like local dial-a-ride and ADA paratransit). A higher fare still would be used for the most costly services, such as premium paratransit to Oregon City.

It may be simplest to establish a single “premium fare,” and then define a number of service enhancements that require it, such as:

- “Will-calls” for non-medical appointments

- Trips to and from Oregon City
- Same-day reservations on dial-a-ride or paratransit

Such a “premium fare” would help send the right signals to customers about the costs the City incurs for different services. It may become necessary to send these price signals to achieve the productivity targets set in this Plan; hard work and “nudging” by CAT staff and dispatchers may not be sufficient on its own.

If CAT does introduce different fares for different levels of service (or for different types of customers), then it will be important that dispatchers advise customers of what their total fare will be when they schedule their trip.

There are other principles, however, that can be applied to setting fares, and these will need to be taken into account at the same time:

- People with lower incomes (including many seniors) benefit from lower cash fares, and many agencies offer discounted fares for low-income riders.
- As Canby and its neighbors develop more intercity connections, reducing the “penalty” associated with transferring between transit systems (and paying

two full fares for each one-way trip) may help increase ridership and productivity.

- Collecting cash fares from riders takes time, and contributes to lower bus speeds. Encouraging riders to purchase fares in advance or buy passes (e.g. by heavily discounting these fare products) can help speed up transit service, which benefits all riders.
- Finally, a complex fare structure can be discouraging for new riders, and requires additional training for drivers.

This general advice about fare structure notwithstanding, CAT is soon to enter a phase in which dial-a-ride and paratransit are made more productive. In service of that goal, riders will need to change some of their habits, and some of them may experience small inconveniences (such as having to ride along to someone else’s destination on their way to their own destination). During this phase, it may be prudent to not increase fares on any existing service (even premium services), so that existing riders are not hit with the double-whammy of an inconvenient change and a fare increase.

We suggest that, after the implementation of Phase 1 of this Plan, CAT undertake a fare study that examines these ideas more closely and evaluates the financial, social

and civil rights impacts of any potential changes to the fare structure.

Continue to enforce consequences for repeated late cancels and no-shows, revisit advanced reservation time-frames

Between 12% and 20% of all reservations resulted in a no-show or cancel in April 2016, though CAT staff believe the rate in April was unusually high because of a book-keeping error that was quickly resolved.

When someone cancels a reservation late, or doesn't show up for a pick-up, they cause valuable transit capacity to go unused by any rider. CAT and MV should continue to monitor and enforce the existing no-show and late cancellation policies, by getting weekly reports from dispatchers of riders who have violated the policies.

CAT may also wish to reduce the advanced-reservation window from 14 days to 7 days, which tends to reduce incidents in which customers simply forget about their trip because they scheduled it so long ago. For customers who have any no-shows in their recent record, dispatchers may call the afternoon before their trip to remind them of it. This has been shown, on other systems, to reduce no-shows and

late-cancels. (Texts and calls to riders can be automated using dispatching software, but for an additional telephone and software cost.)

CAT and MV should be able get the rate of no-shows and late cancels to less than 10% of all reservations, especially under the provisions of their new contract. Other transit agencies commonly have a combined no-show and late cancel rate of just 5-10%.

Implementation

Some of the changes recommended above are "customer-facing," and will change existing customers' expectations or experiences. Others are internal.

We recommend that the biggest "customer facing" changes be rolled out as a package, with prominent new marketing efforts. That way, communication costs are minimized, and more customers are likely to find that any negative effects or confusion are made worthwhile by other positive impacts.

4 Capital and Infrastructure Needs

Sidewalks

One of the most valuable capital investments in transit access in Canby would be the addition of sidewalks to Highway 99E. Without sidewalks, people cannot safely walk to bus stops that are on the highway. Route 99 should not deviate off of the highway wherever sidewalks are lacking, because such deviations make it slow and indirect and therefore less useful to passengers. The lack of sidewalks is therefore not only a hardship for existing riders, it also prevents additional people from using transit, and makes it more difficult for CAT to provide transit that is convenient, safe and time-competitive.

The 2010 Canby Transportation System Plan observed that sidewalks around bus stops were missing in places along Highway 99E.

Bus stop improvements

Route 99 bus stops currently have no amenities - they consist only of a sign on the side of a road, at the shoulder or sidewalk.

Investments in bus stop amenities should be made with the following considerations:

- Which bus stops get the most use each day? Targeting investments at high-use

bus stops means that more people will benefit from each dollar invested.

- Which bus stops are likely to be permanent? As Route 99 becomes more of an Express route, some deviations from its most direct path may be eliminated. While amenities (like benches) can be moved if a stop is moved, other investments (like crosswalks) cannot.
- What particular dangers or discomforts do riders experience at each bus stop? For example, stops on Highway 99E may benefit most from protection against wind, rain and highway noise, and from signalized pedestrian crossings.

The location and design of bus stops on Highway 99E will be decided in collaboration with ODOT, which manages the highway. ODOT's guidance on the placement and design of transit stops is nicely summarized in Chapter 4 of its [Transit in Small Cities](#) guide.

One of the recommendations contained in this Plan is that Route 99 transition from being a combination of an Express route outside of Canby and a Local route inside of Canby. Operating Route 99 as an Express has multiple benefits: it is a faster trip for riders, allows CAT to provide frequency at a lower operating cost, and it

de-couples Canby's ADA paratransit obligation from the operating hours of Route 99.

One of the changes that would make Route 99 more clearly an Express, along its entire length, is to reduce the number of times the route deviates off of the highway and circles around blocks or parking lots. However, a negative consequence of such changes is that some people may need to walk farther to the bus stop (depending on which side of the highway they are on), and they will be asked to wait on the highway, which can be loud and windy.

In order to mitigate these negative impacts to individual riders, we recommend that new investments in stop amenities be made when the route is straightened and bus stops are moved. For example, if a deviation into a parking lot is eliminated, the bus stop on Highway 99E where people will now wait should be made more visible and improved, with the addition of a bench, shelter, or other amenities.

The table at right lists the Route 99 bus stops that saw the highest average daily boardings, during a week in May 2017 when ridership data was collected. All other stops saw 2 or fewer boardings per day.

Four of the bus stops on this list for which additional amenities are recommended are in other cities (Aurora, Hubbard and Woodburn). We recommend that CAT ask Aurora and Hubbard to identify local funding sources for the purchase and installation of bus stop amenities in their communities, and also help identify local partners who can assist with bus stop maintenance.

It is likely that the separate 99E Corridor Plan will include recommendations related to:

- The precise location of Route 99 stops in Woodburn,
- Whether CAT and Salem-Keizer Transit should share those stops,
- What amenities would be needed at those stops, and
- What parties should support the capital and operating costs of any stop enhancements.

The Route 99 stop in Woodburn currently has no seating (nor does the stop for

High-Boarding Bus Stops on Route 99			
Stop	Direction(s)	Avg. Daily Boardings	Recommended Amenities
Oregon City Transit Center	End of line	75	None
Canby Transit Center	North and South	49	None
Woodburn Bi-Mart (1600 Mt. Hood Ave.)	End of line	28	TBD in the 99E Corridor Plan
99E & S Locust St. (Canby)	North	12	Shelter, seats, garbage can
99E & S Pine St. (Canby)	North	7	Shelter, seats, lighting, garbage can
99E & S Sequoia (Canby)	North	6	Shelter, seats, lighting, garbage can
99E & D St. (Hubbard)	South	4	Shelter, seats, garbage can, concrete pad (for wheelchair access)
99E & SW Berg Pkwy. (Canby)	South	4	Shelter, seats, garbage can
99E at Parkway Blvd. (Hubbard)	North	4	Shelter, seats, garbage can, concrete pad (for wheelchair access)
99E at AA Storage (Aurora)	South	4	Shelter, seats, garbage can, concrete pad (for wheelchair access)

Figure 12: In a count of boardings and alightings on every daily trip of Route 99, in April 2017, revealed which stops have the most boardings. All other stops saw 2, 1 or zero boardings during the count.

Cherriots 10X), even though that is where people could transfer between Route 99 and the Cherriots 10X. Seating and shelter for people waiting to transfer between buses is urgently needed and will be addressed in the Corridor Plan.

Note that the table above reports only boardings, not alightings. The people who boarded at these stops may have alighted at a different stop.

For example, there were six boardings at the northbound stop at 99E & Sequoia. On their southbound trip, those people probably alighted at either 99E & Redwood or in the Canby Market Center, both of which are served by southbound Route 99 buses, and at each of which two alightings were recorded.

Improvements at the southbound stop at 99E & Sequoia will become particularly important if and when the route deviation into the Canby Market Center parking lot is ended.

Bus stop amenities are most valuable at stops where people wait in large numbers, and less valuable at stops where people alight, since people typically walk away as soon as they alight.

Many stops serve trips in both directions, such as the Oregon City and Canby Transit Centers, and the Woodburn Bi-Mart stop. Those are also the three stops served by Route 99 at which people wait to make transfers to other routes, and where people may therefore need to sit comfortably for a while, which is why seats and shelters are so essential there.

Stops where large numbers of people alight (even if few people board) benefit from investments in concrete landing pads

High-Alighting (but Low-Boarding) Bus Stops on Route 99			
Stop	Direction(s)	Avg. Daily Alightings	Recommended Amenities
SE 2nd Ave. & Knott (Canby)	South	18	None - should be moved to SE 2nd and Locust or to 99E. See details below.
99E at NE 4th St. (Canby)	South	9	Concrete pad (for wheelchair access), sidewalk between 4th and bus stop
99E & G St. (Hubbard)	North	6	Concrete pad (for wheelchair access)
99E & Redwood (Canby)	South	7	Concrete pad (for wheelchair access)
Canby Market Center/Fred Meyer parking lot (Canby)	North	5	None (deviation into parking lot is not permanent). Improvements should be made to the stops at the nearby 99E & Sequoia/Redwood instead.
99E & D St. (Hubbard)	South	4	As in previous table
99E & SW Berg Pkwy. (Canby)	North	4	None (already has adequate sidewalk)

Figure 13: This table reports alightings data from the same count in April 2017 as the previous table. High-boarding bus stops already listed in the previous table were not repeated here.

that allow people in wheelchairs and other mobility aids to easily step off of the bus. They also benefit from improvements to sidewalks and road crossings, so that people can safely walk away from the bus stop after they alight.

Many of the Route 99 stops listed in the previous table have large numbers of alightings as well as boardings. Those bus stops that have relatively high numbers of

passengers alighting, but not boarding, are listed in the table above along with recommended amenities.

As described above with regards to the high-boarding stops, the City of Hubbard should be asked to help with funding and maintaining any future bus stop amenities in that community.

In 2020, the City of Canby will write a new Transportation System Plan (TSP), to

replace the TSP published in 2010. Some of these investments, especially the most expensive items such as sidewalks and concrete pads, should be specifically included in the 2020 TSP.

SE Knott and Locust Streets

Route 99 service around SW Knott and Locust Streets has changed over recent years:

1. Originally, northbound and southbound bus stops were located on Highway 99E near Locust Street. Because there is no signalized pedestrian crossing of 99E there, crossing to reach the southbound bus stop (on the north side of the highway) was dangerous.
2. The City moved the southbound bus stop to SE 2nd and Locust, and CAT added a deviation to Route 99, so that people on the south side of the highway could access service in both directions without crossing the highway.
3. More recently, when a gas station was developed at the southwest corner of 99E and Locust, the bus stop at SE 2nd and Locust was moved to SE 2nd and Knott.

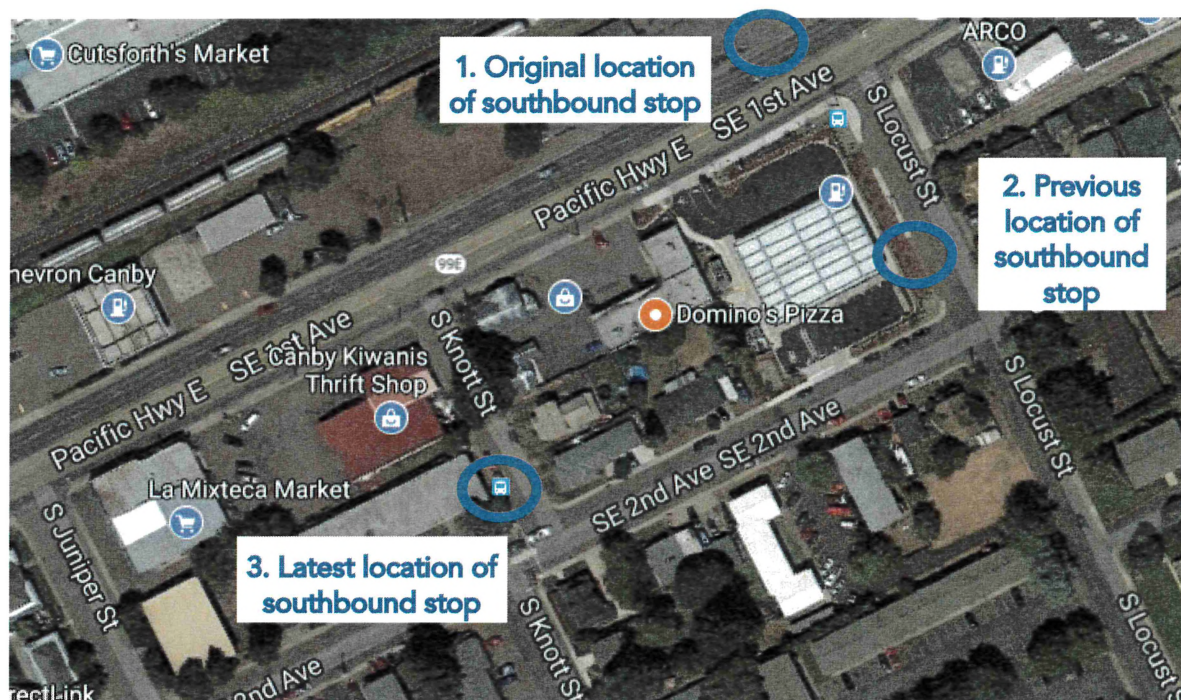


Figure 14: The southbound stop for Route 99 near Locust has been moved over the years. Its current location (3) is problematic.

This latest stop location at SE 2nd and Knott has a very narrow sidewalk, which makes wheelchair access difficult. The bus maneuvers that are required to serve the stop sometimes block Knott Street. In addition, the outbound and inbound bus stops for someone's round trip are far away from one another. This can be confusing for riders (especially people trying the bus route for the first time), because they cannot simply return to the intersection

where they were dropped off in order to catch their return bus. They have to walk somewhere different and unknown to catch the bus in the return direction.

The current situation is problematic because:

- The condition of the sidewalk and intersection at SE 2nd and Knott is not conducive to stopping and loading a

bus.

- Route 99 makes a deviation from the straightest and fastest path; and
- Route 99 makes a deviation in one direction only, which makes the service more confusing to new riders.

In the future, the City should remedy this situation in one of two ways, either:

1. By working with ODOT to install a signalized pedestrian crossing at 99E and Locust, and to restore the southbound bus stop on 99E at this intersection. This would allow CAT to eliminate the deviation to SE 2nd Street entirely (making service faster and more direct) while allowing the numerous residents south of the highway to access service in both the northbound and southbound directions. Or,
2. By restoring the bus stop at SE 2nd and Locust. This location has a sidewalk that is more usable by people boarding and alighting with mobility devices. It is also a short and very safe walk from here to apartments where large numbers of people live south of the highway.

These two potential remedies should be evaluated with the City and ODOT, and the preferred remedy should be included in

the 2020 TSP, especially if it involves new signals or sidewalks.

Canby Transit Center

The Canby Transit Center is located at N 1st and Ivy Streets, just north of 99E and the railroad tracks. The land on which the Transit Center is located is owned by the City, and was donated to the city by the Cutsforth family, owners of the market nearby.

The ideal location for a transit center in any town is:

- Central to the part of town with the highest density of housing, jobs and commercial activities.
- In a place with sidewalks and signalized crossings of any major roads.
- In a place where many streets connect, so that people can reach the center from many different directions.
- Near activities that draw people during many hours of the day, so that people waiting for buses feel safe and there are “eyes on the street.”

The current Canby Transit Center fits these criteria nearly perfectly:

- It is in a central location in the city, near dense residential areas and busy commercial buildings.
- It is in a local street network that allows people to walk to the Center from many different parts of the city, on sidewalks, and with signalized crossings of 99E.
- It is in an active part of the city, where people going to and from restaurants, businesses, the library, and 99E are passing by for most of the day.

The only downside to the current Transit Center location is that it is on the other side of the railroad tracks from Highway 99E. However, CAT staff report that railroad traffic passes quickly, causes delays to Route 99 service only very infrequently.

If the Transit Center is ever moved, it will be essential that it be moved to a place that is just as central, well-connected and pedestrian friendly. We recommend that the only locations that be considered in the future be within one block of Ivy Street, around N 1st Street or S. 2nd Street.

In the past, there has been a proposal to move the Canby Transit Center to a new development on the northwest edge of town, near the Molalla River. This would become possible if Berg Parkway were ever extended over the railroad tracks.

The police station and some large industrial employment sites would be nearby. However, this location would be on the edge of the urban area, far from most of the city's housing, jobs and services.

Moving the Transit Center to this place would make it so that few Canby residents, employees or visitors could access the Center on foot. Nearly all access would require either a car or a dial-a-ride trip, the former being costly for riders and the latter being costly for the City. The Center would be away from the "eyes on the street" that are in the center of downtown most hours of the day (though proximity to the police station might help).

The street network around the Berg Parkway is poorly connected, so even for people nearby "as the crow flies," walking distances would be longer. The residential and job densities around the site are low, meaning that valuable transit services would be concentrated in a place with few people nearby.

A Transit Center at Berg Parkway would also become much less attractive to Wilsonville and South Clackamas transit services (which currently stop in the Center), because transit trips to and from Wilsonville would depart and arrive from the edge of town, creating a "first/last mile" problem

for riders hoping to use that service.

In short, we recommend that the Canby Transit Center remain in its current, excellent location, unless an even better location can be found one block south of Highway 99E near Ivy Street.

New administrative, customer service and maintenance facilities

CAT currently houses its administration, customer service and maintenance functions on Hazel Dell Way. Members of the public and employees reach the building through a driveway and parking lot shared with the Wilco Farm Store. A storage lot for CAT vehicles is located to the south, and is accessible via a different driveway through another property. The vehicle storage lot is not adjacent to the CAT offices – moving between the two requires walking the perimeter of another property.

The current facilities are workable but lacking in a few ways:

- Customer service facilities are not facing the street, and require people to walk through a parking lot.
- The office used for administration,

operations, customer service and dispatching is small and offers no room for growth.

- The space available to maintain vehicles is small and offers no room for growth.
- Vehicle maintenance and storage space is not adjacent to administrative space.

The current location does offer quick access to most destinations in the city, and as a result CAT's deadhead costs are low. ("Deadhead" is the time that buses spend driving to the start of a fixed route, or driving to pickup a first passenger. This time costs the agency money, but is not directly useful to riders.) There are few parcels in the city that are more central but still big enough to fit CAT's current and near-future needs.

CAT staff has identified an opportunity to buy one acre of land directly adjacent to the current offices, and adjacent to the existing vehicle storage lot. The purchase would allow CAT to build a new building for all of its functions, directly adjacent to a maintenance and storage lot that is large enough for existing needs and includes some room for growth in the future. The new building would face Hazel Dell Way, allowing customers to walk up to the storefront from a sidewalk (not a parking lot). Deadhead costs would continue to be low.

CAT's existing lease ends in October 2018. The estimated cost of the parcel in question is approximately \$288,000 (at \$6 per square foot), and CAT currently anticipates carrying-over more than enough cash reserves into the next fiscal year (though that condition is subject to change; see the financial table on page 46 for details). It is therefore possible that the lot could be purchased without a loan. Design and financing of any future building would be addressed after the lot was secured.

Fleet and technology upgrades

The table on the following page lists CAT's current fleet, used for Route 99, dial-a-ride and paratransit service. All vehicles are wheelchair-accessible, though low-floor vehicles offer more comfortable and fast entry and exit for wheelchair passengers than the older high-floor vehicles.

The two Gillig coaches are the largest vehicles in CAT's fleet, and they are used only on Route 99. Dial-a-ride and paratransit service are provided by smaller cut-away vehicles and by the single mini-van. Cut-away vehicles are also used on Route 99 at peak times.

The 99E Corridor Plan will address fleet

requirements for any recommended future Highway 99 services. Cherriots currently uses smaller cut-away vehicles on the 10X route between Salem and Woodburn, while CAT uses the larger coaches from Woodburn to Oregon City. Depending on how passenger loads on the two routes change in the future, the two agencies may need to coordinate the size of their vehicles. In addition, different vehicles require different maintenance responses. If CAT and Cherriots someday in the future develop a reciprocal maintenance response agreement (like the one between Cherriots and Wilsonville), the types of vehicles used by each agency on the route will affect that agreement. These issues will be addressed further in the 99E Corridor Plan.

In CAT's existing fleet, all vehicles older than 7 years are in the process of being replaced, either with funds that have already been granted to CAT or with funds that CAT hopes to receive from ODOT in the next vehicle replacement grant cycle.

A new Route 99 schedule may reduce the number of vehicles that CAT needs to deploy simultaneously to deliver Route 99 service. (This is called the "peak fleet" requirement.) Recommendations for dial-a-ride and paratransit service detailed elsewhere in this Plan may also have the

positive side-effect of reducing the peak fleet requirement for those services. Implementation of this plan could result in CAT needing slightly fewer vehicles in its fleet, unless and until the total supply of service is increased in the future.

All CAT buses are now equipped with cameras with integrated GPS. This allows CAT dispatchers to track the locations of vehicles in real time and to review video of service.

The next improvements in operational and customer-facing technology should be the addition of automated stop announcements. This allows drivers to focus on driving and providing customer service, while the automated system gives customers early notice that their stop is coming up so they can alert the driver if they want to get off.

Automated stop announcements require Automated Vehicle Location service (AVL), which tracks where the bus is in real-time, and compares the real-time location to a known route and stop list. AVL will also work with dispatching software, to support the more efficient scheduling of dial-a-ride and paratransit trips.

The addition of mobile data terminals to vehicles providing dial-a-ride and

Name	Year	Manufacturer	Mileage	Length	Body type	Notes
S-24	2002	Ford	95,001		Sedan	Used for shuttling drivers or for administrative trips.
S-25	2002	Ford	104,105		Sedan	Used for shuttling drivers or for administrative trips.
Bus 2	2002	Girardin	370,202	25'	Cut-away	Will be replaced in 2018.
Bus 14	2006	Freightliner	246,077	35'	Coach	Used as a spare for 35' Gilligs on Route 99. Applied for replacement grant from ODOT in August 2017.
Bus 17	2009	Chevrolet Senator	107,672	26'	Cut-away	Low mileage, in good condition despite age.
Bus 18	2010	Chevrolet	110,833	22'	Cut-away	Will be replaced in 2018.
Bus 19	2010	Chevrolet	97,165	22'	Cut-away	Will be replaced in 2018.
Bus 26	2011	Arboc	84,585	26'	Cut-away, low-floor	
Bus 27	2011	Arboc	78,790	26'	Cut-away, low-floor	
Bus 28	2013	Gillig	105,719	35'	Coach, low-floor	
Bus 29	2013	Gillig	107,818	35'	Coach, low-floor	
MV-30	2013	Dodge Caravan	5,706	19'	Mini-van	
Bus 31	2016	Arboc	4,662	23'	Cut-away, low-floor	
Bus 32	2016	Arboc	4,885	26'	Cut-away, low-floor	
Bus 33	2016	Arboc	5,122	26'	Cut-away, low-floor	

Figure 15: CAT's fleet for all services, as of summer 2017.

paratransit would allow dispatchers and drivers to make more efficient use of service hours each day. Today, drivers are given a paper manifest when they leave headquarters. Any last-minute changes must be done using radios, and are difficult to communicate. Mobile data terminals allow drivers' routes to be modified at any time, to account for cancellations, same-day reservations, or disruptions.

In combination with AVL, Automated Passenger Counters (APCs) would provide CAT with higher-quality, more recent and more reliable data on the performance of its services than is available today. Ridership data must today be hand-counted by a person riding the bus. AVL and APC systems, together, give transit managers and supervisors extremely useful and timely data about ridership, speed, on-time performance, and other aspects of transit performance.

Finally, upgrading the software used for dial-a-ride and paratransit dispatching should be a high priority (as described throughout Chapter 3), as it will help CAT and MV achieve higher productivity on those services, and can also improve customers' experience of the reservation process.

Local bus stops

If CAT adds a local circulator route in the future, additional capital investment will be needed to create stops. The needs for each stop will range from minimal (a simple pole, of which CAT still owns more than 120 from the old circulators) to maximal (shelters, sidewalk improvements, pedestrian crossing signals). The needs at each stop would depend on the route of the circulator and the stop locations chosen along that route.

It is unclear how long the route(s) of a future circulator will be, because the length of the route relates intrinsically to the available operating budget for the route and the desired frequency of the route. The longer the route, or the more separate routes are provided, the higher the cost or the lower the frequency.

The Oregon legislature established a new funding stream for local transit operations in 2017. These funds are expected to be available to Canby starting in the fall of 2018. However, even with this additional funding, it is unlikely that Canby will be able to deliver as much local circulation as in 2011 (i.e. as many local route miles, with as high of frequency) without additional future funding.

We recommend that if in the future CAT

becomes able to restore a local circulator (as described starting on page 19) a new service plan is made for that service. The new plan would take into account:

- The amount of operating budget that is available for local circulation.
- Ways that development and streets have changed since 2010.
- How the local service would connect with an updated Route 99 express.
- What capital investments would be needed in stops or sidewalks, along a future circulator route.

This last element, in particular, could be included in an updated TSP, for funding with public or private sources.

5 Financial Projections

The table on the following page details CAT's financial projections for:

- The recently-ended (2016-17) fiscal year.
- The current (2017-18) fiscal year.
- The next four fiscal years, through 2022.

2017-18 Budget

In preparing the budget for 2017-18, earlier this year, CAT prepared for potentially higher costs. Costs have not grown as fast as feared, while revenues are only slightly lower than budgeted. As a result, it is unlikely that there will be an operating budget deficit in 2017-18, as is shown in the table on the following page.

Reserves

As described on page 39, CAT hopes to purchase land on which to develop new customer service and maintenance facilities. The cash reserves that are projected to be available at the end of the 2017-18 year are intended to support this purchase.

Projected capital investments

The only capital investments contained in these projections are in 2016-17 and 2018-19, and consist of vehicle replacements. All other future expenses are operating

expenses.

New statewide (STIF) revenues

In these projections, CAT has budgeted very conservatively for new Statewide Transit Improvement Funds (STIF). The amount included in the table on the following page (\$100,000 in 2018-19) is based on the expected minimum grant to small Oregon transit systems.

The actual amount of the annual grant, the conditions placed on it by the state, and the time when the grant becomes available, are all unknown at this time.

The \$100,000 of STIF revenue assumed for 2018-19 would be enough to purchase 6.4 service hours from MV for each weekday. This would be nearly, but not quite, enough for CAT to implement the "Enhanced" higher-frequency Route 99 weekday schedule shown on page 16.

Supply of service hours

These projections assume that CAT continues to purchase the same number of service hours (for Route 99, dial-a-ride and paratransit combined) as in recent years. Given the increase in revenues from the STIF it is certainly possible that CAT will purchase more service hours in future

years, which would allow the agency to move more quickly through the phases recommended in this plan.

CAT selected MV Transportation as its contract service provider in May 2016, and signed a new three-year agreement with MV. This provided CAT with some certainty about its costs per service hour for the next three years. CAT will pay MV \$60.18 for each service hour in 2017-18, and slightly higher amounts in the follow two years. (In the past fiscal year, CAT paid \$58.78 per service hour.)

Operating Revenues	Operating Activities					
	2016-17 Year End Projection	2017-18 Budgeted	2018-19 Projected	2019-20 Projected	2020-21 Projected	2021-22 Projected
Canby payroll tax	\$1,278,764	\$1,260,000	\$1,355,228	\$1,436,233	\$1,522,088	\$1,613,086
State and federal grants	664,658	516,750	532,253	548,220	564,667	581,607
Fares and miscellaneous	77,424	67,300	69,319	71,399	73,541	75,747
New Statewide Funding (STIF) (conservative estimate)	-	-	100,000	103,000	106,090	109,273
Total Operating Revenue	\$2,020,846	\$1,844,050	\$2,056,800	\$2,158,851	\$2,266,386	\$2,379,712
Operating Expenses						
Bus drivers, supervision and dispatching (MV contracted services)	\$863,712	\$1,049,224	\$886,198	\$910,377	\$937,688	\$965,819
Facility & Vehicle Maintenance and Fuel	273,865	275,718	283,990	292,509	301,285	310,323
Administration, management and City overhead	484,886	530,768	550,252	570,533	591,650	613,640
Office lease	51,132	43,640	44,949	46,298	47,687	49,117
Other miscellaneous costs of providing service	41,267	55,908	57,585	59,313	61,092	62,925
Total Operating Expense	\$1,714,862	\$1,955,258	\$1,822,974	\$1,879,030	\$1,939,401	\$2,001,824
Net Operating Revenue/(Expense)	\$305,983	\$(111,208)	\$233,825	\$279,822	\$326,984	\$377,888

Figure 16: Operating revenues and expenses for last fiscal year, this fiscal year (as budgeted), and through 2022. Non-operating expenses and revenues (such as reserves and capital) are shown on the next page.

Non-Operating Revenues	Non-Operating Activities					
	2016-17 Year End Projection	2017-18 Budgeted	2018-19 Projected	2019-20 Projected	2020-21 Projected	2021-22 Projected
Cash carryover	\$1,358,918	\$1,365,633	\$941,318	\$992,847	\$1,084,765	\$1,217,809
Capital grants	17,267	125,622	-	-	-	-
Total Non-Operating Revenue	\$1,376,185	\$1,491,255	\$941,318	\$992,847	\$1,084,765	\$1,217,809
Non-Operating Expenses						
Capital Outlay	\$260,788	\$140,000	\$-	\$-	\$-	\$-
One-time Project Expenditures	55,748	10,000	-	-	-	-
Contingency	-	196,526	182,297	187,903	193,940	200,182
Total Non-Operating Expense	\$316,536	\$346,526	\$182,297	\$187,903	\$193,940	\$200,182
Reserves (for future purchases)	\$1,365,633	\$1,033,521	\$992,847	\$1,084,765	\$1,217,809	\$1,395,515

Figure 17: Non-operating expenses and revenues. CAT has created a reserve fund, largely to prepare for purchasing land for a new maintenance and customer service facility. This reserve could also be useful if CAT decides to implement some of the technology upgrades recommended in this plan.

A Appendix: Public Involvement

JWA and CAT staff were guided and assisted in this process by Multicultural Collective (MCC), a firm based in the Willamette Valley that specializes in engaging diverse stakeholders in planning decisions.

The team developed a public involvement plan in the fall of 2016, and worked together to implement it throughout the course of the project.

Outreach Strategies

The first step in public involvement was to reach out to Canby community members and build a list of people who could be consulted throughout the project.

JWA and MCC staff conducted these types of outreach, from November 2016 through March 2017:

- Attending the Bridging Cultures Thanksgiving event; talking with participants, and collecting brief surveys from 48 guests, including their contact info.
- Attending the Bridging Cultures Concilio meeting, to ask for support with event and survey promotion, and present a summary of the key choices raised in the Plan.
- Visiting Canby businesses to collect

contact information, make invitations to the Stakeholder Workshop, and pass out flyers about the web survey.

- Making phone calls to those people who gave us phone numbers, to invite them to the Workshop (in English and Spanish).
- Giving web survey flyers to dial-a-ride and paratransit drivers, for them to give to passengers.
- Riding the 99E bus to promote the web survey and collect paper surveys from riders.
- Posting flyers at the library, and working with librarians to spread the word about the survey and the Plan.

Communication and Public Information

JWA and MCC also distributed and posted more general information about the surveys and events:

- The Choices Report, a link to a video of the City Council presentation, a link to the web survey, and information about the Stakeholder Workshop were all posted on the CAT website (in English and Spanish).
- As the contact list grew, announcements

about all of these same materials and venues for involvement were made by email.

- English and Spanish flyers were posted in public buildings, at local businesses, and at community centers.
- The survey was promoted on the Facebook pages of Bridging Cultures and CAT. Bridging Cultures also distributed information to its text-alert list.

Venues for Input

Input was ultimately collected in a number of venues:

- Through the web survey, to which 116 people provided complete responses.
- Through a paper survey, to which 59 people provided complete responses.
- At the Stakeholder Workshop, which was attended in its entirety by 36 people, of whom 30 responded to the polls taken at the end of the Workshop.
- Through the comments of the Transit Advisory Committee, which is appointed by City Council to advise CAT's decisions, and of City Council members.

Bilingual Engagement

Many of the materials and all of the venues for input were delivered in English and Spanish.

Staff doing the outreach were either fluent Spanish speakers, or received interpretation support (e.g. at the Concilio meetings). Phone calls and emails were made in the native language of the recipient, if it was known to the team.

The Stakeholder Workshop was attended by a diverse group - people of many ages and backgrounds, who use CAT in different ways, and both Latinos and Anglos. The entire workshop was conducted in English and Spanish, with the assistance of professional interpreters. Eleven of the people at the workshop reported that Spanish was their preferred language.

The web survey was offered in English and Spanish. Between web and print responses, 44 people responded in Spanish, and an additional 7 responded in a mix of English and Spanish. 124 people responded in English.

A brief summary of the Choices Report was translated into Spanish, posted on the CAT webpage, and brought to meetings and events for distribution to Spanish readers.

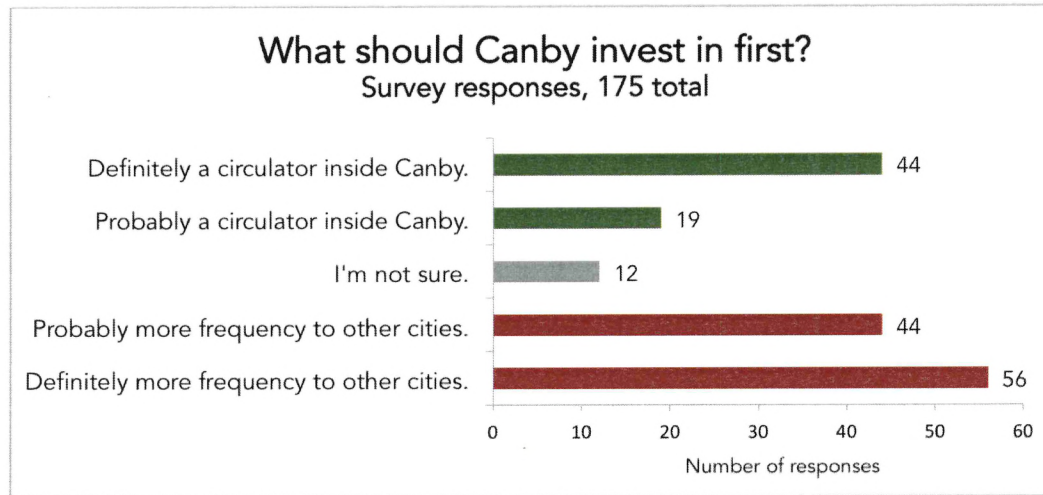
Public Comments in Response to the Alternatives

The charts on the following pages report in more detail the demographics of people who responded to the web or paper survey about the Alternatives.

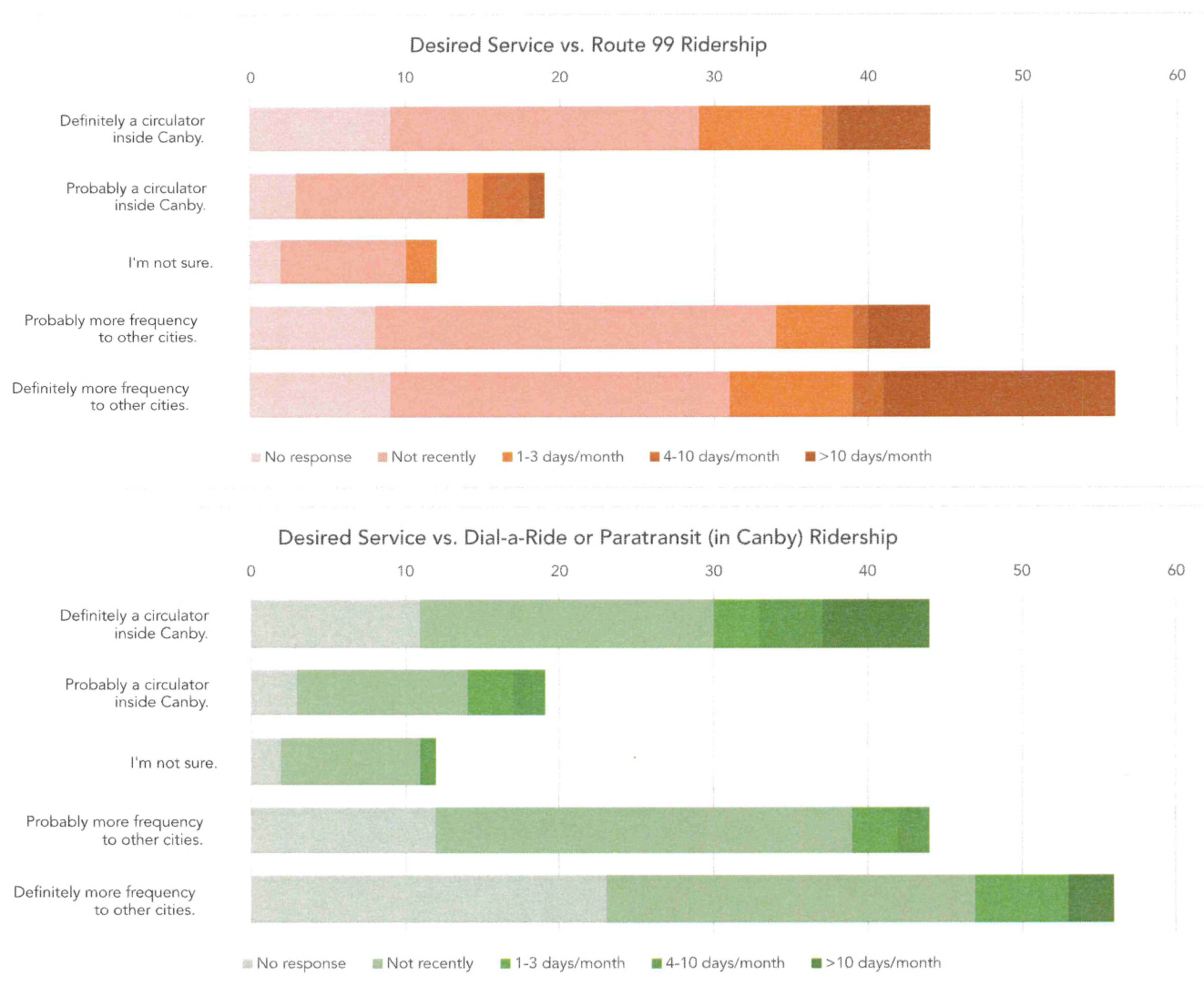
We expected that certain categories of people might respond as a “caucus” to the key choice examined in this planning process. Ultimately, we found that it was hard to predict someone’s opinion, based on their race, their age, where they live or work, and what CAT services they use today.

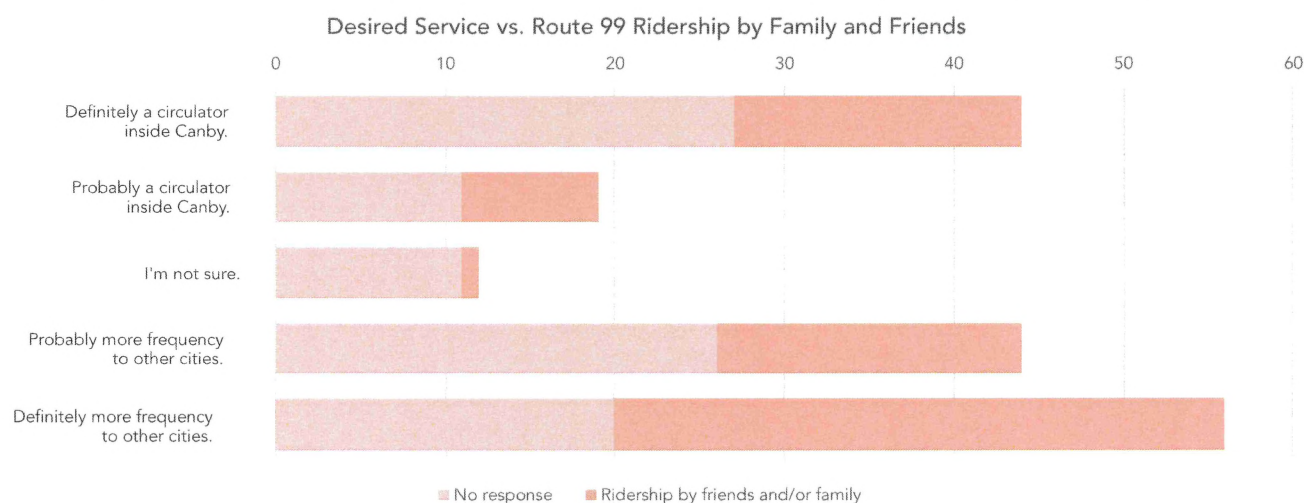
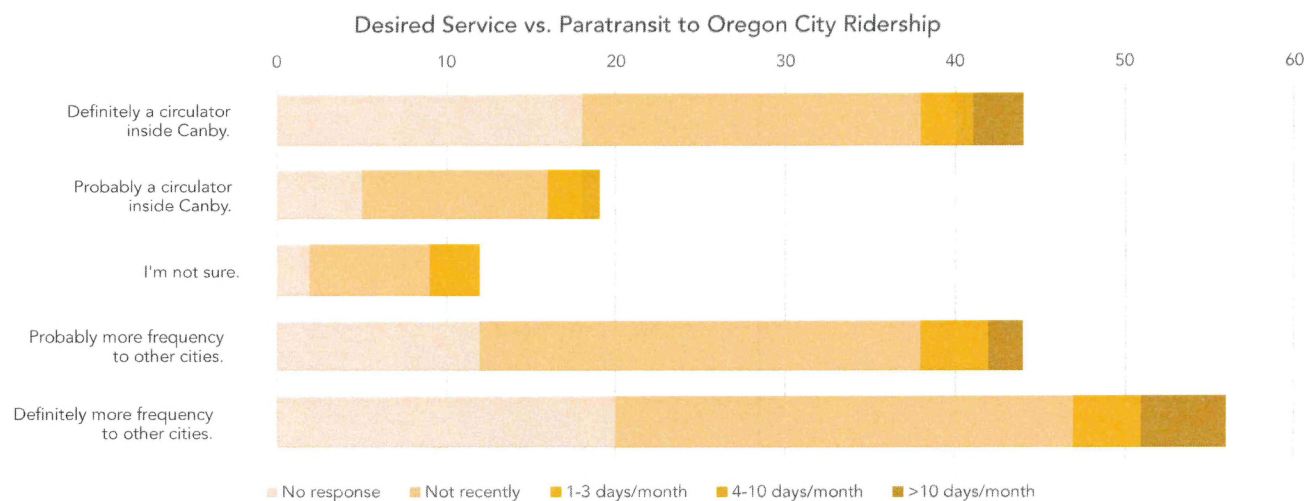
The charts on the following pages revealed to use that the group of people who said that Route 99 investments should be a higher priority included both Latino and Anglo people; residents and workers; dial-a-ride, paratransit and Route 99 riders; and younger, middle aged and senior people.

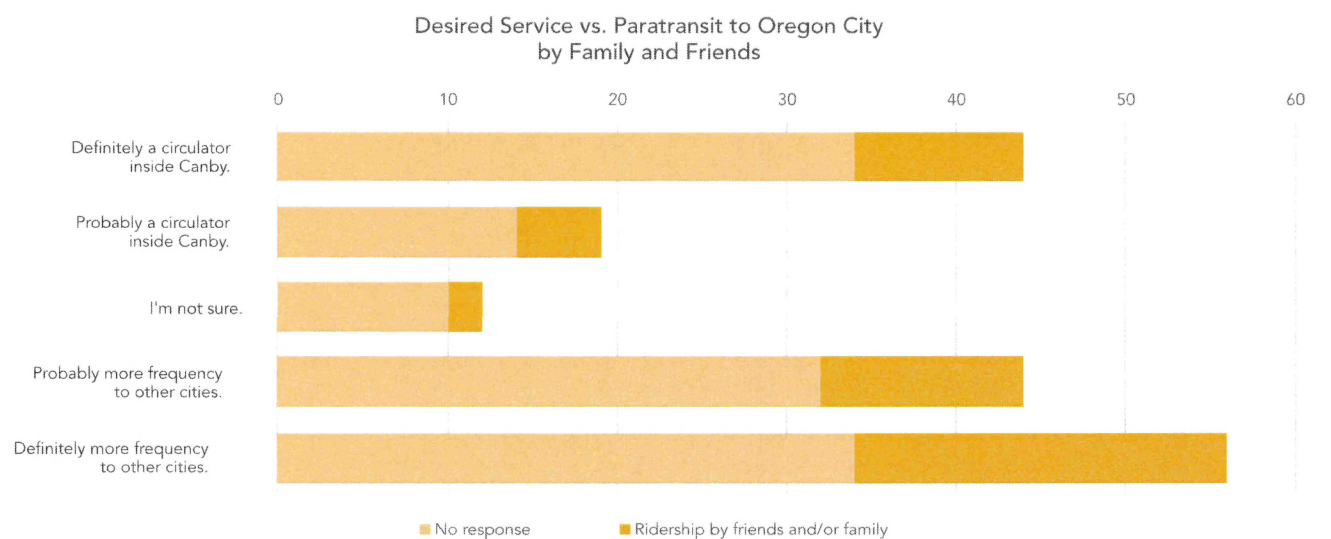
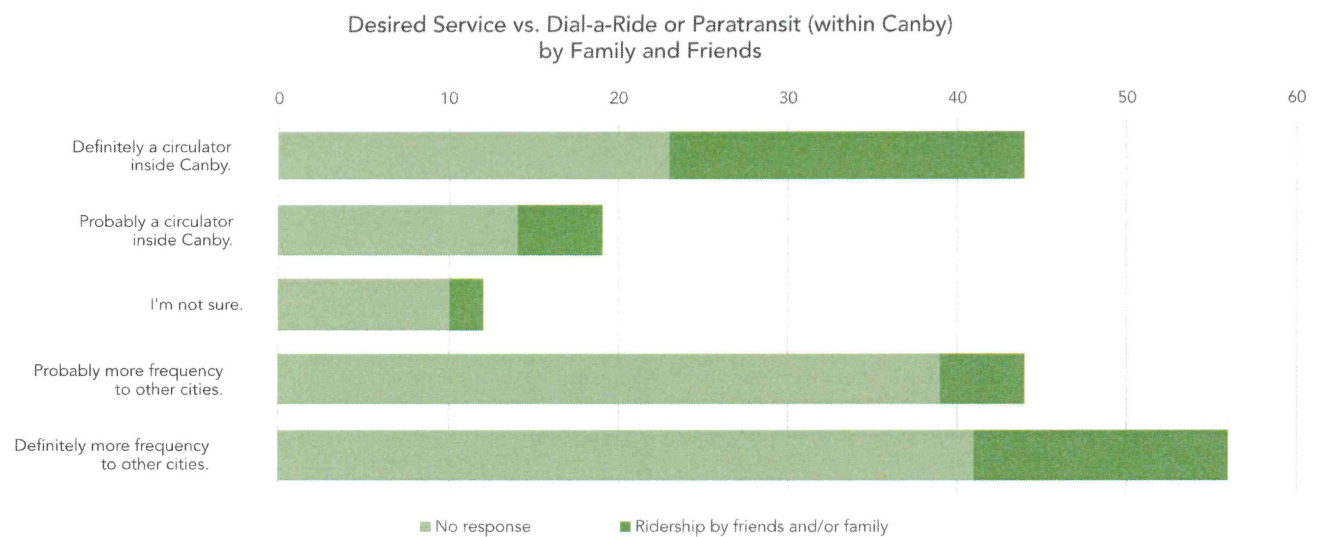
Alternatives Survey Responses



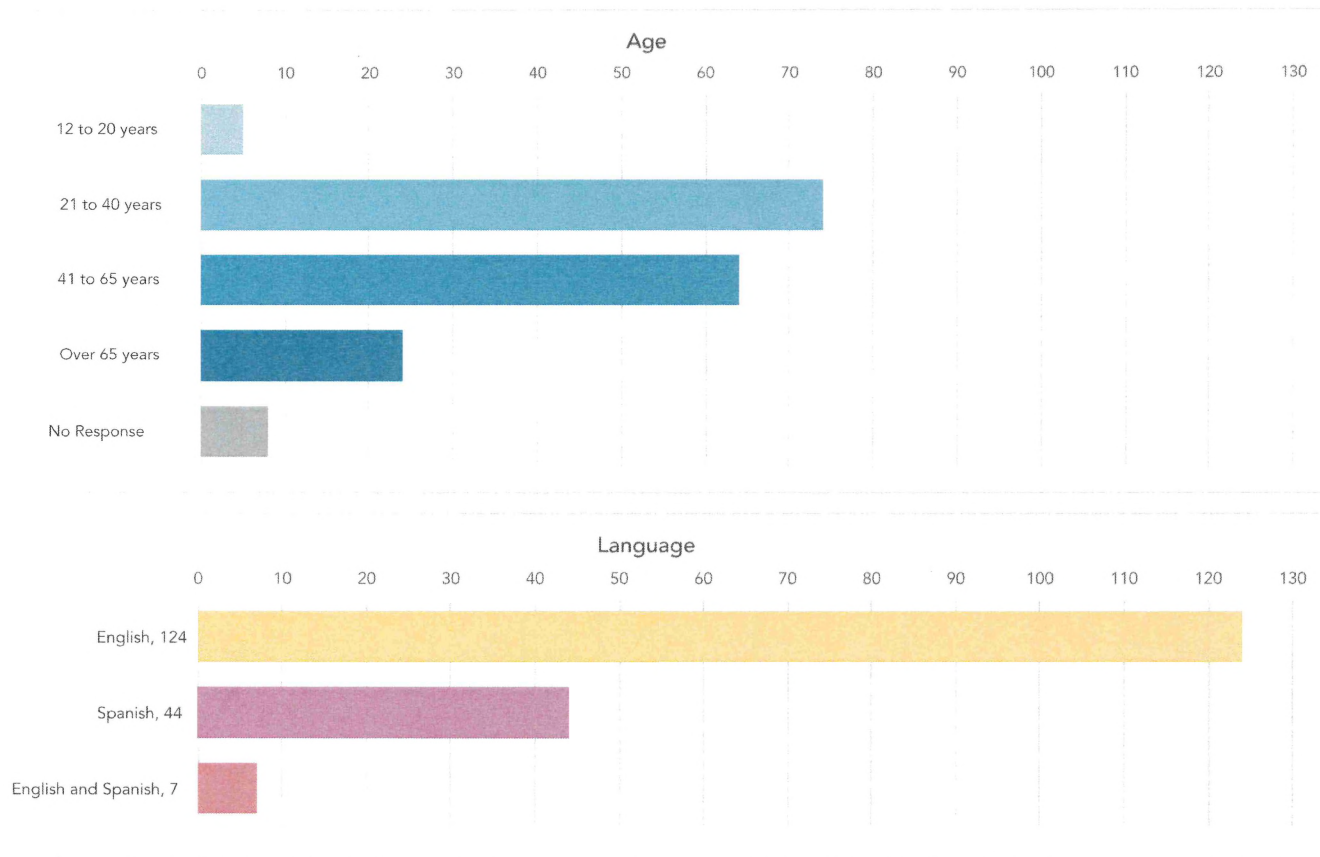
Responses split by riding habits

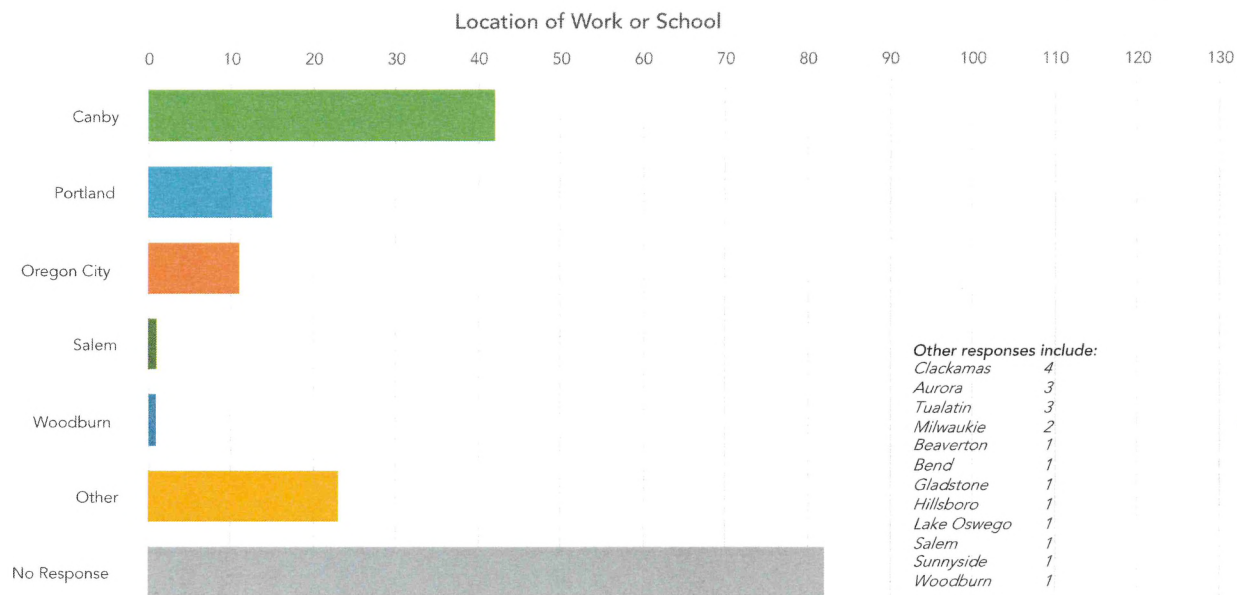




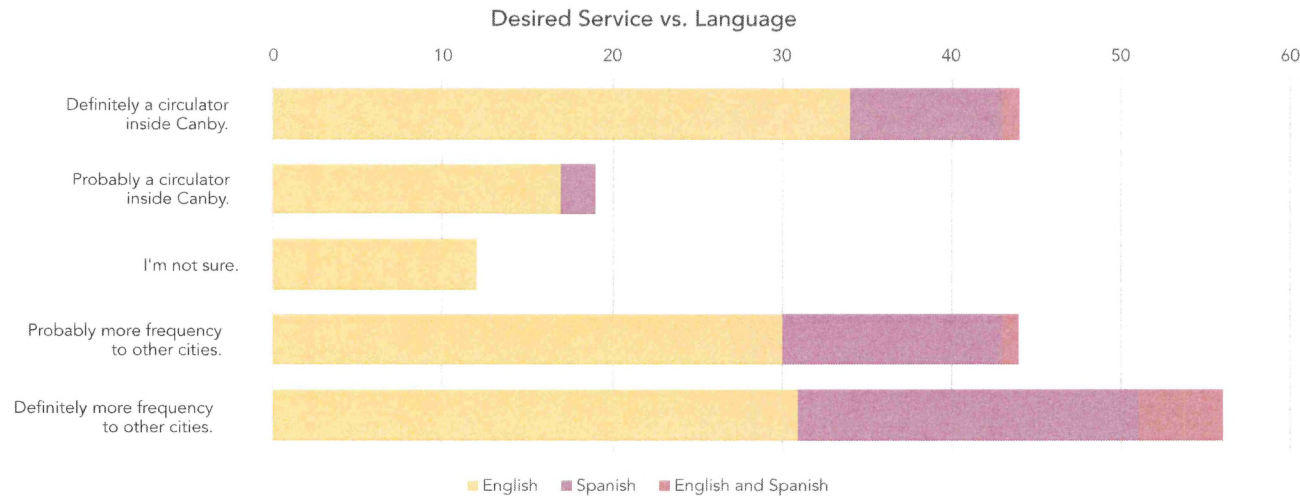
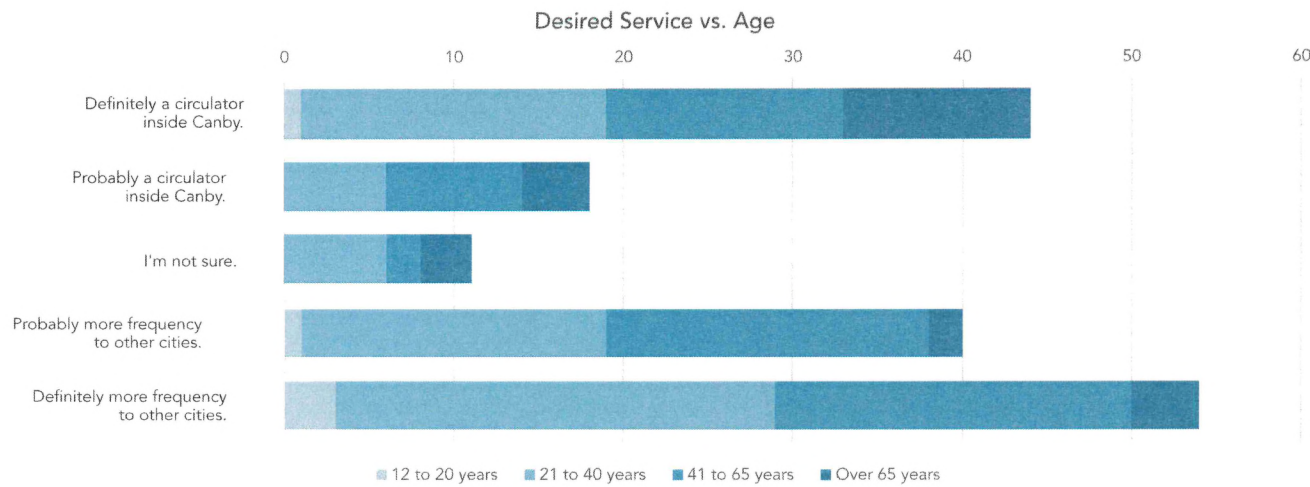


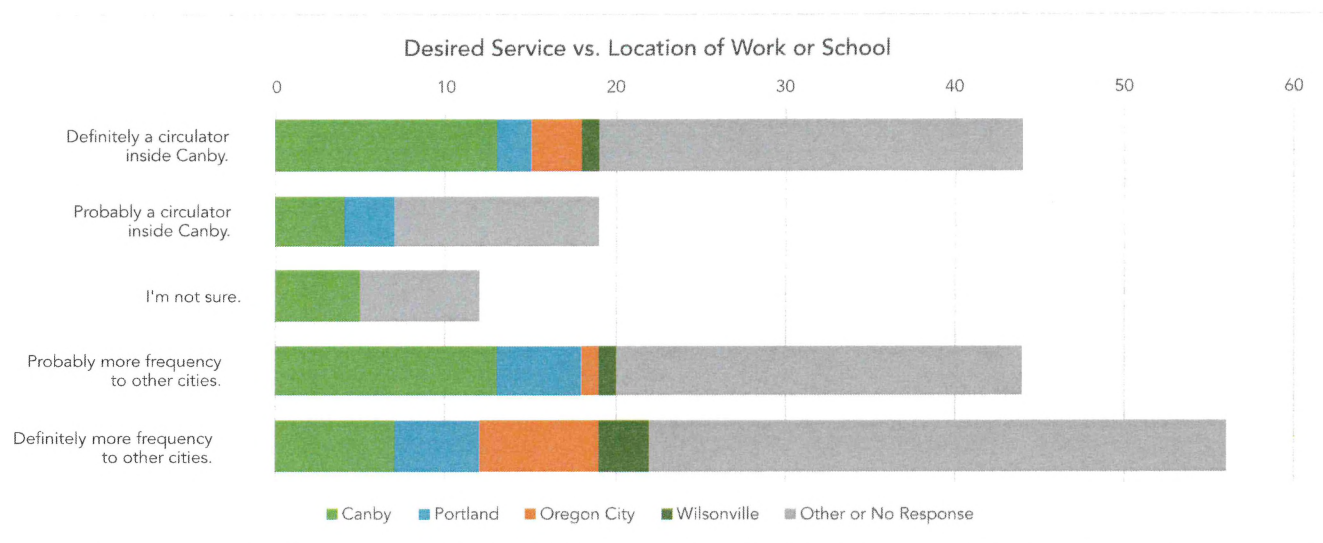
Respondent Demographics



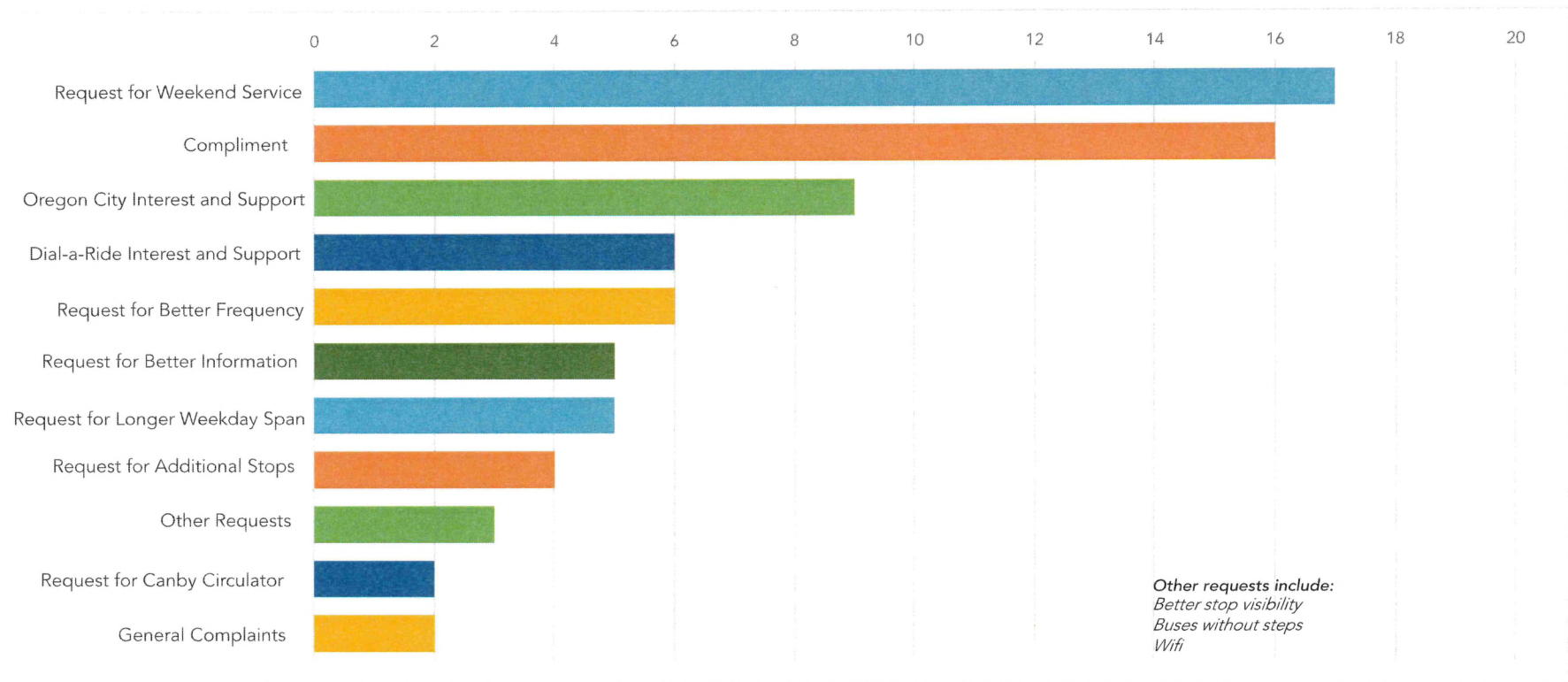


Responses Split by Demographics





Free-Form Comments



All of the free-form comments received through the print or web surveys about the Alternatives (summarized in the chart on the previous page) are reported here. A small number of comments were indecipherable and are not included.

Please consider using smaller buses and providing more frequent service, consider new technology like driverless vehicles for the dial a ride on demand service to lower costs

Have some wifi

More buses without steps

Better visibility at stops

Long stretches of no service to OC prevents the CAT from being a viable commuting option. Also, it'd be a huge win if there was a line or certain times when the CAT ran all the way to the Orange Line in Milwaukie.

anywhere close to Ta truck stop or century meadows would be nice

We disabled seniors at Cascade House are so grateful for your Dial A Ride and Shopper Shuttle and would like to see a Canby Downtown Service if possible.

Never seem to see buses in

neighborhoods, just downtown and 99E

Solo si pueden dar rait a citas médicas ? "Only if you can give a ride to medical centers."

We need to serve the SE area where there are a lot of hispanic citizens with a circulator route

Thank you for providing dial-a-ride to Oregon City

Usually use CAT for getting to Oregon City

It would be nice to get some weekend buses too. Also, do not take Oregon City bus off please. I cannot drive and have doctor appointments up there. Taking it away would make it harder to get up there.

No, Just make weekend services. Maybe a few late night buses as well to match tri-met few late night buses to Oregon City

There should be a morning and night bus at least once or twice on Saturday or Sunday to OC because it's hard to walk 9 miles. Just one route there and back on weekends might help a lot of people.

Need weekend services to Oregon City.

Weekend transit to Oregon City would be very very helpful to my family. Our only transportation for visiting is the CAT!

Please consider weekend routes :)

Frequent service to Oregon City will make it easier for riders to transfer to TriMet services. This is important for students attending Clackamas Community College

to add Fixed rute, you will cut Partransit, Correct? Eliminate GP Dial a ride? Why when it works well now. The circulator will only serve 1/3 of the city. Why do such a select few get the service?

Me interesa el Dial-a-ride. Don't speak English. Me interesa fin de semana. "I'm interested in dial-a-ride. I don't speak english. I'm interested in weekends."

Las rutas durante los días laborales, pero mas temprano y el servicio hasta las 9:00 p. m. también el servicio para los fines de semana, promocionar más el servicio DIAL A RIDE. "On working days, earlier and later service. Also weekend service. And promote the dial-a-ride more."

Dial-a-Ride

Su servicio es muy importante para aquellos que no manejan en el pasado yo lo use y me ayudo bastante, mi familia si usa este transporte y lo usan para ir al medico, tiendas, y para el trabajo.

It is very important to seniors

This service keeps growing old fun. Helps keep down the cost to the public when people become old.

I think you have some wonderful people employed as drivers. Very socialable, patient, and courteous. I always feel better when I get off the bus. Many thanks!

We would miss it, if it was gone.

Weekend service would be very much appreciated.

They do a great job

Need to be much more frequent, and regular so ppl can get to jobs.

Publish route schedules in Canby Herald.

I am isolated for doctor/dental services and a way to grocery shop. Your services allow me to live independently in Canby.

Thank you for the excellent service you give. The drivers and office people bend over backwards to help us.

Needs to have later times.

Unicamente le doy las gracias a la compania de CAT por ayudar a todas las personas.

Probablemente que pase los fines de

semana tambien

Need some form of Weekend service

Saturdays Service

Be nice to run on the weekends

Weekend Services?

Mas publicidad, con horarios mas cerca a las personas.

que tenga mas tiempo de pasar por lo menos cada media hora

It isn't really user friendly or convenient

Ya e usado el CAT y es un buen servicio. Para personas que no tienen caros.

Provide more flyers to the Latino community so they know of other services CAT provides.

Sat Services wouldn't be bad

service on weekends

Maybe do weekends again

Just thankful it runs.

Los buses pasen mas continuos.

I love all of your drivers, the good people skills yoru drivers have are amazing!

No, por el mansuto ya que vengo de Clackamas

the drivers are great people! we love the service!

Quien puede usa el servicio de Dial-a-Ride?

I love CAT (especially after riding Trimet for so long), I just wish I could get home to Hubbard a little later. Or leave Hubbard on weekends!

Yous are great!

Public Comments in Response to the Draft Plan

This Plan was presented in draft form on September 1, 2017. Comments were taken through October 13, 2017.

The Draft Plan was distributed and presented through multiple venues:

- At the regular meeting of the Canby Transit Advisory Committee, which was attended by members of the public (and interpreted into Spanish for attendees).
- By email to the 35 people signed up for email updates.
- On the City's Transit website, in English and Spanish.

In addition to comments made in person at the Transit Advisory Committee, numerous parties submitted written comments, which are included at right and on the following page.

Figure 18: Letter of comment from Clackamas Community College regarding the Draft Transit Master Plan.



19600 Molalla Avenue | Oregon City, OR | 97045-7998
503-594-6000 | www.clackamas.edu
Education That Works

September 25, 2017

Canby Area Transit
195 S Hazel Dell Way Ste C
Canby, Oregon 97013

Re: CCC Comments on the Draft Canby Transit Master Plan

To Whom It May Concern,

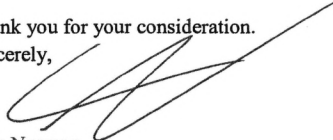
Transit plays a key role in helping community members attend Clackamas Community College (CCC), as over 10 percent of students use transit to access education. For the past 50 years, CCC has helped community members meet their academic and professional goals by providing transfer degrees, career technical education, and community education.

CCC supports the Draft Canby Transit Master Plan's proposal to increase Route 99 frequency. Route 99 plays a valuable role in helping students who live in Canby access our Oregon City campus. Additionally, students who live or take classes in Wilsonville rely on Route 99 to connect with SMART's bus service.

As additional service is planned, CCC urges Canby Transit to invest in increased frequency for midday service. Currently, CCC sees peak enrollment in 10 a.m., noon, 1 p.m., and 2 p.m. classes that are not well served by Route 99. Increased midday frequency would improve students' access to classes, as they balance work and family commitments.

Outside the current proposals in the Master Plan, CCC encourages Canby Transit to consider adding the Oregon City campus as a major stop for the Route 99. Designating the Oregon City campus as a stop would both provide students direct access to education and also connect passengers to jobs and social services across the region. The Oregon City campus is currently served by TriMet, South Clackamas Transportation District, and CCC Xpress routes that provide service to Clackamas, Molalla, Oregon City, and Portland. And the 2019 expansion of the Oregon City campus transit center will provide capacity for additional routes including Route 99.

Thank you for your consideration.
Sincerely,


Luke Norman
Transportation Systems Analyst

Received by email September 29, 2017:

"My name is Carol Long, I have lived in Canby two years now and am very satisfied with the great bus service we receive here at Hope Village.

We are very lucky to have this service and your bus office is terrific!!!

I would like to ask for weekend bus service as in a shopper shuttle or dial a ride so that we can shop all over Canby on the weekends when we all would like to get out and be busy shopping or seeing a movie, etc!! This would add to Canby's Merchants making more monies all over the city.

I hope within the next year we can celebrate a Canby Shopper Bus on WEEKENDS, WE WOULD ALL LOVE IT!!

Best regards,

Ms. Carol Long, Retired Housing Director for the very poor!!"

Received in writing via Bridging Cultures ESL classes, October 5, 2017:

"Circulador local y de fin de semana. [Local circulator and weekends.]" –Citlalic Floras

"Para mi esta bien que haya el fin de semana y tambien local. [For me it would

be good if there were weekends and also local service.]" –Miguelina Morales

"Me gustaria que tengan transporte para la clases de ingles en CCC. [I would like to have transport to the english classes at CCC.]" –Unnamed

"Transporte los 7 dias dentro de Canby. [Transport all 7 days a week inside Canby.]" –Luisa Conta

"Transporte ruta circular local dentro de canby y dias laborales. [Transport local within Canby and on weekdays.]" –Rocio Negrete

"Que haga transporte el fin de semana posiblemente todos los dias. [That there would be transportation on weekends and maybe every day.]" –Unnamed

"Fase 2a y 2b. Me gusta tiene mas transporte. Estara bien que tenga transporte para Oregon City para clase de ingles CCC. [Phases 2a and 2b. I woud like to have more transportation. It would be good to have transportation to Oregon City for english classes at CCC.]" –Unnamed

"Fase 2a. [Phase 2a.]" –Maricarmen Avellaneda, Mayra Avalos-Negrete, Unnamed, and Aurelia Cruz

"Si es posible todos los dias estaria mejor.

[If it is possible, every day would be better.]" –Hector Mendoza

"Fin de semana para el bus. Fase 2a. [Bus service on the weekends. Phase 2a.]" –Unnamed

"Anadir servicio los sabados en la ruta 99. Anadir una ruta de circulacion local dentro de Canby. [Add Saturday service on Route 99. Add a local circulator inside Canby.]" –Unnamed

"Fase 2a y 2b. [Phases 2a and 2b.]" –Unnamed x3

"Transporte ruta circular local dentro de canby y dias laborales. [Circulator route inside Canby on weekdays.]" –Marisol Negrete

"Service los sabados. [Service on Saturdays.]" –Unnamed

"Que tenga servicio los sabados. [That we would have service on Saturdays.]" –Unnamed

"Necesitamos servicio de transporte sabados. [We need transportation services on Saturdays.]" –Felipe Salazar

"Necesito bus para los sabados. Es necesario esos transporte para los que no tienen transporte privado es necesario. [I need the

bus on Saturdays. That transit is necessary for those who don't have private transportation, it's needed." –Unnamed

"Rota circular local dentro de Canby en días laborales. [Local circulator inside Canby on weekdays.]" –Yanet Pastrana

"Fase 2b. Anadir una ruta de circulador local dentro de Canby. [Phase 2b. Add a circulator route inside Canby.]" –Unnamed

"2b." –Mari Cruz Flores, Araceli Vasquez, Gloria Montes, Angeline Duran, Crispina Casarez, Marcos Hernandez, Guadalupe Urbina, Veronica Lopez, Rubens Huinae, Bryn Hager and Maria Gallardo.

B Appendix: Transit Outcomes from HB 2017

Transit Outcomes Named in House Bill 2017						
Phase or action	<i>"Increased frequency of bus service schedules in communities with a high percentage of low-income households"</i>	<i>"Procurement of buses that are powered by natural gas or electricity for use in areas with a population of 200,000 or more"</i>	<i>"Implementation of programs to reduce fares for public transportation in communities with a high percentage of low-income households"</i>	<i>"Expansion of bus routes and bus services to reach communities with a high percentage of low-income households"</i>	<i>"Improvement in the frequency and reliability of service connections between communities inside and outside of the qualified entity's service area"</i>	<i>"Coordination between public transportation service providers to reduce fragmentation in the provision of transportation services"</i>
Phase 0: Make dial-a-ride and paratransit more efficient						
Phase 0: Make Route 99 schedule more regular and legible					X	X
Phase 1: Increase frequency of intercity service	X			X	X	X
Phase 1: Add more structure to premium paratransit						
Phase 1: Continue outreach to Latino community						

Transit Outcomes Named in House Bill 2017						
Phase or action	"Increased frequency of bus service schedules in communities with a high percentage of low-income households"	"Procurement of buses that are powered by natural gas or electricity for use in areas with a population of 200,000 or more"	"Implementation of programs to reduce fares for public transportation in communities with a high percentage of low-income households"	"Expansion of bus routes and bus services to reach communities with a high percentage of low-income households"	"Improvement in the frequency and reliability of service connections between communities inside and outside of the qualified entity's service area"	"Coordination between public transportation service providers to reduce fragmentation in the provision of transportation services"
Phase 2a: Add intercity Saturday service	X			X	X	X
Phase 2b: Add local circulator on weekdays	X			X		
Phase 3: Add more weekend service (local or intercity)	X			X	X	X
Conduct a fare study			X			X

Phase or action	Transit Outcomes Named in House Bill 2017					
	<i>"Increased frequency of bus service schedules in communities with a high percentage of low-income households"</i>	<i>"Procurement of buses that are powered by natural gas or electricity for use in areas with a population of 200,000 or more"</i>	<i>"Implementation of programs to reduce fares for public transportation in communities with a high percentage of low-income households"</i>	<i>"Expansion of bus routes and bus services to reach communities with a high percentage of low-income households"</i>	<i>"Improvement in the frequency and reliability of service connections between communities inside and outside of the qualified entity's service area"</i>	<i>"Coordination between public transportation service providers to reduce fragmentation in the provision of transportation services"</i>
Improve transit access among Oregon City, Canby and Salem (feasible in Phases 0 or 1)					X	X
Improve transit access among Wilsonville, Canby and Oregon City (feasible in Phases 0 or 1)					X	X