

TECHNICAL MEMORANDUM #5: FUTURE SERVICE OPPORTUNITIES

Date: February 8, 2022 Project #: 23021.022

To: Cheryl Cheas, Christine Sepulveda, and Crystal Hall, UPTD
Thomas Guevara, ODOT

From: Susan Wright, Paul Ryus, Krista Purser, and Michael Ruiz-Leon, Kittelson & Associates

Project: UPTD Transit Master Plan

Subject: Future Service Opportunities Update (Subtask 4.3)

TABLE OF CONTENTS

Introduction.....	1
Summary of Needs.....	2
Transit Markets and Recommended Service Models	2
Service Enhancements and Efficiencies.....	2
Future Service Opportunities.....	3
Information & Technology	4
Coordination	5
Facilities.....	6
Routing Opportunities	9
Conclusion and Next Steps	23

INTRODUCTION

This memorandum identifies future transit service opportunities based on Task 1 outreach efforts, the gap analysis completed in Memo #4, and goals and benchmarks from Memos #2 and #3. It also identifies capital alternatives, facility improvements, and public transportation system technologies.

SUMMARY OF NEEDS

Potential needs were identified primarily from service gaps identified from the population and land use analysis, previous planning processes, and existing service analysis conducted as part of *Memo #1: Existing System Conditions*, and gaps identified through public involvement and outreach. *Memo #4: Unmet Transit Needs* described these potential needs and recommended service models to address them. These needs and service models are summarized below.

Transit Markets and Recommended Service Models

Table 1 summarizes existing and potential future service types to address transit market needs.

Table 1. Service Types to Address Transit Market Needs

Transit Market	Local Fixed-Route	Shuttle/ Deviated Fixed-Route	Intercity/ Express	Vanpool	Demand-Response
Existing transit users within Roseburg	Existing	Potential	Existing	Potential	Existing
	Consider adding stop locations, increasing frequency, and expanding service hours within Roseburg. The Roseburg area is on the brink of becoming a Metropolitan Planning Organization (MPO) and large employers would be required to develop travel demand management programs, promoting the potential for vanpool.				
Additional or modified service in Riddle and Sutherlin	Potential	Potential	Existing	Potential	Existing
	Existing routes could be modified and/or new routes could be added to serve additional areas within Riddle and Sutherlin. Expanded service hours or changes to frequency may also address the transit gap. Should these communities be included in a future metropolitan planning organization (MPO), vanpools may have higher potential for implementation and success.				
Tourism and recreation	—	—	Potential	Potential	Existing
	New services to tourism and recreation areas, such as east–west connections to the coast or Umpqua National Forest, would provide service to visitors, residents, and employees in Douglas County.				
Growing populations inside UGBs	Potential	Potential	Existing	Potential	Existing
	In addition to UPTD’s services, partnering with CCAT, South Lane Wheels, and other agencies to expand intracity and intercity services and encouraging use of vanpools can help serve growing populations in Douglas County cities.				
Transit-dependent populations in rural areas	Potential	Potential	Existing	—	Existing
	Providing intercity rural transit and demand-response services or new shuttle services can help to address the needs of transit-dependent populations in rural Douglas County.				

Service Enhancements and Efficiencies

The following improvements were identified as general needs not specific to geographic or demographic transit markets. These improvements could help improve the existing rider experience, attract new ridership, and improve the efficiencies of partnerships and UPTD’s operations.

- Increase service frequency, extend service hours, and provide weekend service:** The highest-priority improvements of survey respondents were increased frequency, extended service hours, and weekend service. Non-riders stated that they do not use transit services due to service coverage and frequency.

- **Improved education, marketing, and partnerships:** Compared to several of its peers, UPTD provides fewer rides per hour and rides per mile. Lower efficiency may be an outcome of the geographic and demographic layout of the community, but looking toward other transit providers can help identify marketing opportunities. For example, both Lincoln County Transit Service District (LCTSD) and Sunset Empire Transportation District (SETD) are part of the NWOTA transit alliance, marketing services and coordinating with adjacent providers to increase awareness and ridership. Improved partnership with South Lane Wheels, CCAT, and other providers may help to boost all providers' services. Improved website information showing adjacent provider connections, routes, and service times may help boost transit ridership.
- **Update vehicle fleet:** UPTD's fueling costs have been increasing substantially with the change in fuel prices. Cleaner fuel sources, such as electrification, could be considered for future vehicle purchases and facilities. The upfront higher cost may be worth lower and more stable fuel costs. Clean fuels are also a goal of the City of Roseburg, a major partner for UPTD. In addition to fueling costs, many of UPTD's vehicles are in poor condition or near the end of their expected useful life (EUL) and in need of replacement.
- **Improved travel times:** Providing transit services competitive with driving a personal vehicle is a goal for UPTD. Seeking ways to improve travel times, such as bus-on-shoulder operations, signal improvements prioritizing transit vehicles, or route optimization may help reduce travel times on transit.
- **Bus stop amenities and access:** Individual bus stops could be improved with amenities, sidewalk access, park-and-ride access, and more. Specific improvements identified through outreach include shelters, updated information boards, and benches.
- **Update tools and technology:** Tools that respondents felt would increase the convenience of their trips include more fare payment options, mobile trip-planning tools, real-time vehicle arrival information, and more bicycle racks. Difficulty planning trips was cited in non-riders' responses as a barrier to using transit service.

FUTURE SERVICE OPPORTUNITIES

This section describes future service opportunities that address transit efficiency, ridership, and coverage needs through information and technology, coordination, facilities, service enhancement, and routing opportunities. Future service opportunities related to service enhancement, coordination, information and technology, and facilities are more focused on improving current system efficiency, as opposed to enhancing coverage. Routing opportunities can improve both existing efficiency and geographic coverage. These opportunities were developed based on stakeholder input; population, employment, and land use growth forecasts; and existing and forecasted future transit demand. Future memos will evaluate projects and services identified in this memo, including a financial assessment for projects and a list of preferred projects.

Future service opportunities, listed generally from lower-cost to higher-cost, include:

- Information and technology improvements such as automatic vehicle location (AVL) that can support vehicle dispatchers, provide schedule reliability data to inform service planning, and provides the data source that can be used to provide riders with real-time arrival information.

- Coordination with other providers can improve efficiency by reducing transfer times and distances, while coordination with cities and Douglas County can improve rider access to bus stops.
- Bus stop improvements can be a low-cost way to make riding transit more comfortable, increasing ridership from existing users, and making transit service more visible, attracting new riders.
- Modifications to regional and local routes can enhance geographic coverage and increase ridership by serving key activity centers and transit-dependent populations.
- Increasing frequency and service hours of existing routes increases the number of trip types that transit can serve and helps address identified local and regional transit gaps.
- Implementing new regional routes can substantially increase geographic coverage and attract new ridership, but are also costly to implement.
- Larger facility improvements, such as transit centers, can build the capacity for increased transit and provide a landmark destination for transit service in Douglas County.

Information & Technology

Information and technology services can improve the existing ridership experience, attract new ridership by improving ease of transit use, and provide information to UPTD to help plan and operate transit service in the future. The following sections provide high-level cost estimates for and describe potential benefits of information and technology improvements, including real-time vehicle arrival information, fare payment options, online/mobile trip planning tools, and on-board cameras. The impacts to transit ridership vary strongly by provider when implementing these services and thus changes in ridership are not explored for these improvements.

In addition to improving existing service, data gathered from technologies such as real-time vehicle arrival information and AVL can help in analyzing the performance of existing and future service opportunities. For example, AVL data could be assessed to adjust schedules based on delay points to improve transfer connections and maintain on-time performance.

Fare Payment Options

Fare payment technology options include smart card-based electronic fare collection systems, mobile ticketing, and more. UPTD does not currently provide mobile ticketing for its services and requires exact fare for trips. UPTD should consider allowing fare reciprocity with connecting systems such as CCAT to encourage more transit trips. UPTD can market these services and gauge feedback on whether they address the need for more fare payment options.

Trip Planning Support

Online mobile trip planning tools can help the public get travel information at any day or time. While some providers create proprietary trip planning tools, free and readily available trip planning tools are available and more fitting to UPTD's size and needs. These tools include Google Maps (currently on the UPTD website), OneBusAway, Moovit, and Transit. All of these tools depend on the open data format GTFS. In addition to using GTFS for scheduled stops and routes, UPTD could also pursue GTFS-flex, an emerging format for demand-response services, which can increase awareness and use of the overall transit system.

On-board Cameras

On-board cameras seek to provide customer and driver safety, assist with accidents and insurance claims, and provide insight on bus operator performance and passenger counting by monitoring activity in real time. UPTD currently has on-board cameras on all fixed-route vehicles and three demand-response vehicles; all new vehicles are ordered with the camera system. Total capital cost varies from \$4,000 to \$14,000 each to retrofit one-door buses. Other cost considerations include hardware such as servers and equipment to view camera footage. UPTD should consider equipping its fleet with on-board cameras.

Real-Time Vehicle Arrival Information

UPTD posts schedules for all routes but does not currently provide real-time vehicle arrival information. Real-time information helps improve the ridership experience by reducing passenger wait times, providing confidence that a bus has not been missed, and generally creating a more informed and comfortable rider. This information can be made accessible via UPTD's website, smartphones, and through "push" technologies such as text messages. *TCRP Synthesis 48: Real-Time Bus Arrival Information Systems* reports costs for AVL system implementation for smaller systems (10–25 Automatic Vehicle Location [AVL]-equipped vehicles), with total capital cost between \$60,000 and \$171,000 and per-vehicle cost between \$3,000 and \$8,100. However, these cost data were collected when the technology was newer; improved system efficiencies have led to decreased costs. These costs should be explored further with vendors. ODOT encourages providers to buy systems that support GTFS-Realtime (GTFS-rt), allowing for up-to-date information on vehicle arrival to be pushed through the tools cited in the *Trip Planning Support* section.

Coordination

Improving coordination with other providers in the region and between services in Douglas, Lane, and Coos County can improve the efficiency and effectiveness of UPTD's transit services. Potential methods of coordination include:

- **Pulsing** – timing transfers so that all buses meet at the same stop at the same time. Advertising pulsed services can assure riders that transferring between local and regional services will be easy, and connections won't be missed. Pulsing requires adequate bus bays for vehicles to arrive simultaneously.
- **Interlining** – Using the same bus to complete two different routes can provide a one-seat ride and not require additional service or vehicles. For example, if a regional route to Reedsport were implemented, it could interline with a local route in Roseburg. The local route would provide direct connections to Roseburg destinations of interest to Reedsport riders, and then become the Reedsport route after completing the local run, allowing Reedsport passengers to stay on the same bus.
- **Shared Corridors** – In considering regional transit, UPTD could partner with neighboring providers to serve connections between their communities. This is generally accomplished two ways: Traded trips, where both providers run buses the entire route and alternate trips or days, or single-operator, where one provider covers the connection with financial contributions from the other provider(s). For example, CCAT currently operates one round-trip two days per week from Coos Bay to Roseburg, allowing same-day round-trips from Coos Bay to Roseburg. However, Roseburg-based passengers cannot use this service to make same-day round-trips to the coast. A traded-trip operation would allow round trips to be made in both directions.

- **Fare Reciprocity** – As described above, UPTD could reduce passenger transfer costs by accepting CCAT or South Lane Wheels fares and vice versa.

Facilities

Facilities improvements include bus stop improvements, fleet improvements, bicycle and pedestrian amenities, and park-and-ride lots. Similar to information and technology improvements, safe and comfortable facilities can improve the ridership experience and increase ridership by improving stop visibility, providing protection from poor weather, and improving access to transit.

Bus Stops

Waiting at a bus stop is generally the first part of a rider's journey on a fixed-route transit system, and a comfortable and safe stop helps enhance the transit system. Bus stops range in cost, with a bench costing the least and a new bus stop with an ADA-complaint landing pad and a shelter costing more.

Benches

An alternative to a shelter for a stop that has less ridership is a bench. Benches should be considered for stops with at least three boardings per day, although other factors, such as the proximity to senior housing and nearby businesses willing to contribute to the costs, should be factored into the decision as well. Benches that attach to the bus stop pole, such as the Simmi-Seat (see Figure 1) take up very little space, have low maintenance, and are relatively inexpensive. Benches with backs and wider seating can be more comfortable for elderly and people with disabilities. Installed benches vary in price from \$500 to \$1,500, depending on materials, the quality of the product, and the installation conditions.



Figure 1. Simmi Seat

© 2015 Simme LLC

Shelters

Passenger shelters add to the comfort of using transit and are generally very popular with riders. An “off-the-shelf” passenger shelter (there are several companies that provide them) typically costs approximately \$6,000 plus installation. In addition to initial capital costs, passenger shelters will incur maintenance costs, both for routine ongoing cleaning and repair and replacement as needed. The primary maintenance issues for shelters, apart from the routine cleaning, are vandalism and fading/clouding of the windscreen. For routine cleaning, trash receptacles, if included, would dictate the frequency that the shelter should be serviced. If trash receptacles are not provided, the regular cleaning and servicing of shelters can be as low as once per month.

Passenger shelters must be designed to meet the requirements of the Americans with Disabilities Act (ADA) and should be located so as to provide safe and convenient pedestrian connections with nearby destinations. Coordination of shelter placement with sidewalk and other pedestrian improvements projects planned by Oregon Department of Transportation (ODOT) or local agencies is encouraged. In addition to the overhead protection (roof), shelter amenities can include:

- Windscreens
- Benches
- Trash receptacles
- Passenger information

Passenger shelters are recommended at high-use stops and all transit centers. The condition of existing shelters at these locations should be reviewed and additional amenities considered, although the final prioritization will depend on the future service plan.

There is a tradeoff between the level of wind/weather protection provided through the use of windscreens and an open shelter design, without a windscreen, that reduces maintenance costs. If vandalism is not a major problem for UPTD, windscreens are recommended for UPTD shelters both to address winds and because the infrequent service can lead to longer wait times which suggests the need for a higher level of protection from the weather. Glass in lieu of acrylic should be considered to address weathering and fading issues.

New Bus Stop

The cost for building a new bus stop with an ADA-compliant landing pad and space for a shelter is approximately \$15,000 per location. Designated bus stops have the following advantages:

- They provide awareness of the service, improving the visibility of UPTD in the community.
- The stop can be located to assure safe bus and passenger access.
- The stop can include a paved, ADA compliant landing pad, to facilitate access by riders needing to use the bus lift or ramp.
- They can consolidate access, reducing the number of stops a bus makes.
- They can help communicate service information such as route numbers are included on the signs.

New bus stop signage on a pole, installed, can range from \$300 to \$1,000, depending on the material and the installation conditions. It is recommended that route names be placed on signs to assist riders in identifying the service. Bus stop displays with specific route, schedule, and fare information can also be very helpful, though they require updating when there are services or fare changes, which adds to operating cost. If service and fare changes are relatively infrequent, providing more-specific rider information at high-use bus stops is recommended. This option is especially important in areas where visitors tend to use UPTD service, because they are less likely to be familiar with the fares, routes, and schedules.

Bus stops should be located to allow for safe bus and passenger access. Where possible, bus stops would be located at locations that have existing or planned sidewalks or other pedestrian connections, and that allow for safe pedestrian crossing of the street. On major roadways with speeds of 35 mph or more, such as state highways, transit agencies may consider bus stops that allow the bus to stop out of the traffic lane to avoid rear-end collisions and to discourage unsafe passing of the bus by motorists.¹ At intersections, locating a bus stop on the far side of the street helps maintain pedestrian visibility at crosswalks and allows buses to reenter the travel lane more easily. Major bus stops should have some lighting and provide bicycle parking accommodations such as racks.

Bicycle and Pedestrian Infrastructure and Amenities

Bicycle and pedestrian access are very important to transit. Virtually every bus rider is also a pedestrian, and bicycles provide an important "last mile" option for transit, particularly for a system such as UPTD that serves low-density and rural communities. While UPTD is not able to provide safe and convenient pedestrian access to transit stops on its own, UPTD can work with local cities, Douglas County, and

¹ Source: <https://nacto.org/publication/transit-street-design-guide/stations-stops/stop-configurations/curbside-pull-stop/>

ODOT to prioritize pedestrian improvements that serve transit stops. In addition, pedestrian improvements in the immediate vicinity of a transit center or shelter can sometimes be funded by other projects.

It is of particular importance and a legal requirement to provide for access by persons with disabilities. Transit centers, shelters, and new or relocated bus stops should be designed to meet the requirements of the ADA. It is recommended that cities, the county, and ODOT prioritize street corners near transit centers and shelters for ADA ramps.

The bicycle/transit connection can be facilitated by providing bike parking at transit centers and, space permitting, at major bus stops. All UPTD buses (not vans) have the capability to carry bikes, and the agency should make this information more prominent on its website and other promotional materials.

Park-and-Ride Lots

Park-and-ride lots are typically feasible in situations where there is either a parking charge or parking shortages at the rider's destination, or if there is a substantial savings in travel cost or time by using transit. The only existing formal park-and-ride in Douglas County is in Myrtle Creek. The Washington & Rose downtown Roseburg stop is located directly across from a public parking garage and is considered an informal park-and-ride. It may not make sense for UPTD to invest in a large park-and-ride program, as parking in many areas is free and widely available. Instead, agreements with local business, local government, and community organizations that allow use of a few spaces for "informal" park-and-ride usage is recommended.

Transit Centers and Major Transit Stops

Transit centers provide a transfer point for bus routes, while major transit stops are typically provided at major activity centers. In addition to providing greater passenger amenities that improve rider comfort, transit centers and major transit stops provide visibility for the transit service, reminding residents and visitors of the availability of the service within their community. Currently, Washington and Rose is the designated transit center in the UPTD service area. Mercy Medical Center, Umpqua Community College, Roseburg VA, and Walmart could be considered major bus stops.

- The location of the stop or transit center should consider pedestrian access to nearby destinations, ease of bus access to reduce out-of-direction travel and allow for safe bus operations, and visibility, both to publicize the service and to enhance rider security.
- The stop or transit center should be sized to accommodate planned growth, both in terms of the number of buses accommodated and the size of rider amenities, such as a passenger shelter.
- Materials used should consider life-cycle costing, which usually points toward high-quality, long-lasting materials that have lower ongoing maintenance costs.
- The stop or transit center design should use Crime Prevention Through Environmental Design (CPTED) principles to improve rider security. CPTED principles include maintaining clear sight lines into and across the station, eliminating "hiding" spots, and providing adequate lighting.
- Public art should be considered for transit centers. Art has been shown to discourage vandalism and can also be used to involve the local art community in a transit center project. Regulations now require that public art funded through the Federal Transit Administration (FTA) be "functional." Art associated with railings, benches, pavement, windscreens, or any other element of the shelter would meet the FTA requirement. Free-standing art, such as a sculpture, would not.

- Information cases should be located at transit centers and at some major stops to provide general schedule and overall system information.

Current bus stops that have more than ten boardings a day should be considered major stops, and merit consideration for a higher level of improvement (relative to the base-level amenities found at all bus stops), such as a shelter or information case. Final decisions about transit center locations and other stop improvements will depend on the final service network.

Routing Opportunities

UPTD currently operates fixed-route, rural intercity service, and demand-response services. Table 2 summarizes the cost per hour and rides per hour assumptions for various service types in Douglas County, as established in *Memo #4: Unmet Transit*. Table 3 shows the current routes operated by UPTD. Demand-response information is derived from the last full year of data.

Table 2: Cost and Ridership Assumptions

Services	Typical Operating Cost per Hour	Rides per Hour
Fixed-Route	\$101/hour	8–10
Deviated Fixed-Route	\$98/hour	6–8
Demand-Response	\$96/hour	2–4
Shuttles	\$96/hour	4–6
Vanpools	\$96/hour	4–6
Rural Intercity Service	\$108/hour	6–8
Express Service	\$119/hour	6–8

Table 3: Existing UPTD Routes

Route	Sutherlin BlueLine	Winston Greyline	Orangeline	Redline	Greenline	Route 99/Commuter	Demand-Response
Service Span	7 AM - 7 PM	6 AM - 6 PM	6:15 AM - 7:30 PM	6:15 AM - 8:15 PM	6:30 AM - 8:15 PM	5 AM - 8 PM	6:15 AM - 8 PM
Total Service Span	12	12	13	14	14	15	14
Average Headway (Minutes)	144	120	130	60	60	129	N/A
Trips per Day	5	6	6	14	14	7	23
Trip Length (Miles)	37.64	22.97	29.01	13.83	17.89	98.7	8.3
Service Days	Weekdays	Weekdays	Weekdays	Weekdays and Saturdays	Weekdays and Saturdays	Weekdays	Weekdays
Service Type	Rural Intercity Service	Rural Intercity Service	Fixed-Route	Fixed-Route	Fixed-Route	Rural Intercity Service	Demand-Response
Cost per Hour	\$108	\$108	\$101	\$101	\$101	\$108	\$96
Approx. Annual Operating Cost	\$141,000	\$169,000	\$236,000	\$440,000	\$440,000	\$590,000	\$456,000
FY20 Ridership	8,183		30,172			10,903	6,017

Increased Frequency and Service Span

Increased frequency and extended service hours were survey respondents' highest priority from Survey #1. Increasing frequency and service hours can improve ridership by improving convenience and availability. Currently, UPTD has average headways ranging from 60 minutes (Roseburg Redline and Greenline) to 144 minutes (Sutherlin Blueline). Most transit service is provided on weekdays only, with the exception of the Redline and Greenline, which provide reduced service on Saturdays. Increasing frequency can be a substantial investment; even getting to 60-minute headways systemwide would take a near doubling of frequency and thus doubled costs. Priorities for increased headways will be established later in the project alongside routing alternatives to achieve increased service across Douglas County.

Several transit frequency improvements are underway, including reducing the Sutherlin Blueline and Winston Greyline to just over an hour in headway and reducing the Redline and Greenline to 30-minute headways. The resulting headways, trips per day, and costs are shown in Table 4.

Table 4: UPTD Service Planned Frequency Increases

Alternative	Sutherlin Blueline	Winston Greyline	Orangeline	Redline	Greenline	Route 99/Commuter	Demand-Response
Service Span	7 AM - 7 PM	6 AM - 6 PM	6:15 AM - 7:30 PM	6:15 AM - 8:15 PM	6:30 AM - 8:15 PM	5 AM - 8 PM	6:15 AM - 8 PM
Hours per day	12	12	13	14	14	15	14
Average Headway (Minutes)	72	72	130	30	30	129	N/A
Trip Length (Minutes)	50	50	80	50	50	180	47
Trip Length with Buffer (Minutes)	60	60	90	60	60	180	N/A
Trips per Day	10	10	6	28	28	7	23
Trip Length (Miles)	37.64	22.97	29.01	13.83	17.89	98.7	8.3
Service Days	Weekdays	Weekdays	Weekdays	Weekdays and Saturdays	Weekdays and Saturdays	Weekdays	Weekdays
Days per week	5	5	5	6	6	5	5
Service Type	Rural Intercity Service	Rural Intercity Service	Fixed-Route	Fixed-Route	Fixed-Route	Rural Intercity Service	Demand-Response
Cost per Hour	\$108	\$108	\$101	\$101	\$101	\$108	\$96
Approx. Annual Operating Cost	\$281,000	\$281,000	\$236,000	\$879,000	\$879,000	\$590,000	\$456,000
Approx. Scheduled Hours	2,600	2,600	2,340	8,740	8,740	5,460	

Another survey desire was increased weekend service. The estimated costs of this improvement are shown in Table 5. As shown, providing service all days would increase total operating costs by about 8% above the cost of planned services.

Table 5: UPTD Service All Days of the Week

Alternative	Sutherlin Blueline	Winston Greyline	Orangeline	Redline	Greenline	Route 99/ Commuter	Demand- Response
Service Span	7 AM - 7 PM	6 AM - 6 PM	6:15 AM - 7:30 PM	6:15 AM - 8:15 PM	6:30 AM - 8:15 PM	5 AM - 8 PM	6:15 AM - 8 PM
Total Service Span	12	12	13	14	14	15	14
Average Headway (Minutes)	72	72	130	30	30	129	N/A
Trips per Day	10	10	6	28	28	7	17
Trip Length (Miles)	37.64	22.97	29.01	13.83	17.89	98.7	8.3
Service Days	All Days	All Days	All Days	All Days	All Days	All Days	All Days
Days per week	7	7	7	7	7	7	7
Service Type	Rural Intercity Service	Rural Intercity Service	Fixed- Route	Fixed- Route	Fixed- Route	Rural Intercity Service	Demand- Response
Cost per Hour	\$108	\$108	\$101	\$101	\$101	\$108	\$96
Approx. Annual Operating Cost	\$394,000	\$394,000	\$330,000	\$1,026,000	\$1,026,000	\$827,000	\$638,000

Modifications to Existing Routes

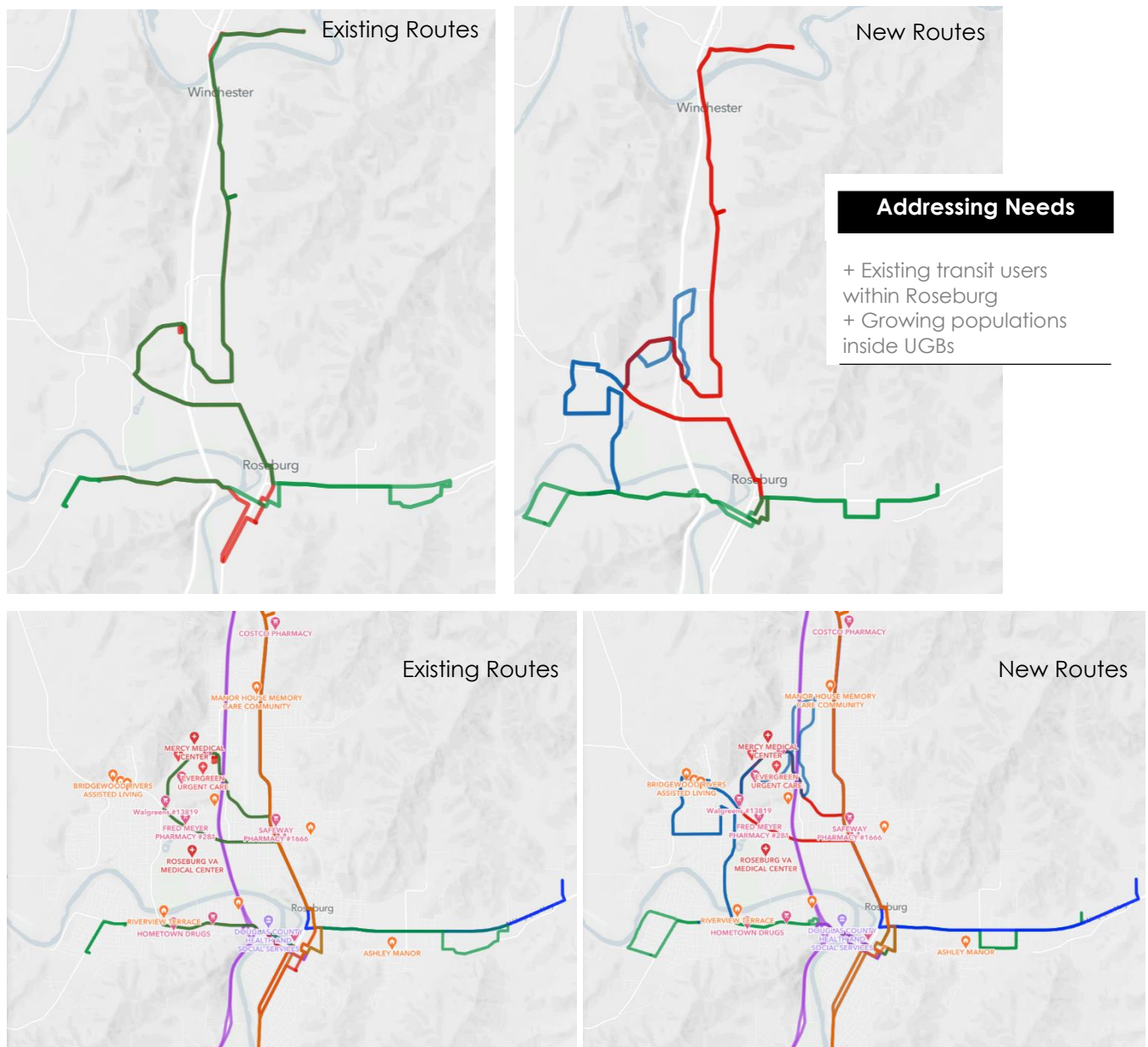
Potential route modifications include increasing service hours, stops, Roseburg circulation, Winston/Dillard service, and access to Riddle and Sutherlin.

Roseburg Routes

Several areas within Roseburg were identified as being underserved, in particular several assisted living centers in the northwest. Additionally, higher service frequency was identified as a need in Roseburg. UPTD is planning to modify the existing Redline and Greenline to simplify the routes into east-west and north-south options, which allows for easier implementation of higher frequency service. The Redline and Greenline would operate at 30 minute headways as opposed to existing 1 hour headways. In addition, a new Collector route would serve destinations in the northwest area of town. Figure 2 shows the existing and proposed routes.

This alternative addresses two identified transit needs: existing transit users within Roseburg and growing populations inside UGBs. This modified route would encourage travel in Roseburg and simplify transfers from regional routes.

Figure 2. Roseburg Route Modifications



Winston Greyline

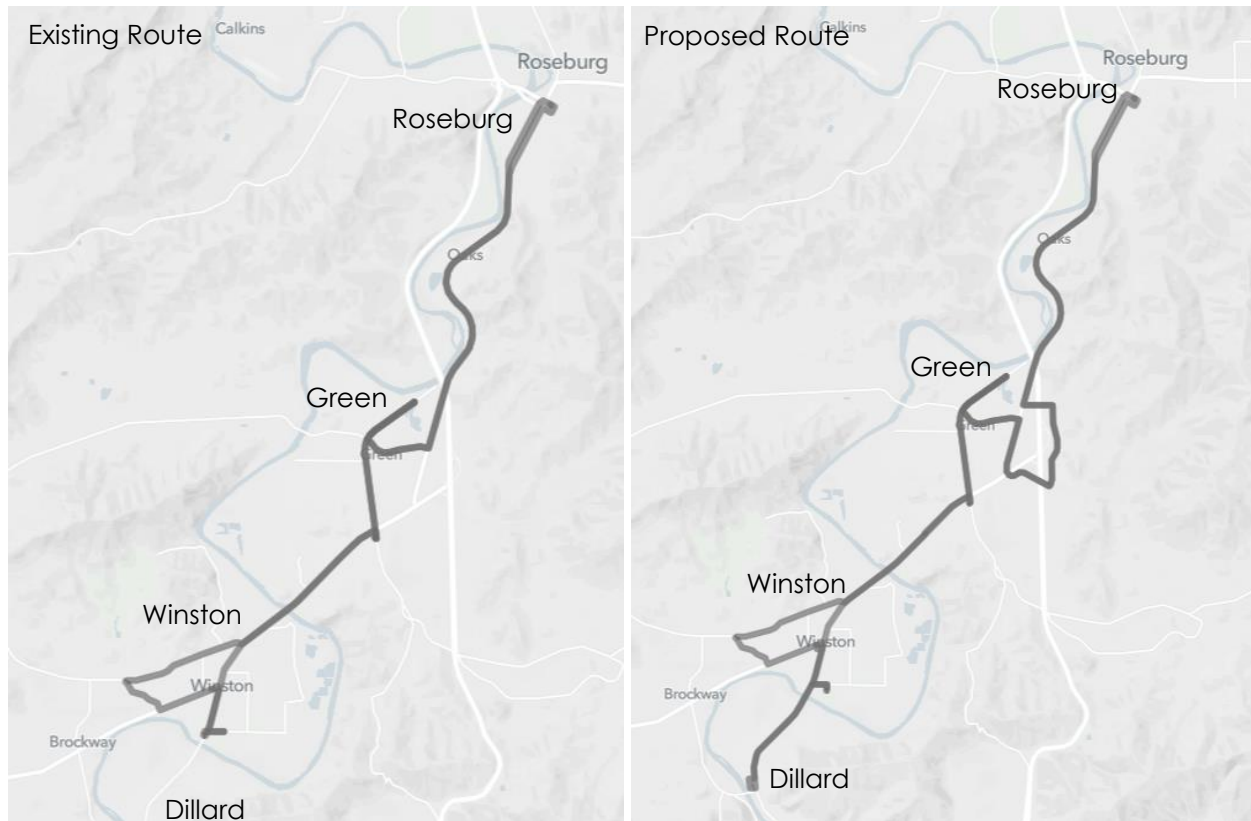
Dillard and several large employers such as Ingram Book and Roseburg Forest Product are currently unserved by transit. Additionally, survey respondents asked for more service coverage and higher service frequency. UPTD is planning to modify the existing Winston Greyline to provide additional service in Dillard and closer to these large employers. Figure 3 shows the existing and proposed routes.

Addressing Needs

This alternative addresses two identified transit needs: transit-dependent populations in rural areas and growing populations inside UGBs. This modified route would encourage transit use for job access and other travel needs.

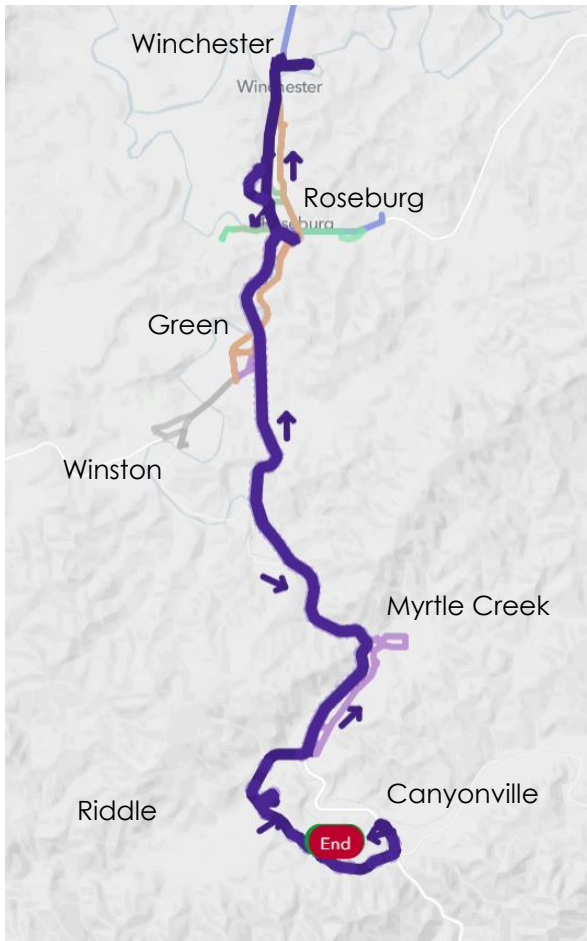
- + Growing populations inside UGBs
- + Transit-dependent populations in rural areas

Figure 3. Winston Greyline Route Modification



Route 99 / Riddle

Figure 4: Route 99 Increased Service and Rerouting Route



Increasing frequency by providing one-hour headways on Route 99 would encourage more local and regional ridership. A more direct trip between Riddle and Roseburg may also help capture more ridership. Figure 4 shows a more direct routing between Canyonville, Riddle, and Roseburg. This route would take approximately 2 hours round-trip, compared to 3 hours at present, and could be implemented in addition to the existing route, reducing headways in Riddle and Canyonville.

This alternative addresses three identified transit needs: providing additional or modified service in Riddle, growing populations inside UGBs, and expanded intercity transit services to address the needs of transit-dependent populations in rural Douglas County.

Addressing Needs

- + Additional or modified service in Riddle
- + Growing populations inside UGBs
- + Transit-dependent populations in rural areas

Sutherlin Blueline

The Sutherlin Blueline currently begins at UPTD's offices, serving Umpqua Community College on its way to provide local connections in Sutherlin. The route does not provide coverage to all of Sutherlin, nor does it provide stops at additional locations in Roseburg. Providing access to more of Sutherlin and direct access to key activity centers in Roseburg may help promote ridership. Figure 5 shows the extended services. This route would add approximately 20 minutes to service time, bringing the trip to 80 minutes total. The modified Sutherlin Blueline would improve transit coverage in the Sutherlin Area by providing more stops and would encourage ridership in the Sutherlin and to Roseburg. This connection could also be provided by having timed or interlined transfers at UCC. Figure 6 shows additional modifications that can be considered on the Sutherlin Blueline, providing extensions to Oakland and/or West Sutherlin.

This alternative addresses three identified transit needs: existing transit users within Roseburg, additional or modified service in Sutherlin, and growing populations inside UGBs. This modified route would encourage travel between Sutherlin and Roseburg for recreation, commuting, and essential trips by adding more coverage in the Sutherlin area. Changes in the route would improve transit access in eastern Sutherlin.

Addressing Needs

- + Existing transit users within Roseburg
- + Additional or modified service in Sutherlin
- + Growing populations inside UGBs

Figure 5. Sutherlin Blueline Modifications

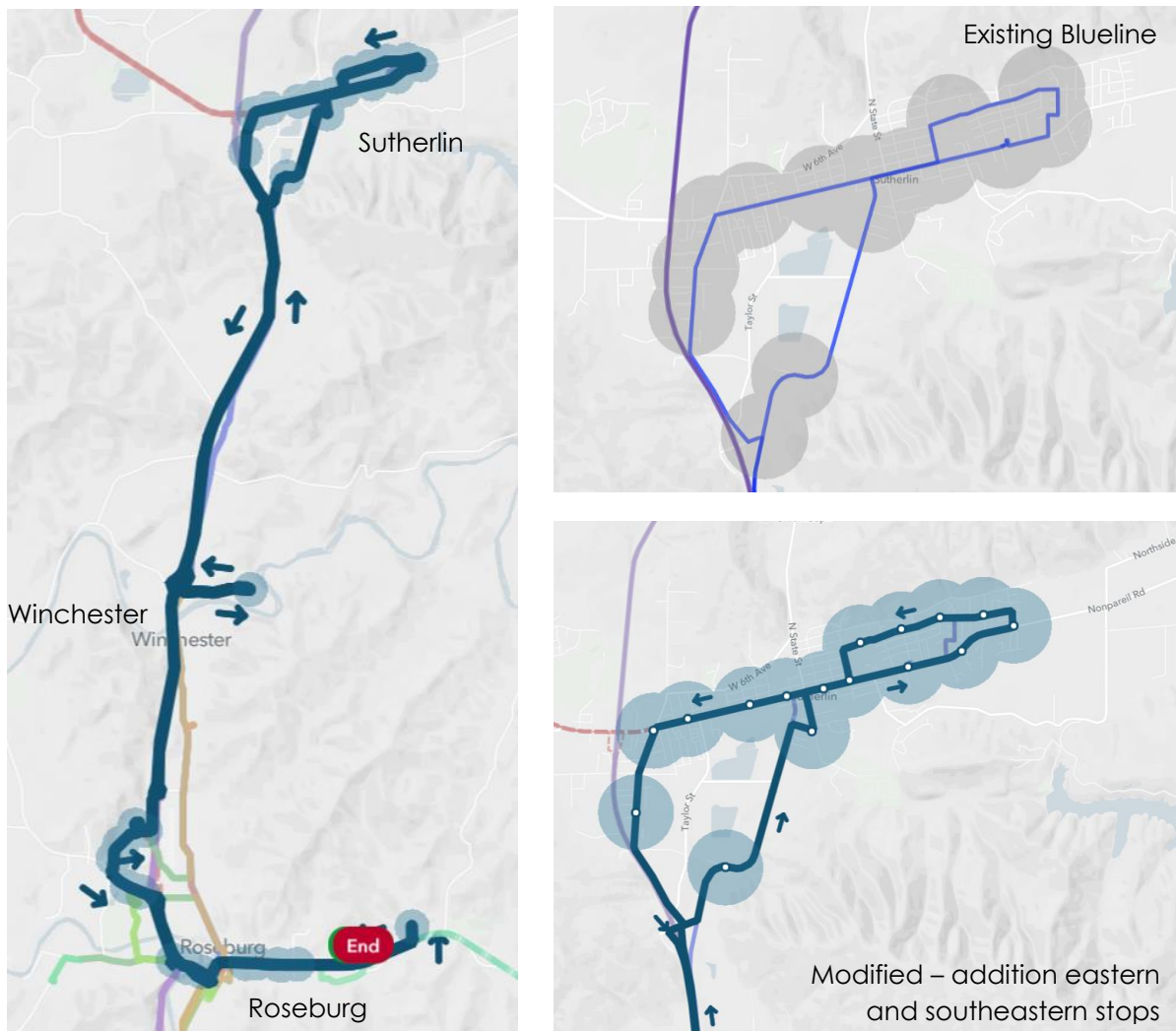
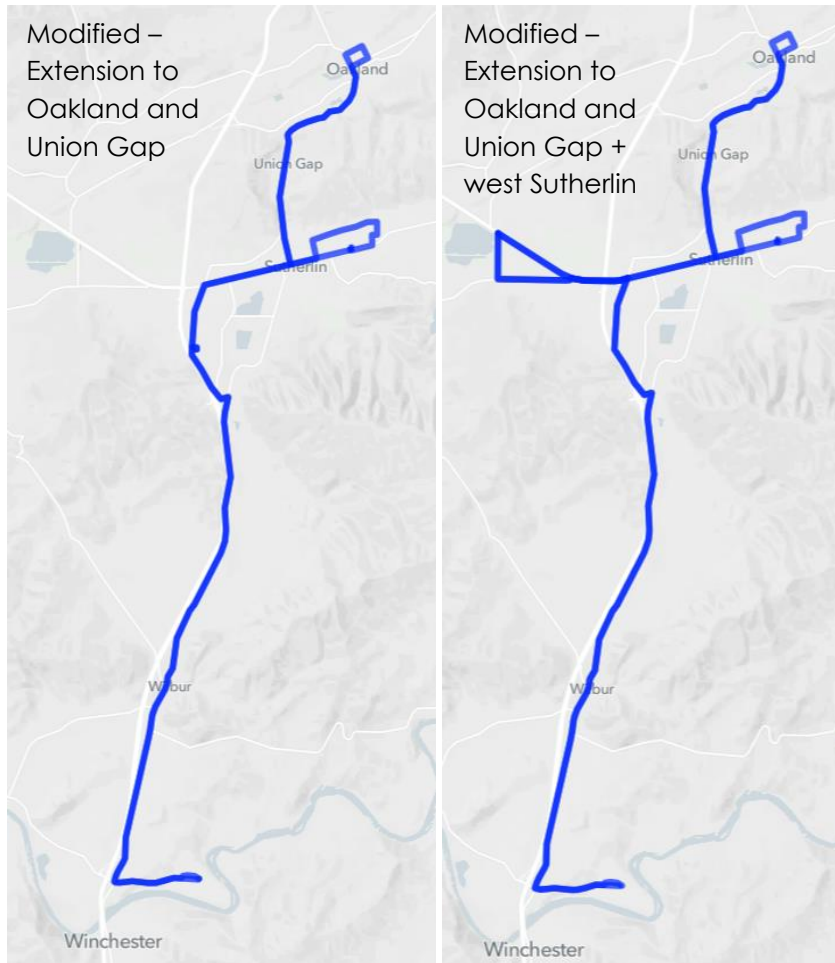


Figure 6. Sutherlin Blueline – Potential Extensions



New Regional Routes

This section describes potential new routes to improve intercity and regional coverage, including the route's potential benefits, connections to other services, and approximate runtimes.²

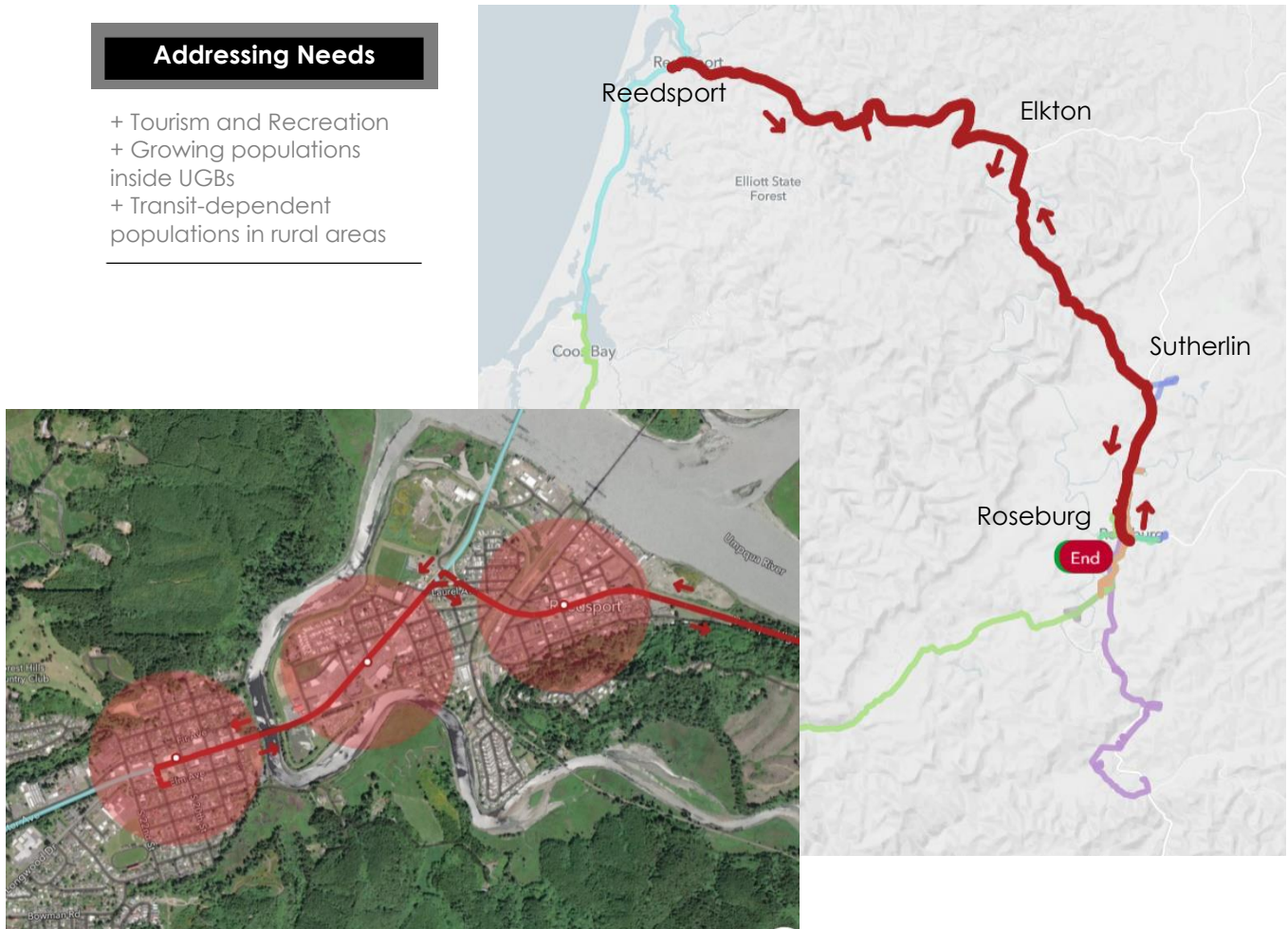
² Runtime estimates are based on Remix data. These runtimes are based on similar route schedules.

Roseburg – Reedsport

One option for providing east–west connectivity to the coast is to provide a fixed-route service from Roseburg to Reedsport. Figure 7 shows a potential route, which would provide service for tourism and recreation, and also connect coastal residents to key resources in Roseburg, such as Mercy Medical, the VA Hospital, and shopping opportunities and the nearby UCC campus. The route would take approximately 5 hours round-trip (2.5 hours one-way). A long-distance route such as this may need to run at least 2 times per day of operation or on consecutive days to allow for faster return trips. This route can be coordinated with CCAT for timed connections in Reedsport. UPTD is currently looking to implement this service, pending driver availability, as a lifeline route operating three days per week, with one morning and one evening trip.

This alternative addresses three identified transit needs: tourism and recreation, growing populations inside UGBs, and transit-dependent populations in rural areas. This route would provide access to tourism and recreation opportunities on the Oregon Coast for Douglas County visitors, residents, and employees. This route would also allow residents of rural communities along Highways 38 and 138 to access key resources in Roseburg. Intercity routes are eligible for Statewide Transportation Improvement Fund (STIF) intercommunity funding to fill gaps in the statewide transit network.

Figure 7. Roseburg to Reedsport

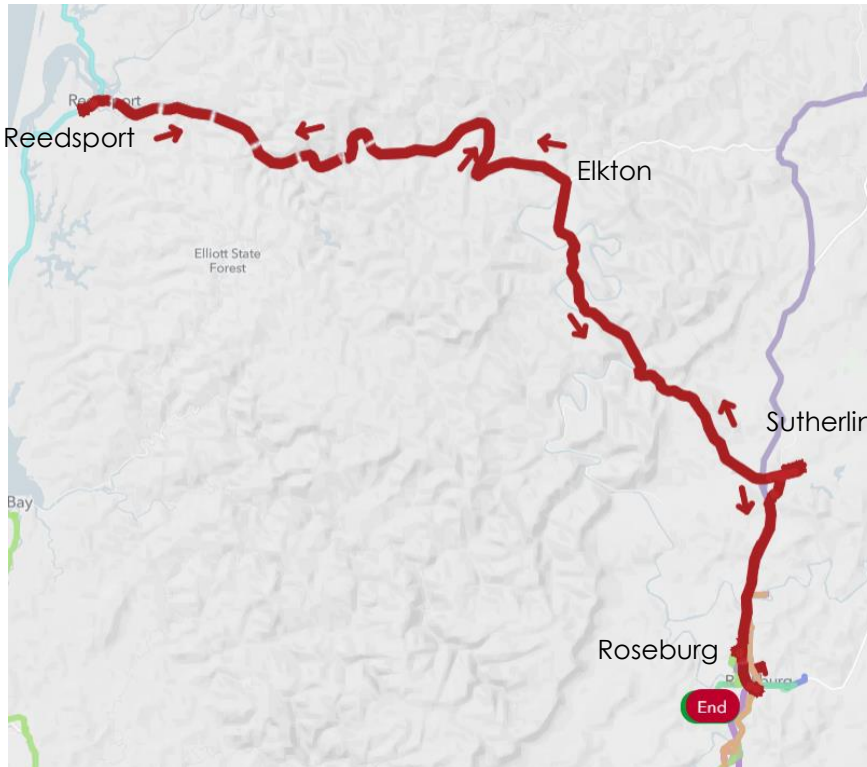


Roseburg – Sutherlin – Reedsport

A modification of the first option would be to add stops in nearby communities, such as Sutherlin and/or Umpqua Community College. Figure 8 shows the service with a diversion into Sutherlin. This option would add approximately 15 minutes run time compared to the direct Roseburg – Reedsport trip, or 5 hours 15 minutes round-trip (just over 2.5 hours one-way). This option would supplement the Sutherlin Blueline, and could be implemented to provide additional frequency between Sutherlin and Roseburg. A long-distance route such as this may need to run at least 2 times per day of operation or on consecutive days to allow for faster return trips.

This alternative addresses three identified transit needs: tourism and recreation, growing populations inside UGBs, and transit-dependent populations in rural areas. This route would provide access to tourism and recreation to the Oregon Coast for visitors, residents, and employees in Douglas County. This route would allow for rural areas and growing populations in UGBs to access key resources in Roseburg and Douglas County. Additionally, intercity routes are eligible for STIF intercommunity funding to fill gaps in the statewide transit network.

Figure 8. Roseburg – Sutherlin - Reedsport



Addressing Needs

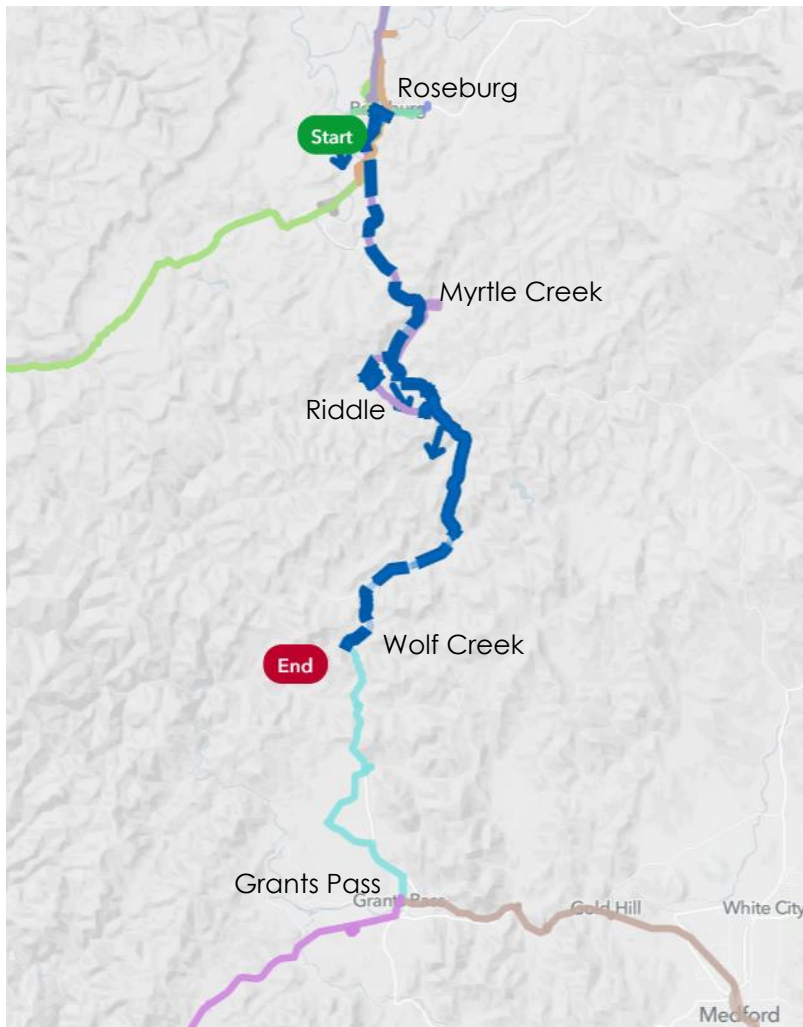
- + Tourism and Recreation
- + Additional service in Sutherlin
- + Growing populations inside UGBs
- + Transit-dependent populations in rural areas

Roseburg – Wolf Creek

One option for providing north–south connectivity is to provide intercity service from Roseburg to Grants Pass via transfer in Wolf Creek. Figure 9 shows a potential route from Roseburg to Wolf Creek. This route overlaps with the Route 99, and could be implemented as an extension of that service with new runs to increase transit frequencies to southern Douglas County. Figure 10 shows potential stops in Roseburg, Riddle, Canyonville, and Wolf Creek. The route would provide more statewide connections to and from Douglas County, with onward connections possible to Medford, Klamath Falls, Crescent City, and Brookings via coordination with Josephine County Transit (JCT). It could also serve rural communities along I-5 in southern Douglas County, such as Glendale, and northern Josephine County. The route would take approximately 3 hours and 45 minutes round-trip. UPTD is currently looking to implement this service, pending driver availability, as a lifeline route operating three days per week, with one morning and one evening trip.

This alternative addresses two identified transit needs: growing populations inside UGBs and transit-dependent populations in rural areas. Additionally, intercity routes are eligible for STIF intercommunity funding to fill gaps in the statewide transit network.

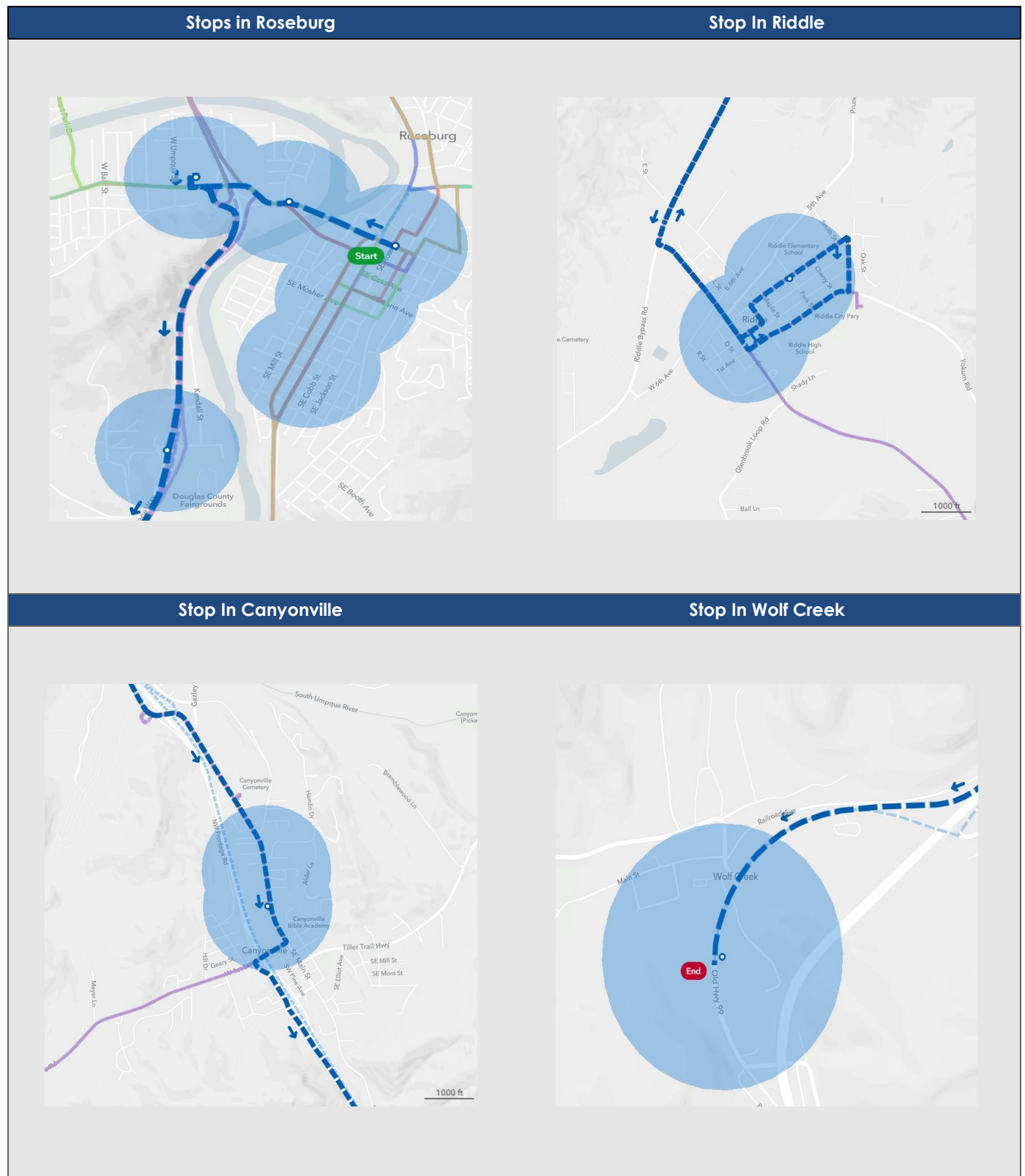
Figure 9. Roseburg to Wolf Creek



Addressing Needs

- + Growing populations inside UGBs
- + Transit-dependent populations in rural areas

Figure 10: Local Stops along New Route to Wolf Creek



South County Collector

Several communities in South County have growing local resources, such as pharmacies, food banks, and other community resources. These new and upcoming local destinations are driving increased travel within the Myrtle Creek, Riddle, Tri City, and Canyonville areas beyond the regional routes that currently operate. Local circulation routes would be beneficial in serving those within the communities and rural areas in-between. Figure 11 shows the area a deviated fixed-route could provide service to. UPTD is currently looking to implement this service, pending driver availability.

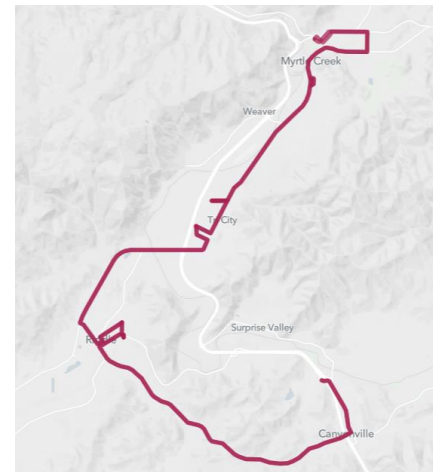
This alternative addresses two identified transit needs: growing populations inside UGBs and transit-dependent populations in rural areas.

Roseburg – Crater Lake

One option for seasonal weekend recreation/tourism-focused service is a route along Highway 138 to Diamond Lake and Crater Lake. Figure 9 shows a potential route, which would provide a shuttle or regular fixed-route from Roseburg to Crater Lake National Park. The route would take approximately 6 hours and 30 minutes round trip (3 hours and 15 minutes one-way).

This alternative addresses the tourism and recreation transit need. This alternative would provide access to tourism and recreation opportunities at Umpqua National Forest and Crater Lake National Park for Douglas County visitors and residents. This route could be eligible for Federal Lands Access Program (FLAP) funding, with sponsorship from United States Forest Service or the National Park Service. These funds are sometimes limited, and many counties prioritize funds to maintain roads.

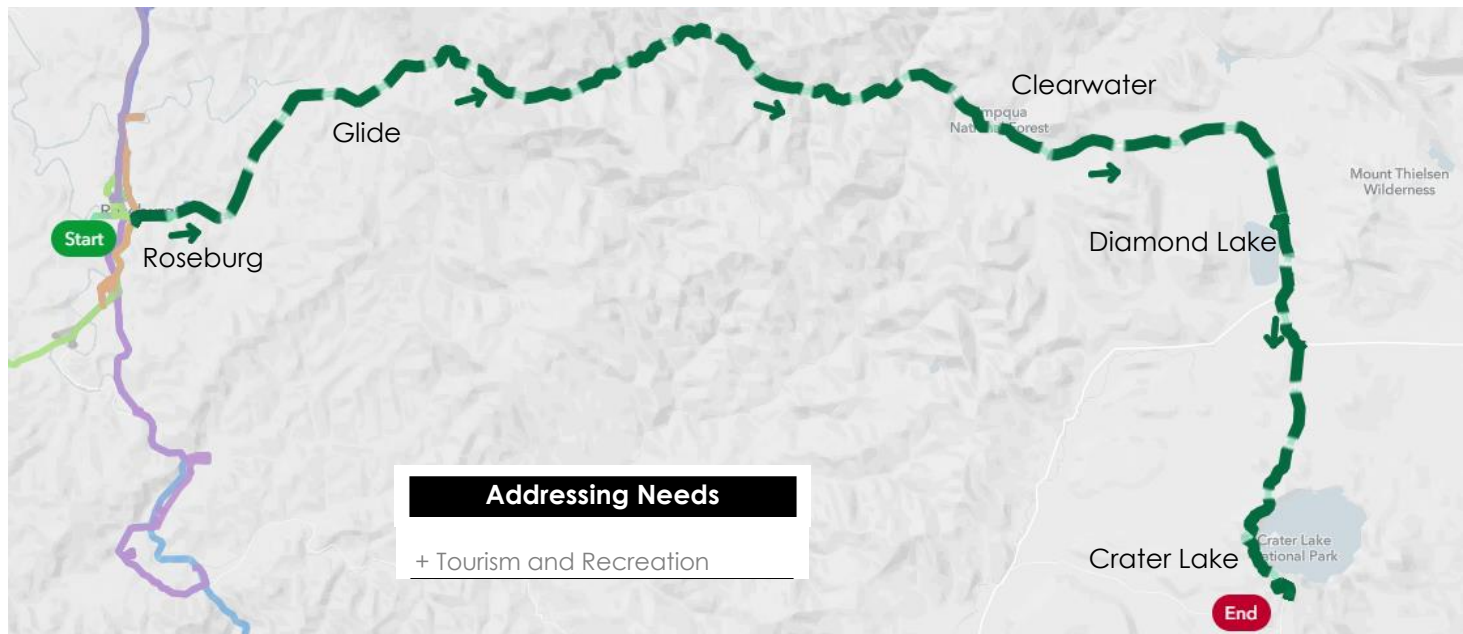
Figure 11. South County Collector



Addressing Needs

- + Growing populations inside UGBs
- + Transit-dependent populations in rural areas

Figure 12: Roseburg to Crater Lake National Park



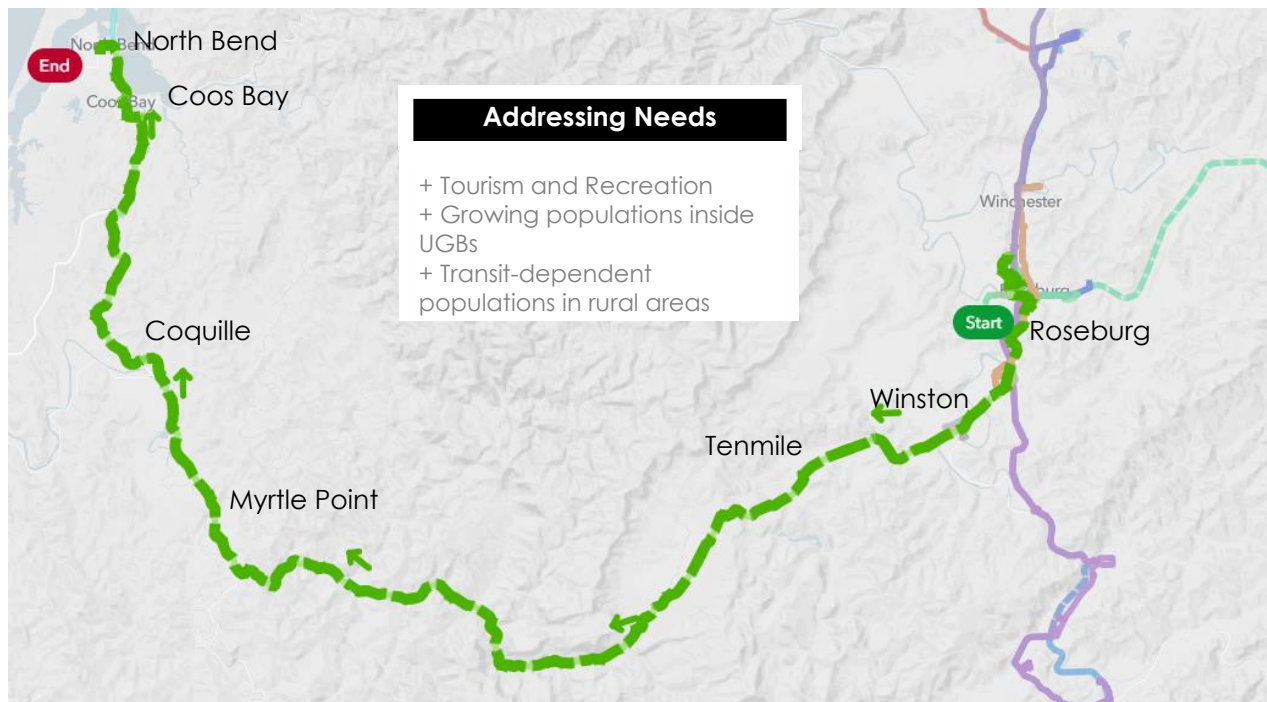
Addressing Needs
+ Tourism and Recreation

Roseburg – Coos Bay

One option for providing east–west connectivity to the coast is to provide a fixed-route service from Roseburg to Coos Bay to supplement the Roseburg Express service provided by Coos County Area Transit (CCAT). Figure 13 shows a potential route, which would provide additional service for tourism and recreation, and also connect coastal residents to key resources in Roseburg, such as Mercy Medical, the VA Hospital, and shopping opportunities. The route would take approximately 3 hours round-trip (1.5 hours one-way).

This alternative addresses three identified transit needs: tourism and recreation, growing populations inside UGBs, and transit-dependent populations in rural areas. This route would provide access to tourism and recreation opportunities on the Oregon Coast for Douglas County visitors, residents, and employees. This route would also allow residents of rural communities along Highway 101 to access key resources in Roseburg. This route could operate the same days as the CCAT service to provide round-trip opportunities on both directions on Tuesdays and Wednesdays or operate on other days to increase the number of service days within the corridor and expand connection opportunities to Curry County, pending information on CCAT’s ridership and demand for this service. This route can be coordinated with CCAT for timed connections in Coos Bay and North Bend. Additionally, the route can provide an indirect way to get to and from Reedsport in addition to the proposed Roseburg to Reedsport route. Intercity routes are eligible for Statewide Transportation Improvement Fund (STIF) intercommunity funding to fill gaps in the statewide transit network.

Figure 13. Roseburg to Coos Bay

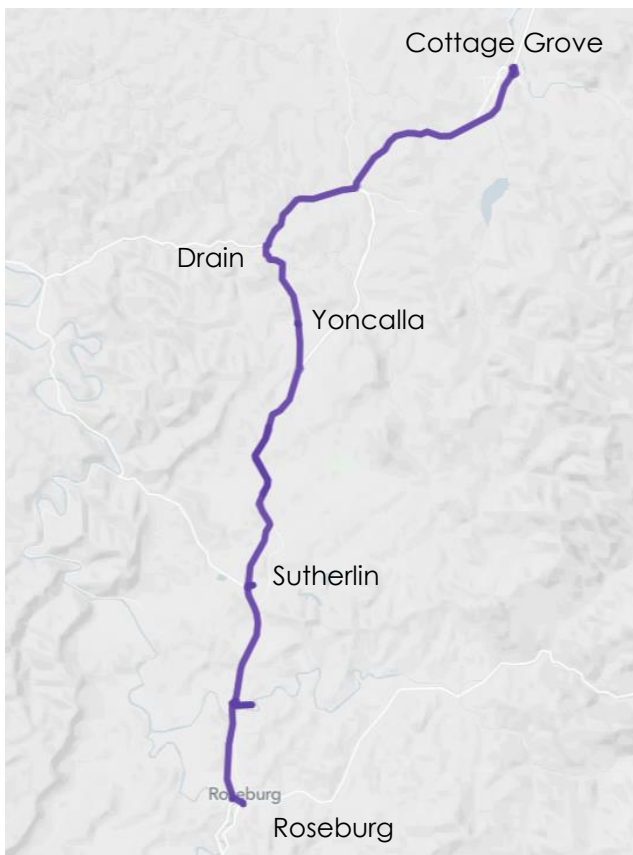


Roseburg – Cottage Grove

One option for providing north-south connectivity to neighboring communities is to provide a fixed-route service from Roseburg to Cottage Grove to supplement the Lane to Douglas Connector service provided by South Lane Wheels.

Figure 15 shows a potential route, which would connect residents to key resources in Roseburg, such as Mercy Medical, the VA Hospital, and shopping opportunities, and provide further connections for Douglas County residents to Eugene and beyond. The route would take approximately 3 hours round-trip (1.5 hours one-way). UPTD can coordinate with South Lane Wheels to assess demand for this service, compared to the existing South Lane Wheels connection. UPTD is currently looking to implement this service, pending driver availability, as a lifeline route operating three days per week, with one morning and one evening trip.

Figure 14. Roseburg to Cottage Grove



This alternative addresses three identified transit needs: service within Roseburg, growing populations inside UGBs, and transit-dependent populations in rural areas. This route could operate supplemental days as the South Lane Wheels service to increase the number of service days within the corridor and expand connection opportunities to Lane County. Intercity routes are eligible for Statewide Transportation Improvement Fund (STIF) intercommunity funding to fill gaps in the statewide transit network.

Addressing Needs

- + Transit users within Roseburg
- + Growing populations inside UGBs
- + Transit-dependent populations in rural areas

CONCLUSION AND NEXT STEPS

This memorandum was reviewed with the Project Management Team (PMT) and with the Technical Advisory Committee (TAC). The revised memorandum will be used to inform the Transit Master Plan by establishing potential future service opportunities.