

TECHNICAL MEMORANDUM #5: SERVICE OPTIONS EVALUATION

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Project# 23021.055

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Draft TM#5 – Service Options Evaluation

RE: Link Lane Transit Development Plan

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Introduction

This memorandum identifies a range of future service options to address needs identified in *TM #3: Market Analysis* using traditional transit services as well as innovative services as identified in *TM #4: Peer Provider Analysis and Transit Innovations*. Each service option is evaluated based on the criteria established in *TM #2: Vision, Goals, Objectives, and Performance Measures*. These options and their evaluation will be presented to the Project Management Team (PMT), Project Advisory Committee (PAC), and the public via Outreach Effort #2, revised, and organized into potential project packages in *TM #6: Alternatives for Transit Service*.

Summary of Market Analysis Findings

Key gaps and needs identified from *TM #3: Market Analysis* are summarized below.

Needs related to **connectivity and frequency of rural routes** include:

- Several services, such as the Florence – Yachats Connector, Rhody Express, Lane Transit District (LTD) Routes 92 and 96, and Diamond Express, as well as connecting services operated by Lincoln County Transportation Service District (LCTSD) and Coos County Area Transit (CCAT), do not operate on Sundays. Expansion of these services to Sundays would provide increased options for people riding these routes. More weekend bus service will provide families with the ability to recreate and experience nature outside of Eugene-Springfield.
- Improved evening services would facilitate access to evening activities, such as events at local schools.
- There is good geographical service coverage with transit service to Eugene and surrounding towns, as well as around Florence. However, there are a limited number of trips per day. Increasing frequency would provide more access for riders and better opportunities for connections to other services.
- People in most towns in Lane County outside of the Eugene-Springfield metro area can reach the metro area via transit without a transfer. However, as travelling between communities usually requires a transfer in Eugene, connections between services should be well timed to facilitate those transfers.
- Connections between the Eugene – Florence Connector and other transit services are well-timed for CCAT's Florence Express and the Florence – Yachats Connector on each trip. There are connections within an hour for Cascades POINT, the Rhody Express, and LTD Route 95 for some of the runs. However, other connections to regional routes require more than an hour's wait. Opportunities for improved connections via lower wait times with other regional routes should be explored.

Needs related to **underserved areas and populations** include:

- While Oakridge and Florence already have some coverage, additional routes or service within these communities and others such as Mapleton are needed, as well as on-demand service in rural areas.
- The largest growth in population outside Eugene/Springfield is anticipated in Creswell (+7,400 annually), Florence (+6,700), Junction City (+4,250), and Veneta (+4,200). Coburg, Westfir, Lowell, and Florence are also forecast to experience substantial population growth relative to their current population. Additional demand for transit, especially in Junction City and Florence, could warrant increased service.
- There is a need to provide improved door-to-door or door-to-stop options for those riders living far from a transit stop.
 - About 75% of the general population lives within a ½ mile of a fixed-route bus stop.
 - About half of the general population and less than 50% of the county's youth, older adults, and people with a disability live within ¼ mile of fixed-route bus stops.
- Individuals living in more rural areas may find it difficult to access the existing transit lines. More flexible transit service, such as on-demand service, can help provided a lifeline for riders far from existing transit stops.
- The Rhody Express offers Americans with Disabilities Act (ADA) Paratransit for eligible riders in Florence, as well as the Rhody Express fixed-route service for the general public. However, there is no dial-a-ride service for the general public provided in Florence or Mapleton.
- Migrant farm workers are in high need of transit service, as they are typically living and working in rural areas without connections. Communities like Monroe, Harrisburg, and Springfield have noteworthy migrant

populations. There are opportunities to look at first/last mile and micromobility options for these communities to access field work, which often begins at sunrise. Further, accessing virtual meetings can be difficult and live event participants noted that hard copy surveys or telephone interviews are best to reach these communities.

Needs related to **improved technology, fare payment, and rider comfort** include:

- There are currently limited options for fare reciprocity and combined passes between Link Lane and other services. In addition, there is a desire for the Diamond Express to be included in the LTD day pass.
- Link Lane currently accepts cash onsite and credit card (in advance via Amtrak) for payment. There is currently no E-fare option that could improve ease of use of the service.
- There is a desire to form additional partnerships with local organizations, such as colleges and recreation groups, to expand use of Link Lane services to a wider ridership.
- There is a need to improve the rider experience and make better connections at transit centers.
- Safety and comfort can be improved at bus stops by using transparent materials on shelters, which provides protection while maintaining sight lines for arriving buses. Bus stops need to be covered and illuminated. Signage at the stops could also be improved.
- Pet policies flexibility or options were desired so people can travel with their pets and obtain veterinary medical care.
- Bicycle capacity on transit needs expanding, in addition to secure bike storage at stops.

Service Options and Existing Service Summary

There are a number of service models that public transportation agencies can use to meet community needs. The following section describes options for public transportation service models that Link Lane could implement and their applications for different needs. In addition, ridership and cost data is provided for different service models based on existing Link Lane and LTD performance, or providers similar to Link Lane. In the next section, specific options are detailed for the needs outlined above.

Public transportation service is generally designed with several factors in mind. These include:

- the characteristics and travel needs of potential riders (e.g., key origins and destinations within the service area),
- the trade-offs the community is willing to make in providing service (e.g., balancing geographic coverage and frequency),
- the surrounding land use context, walking and biking accessibility to stops, and intensity of development (e.g., population and employment densities), and
- the readiness of operators, agencies and their partners to make the commitments necessary to start up and maintain services under a particular model, including funding availability, staffing/driver availability, acquisition of spare fleet vehicles, and more.

The service model may focus on one or several types of services, including:

- **Local and regional fixed-route services:** These services tend to be the most visible and are increasingly cost-efficient as ridership increases. Local service provides connections within communities, generally with relatively closely spaced stops. Local service is suitable in areas with higher population and/or employment densities. Regional fixed-route services connect between or across population centers and major land use centers. The Americans with Disabilities Act (ADA) requires complementary paratransit service, which

entails extra costs, for local fixed-route services or portions of the regional routes where stops are frequent. The Rhody Express and LTD's Eugene/Springfield services are local fixed-route services, and the LTD Route 90 series are regional fixed-route services.

- **Rural intercity or commuter service:** This longer-distance fixed-route service typically connects cities, serving relatively few major stops at key activity or employment centers and connecting to local service with each city. Intercity frequency is based on market size and can be scaled to meet demand; some may operate every day, while others are “Lifeline” routes that operate once a week. They are not required to provide ADA paratransit service, which lowers the overall cost of providing service. Link Lane's services are rural intercity routes.
- **Deviated fixed-route services:** These services combine elements of fixed-route and on-demand service – these routes serve specific stops at specific times but are allowed to deviate from the route to pick up and drop off passengers. Deviated services can be used to provide local access as part of an intercity route. Some small-city systems with relatively low ridership use flexible routes to eliminate the need for ADA paratransit service (as the ability to deviate serves some needs of people with limited mobility), with the trade-off that additional time must be provided in the schedule to accommodate these deviations. This service does not currently exist in Lane County, though several regional fixed-routes offer “flag” stop opportunities along the route.
- **On-demand services:** These services do not follow fixed routes or serve fixed stops and therefore can provide curb-to-curb service between any origin and destination. Passengers request rides (often through a smartphone app or over the phone), and the provider optimizes vehicle routing to serve passengers most efficiently. Transit accessibility is maximized, but per-trip costs can be significantly higher than other service types, as there are typically only one or two people traveling between any given origin and destination. Non-ADA passengers may not be able to travel at their desired time in order to better match trips. LTD's paratransit RideSource service is an on-demand option, as is the LTD Connector (see below).
- **Microtransit:** This middle ground between taxis and public transit is generally heavily reliant on smartphones for drivers and passengers. Microtransit services vary, and may include on-demand service within a defined area, deviated fixed-routes routes with dynamic scheduling for deviations, or service that feeds into existing fixed-route transit at scheduled connections. The LTD Connector in Cottage Grove is this type of service, providing smartphone-based trip requests and operated by South Lane Wheels.
- **Transportation network companies (TNCs) (Uber, Lyft, etc.):** TNCs provide an on-demand curb-to-curb service between any origin and destination within a TNC provider's service area. Passengers request rides through a smartphone app and are paired with a nearby driver who is available or is close to completing a previous request. TNCs provide carpooling services (branded as UberX Share for Uber and Shared rides for Lyft) which give passengers the option for a reduced fare if their trip is linked with another passenger's trip whose origin and/or destination is along the way. The Eugene/Springfield area is currently served by TNCs, though shared ride availability has not returned to Eugene/Springfield following its removal during the COVID-19 pandemic.
- **Shuttles:** This service is designed to serve regular trips to key local or regional activity centers such as commercial districts, grocery stores, or medical facilities. These routes may be the only regular or fixed-route service available within the area or times that they operate. Service models for shuttles are typically deviated fixed-route or on-demand. This service does not currently exist publicly in Lane County, though the private company Groome Transportation offers a shuttle from Eugene to the Portland Airport.

In addition to the capital and operating costs, many of these services require coordination with other transit providers, counties, cities, ODOT, or other organizations for access to stops, including existing transit centers, new stops, or improvements to existing stops, and coordination such as fare reciprocity or schedule adjustments.

Table 1 shows estimates for the typical coverage area, route flexibility, vehicle size/capital cost, operating cost per hour, and rides per hour for the service types listed above. Table 2 shows the current routes operated in rural Lane County. It should be noted that the cumulative transit reliant populations reflect a sum of the populations who are a racial/ethnic minority, living with a disability, living below 200% poverty, age 65 and older, under age 18, and households who speak English less than “very well”. As some of the population meets multiple criteria, this sum often exceeds the population served and is meant as a relative comparison of the population’s demographics.

Table 1. Service Type Specifications

Service Type (Example or Similar Service)	Typical Coverage Area		Flexibility			Vehicle Size		FY22 Estimated Operating Cost	FY21 Rides per Hour
	Regional	Local	Fixed-Route	Deviated Fixed-Route	On-Demand	Smaller	Larger		
Small City Local Fixed-Route (Rhody Express)	X	X	X				X	\$100/hour	2-4
Regional Fixed-Route (LTD Route 90 series ¹)	X		X	X		X	X	\$200/hour	6-9
Rural Intercity (Link Lane)	X		X					\$100/hour	1-2
Deviated Local Fixed-Route		X		X			X		
On-Demand (Rhody Express Paratransit)		X			X	X		\$100/hour	1-3
Microtransit (Cottage Grove Connector)		X		X	X	X		\$100/hour	1-3
TNCs	X	X			X	X		Varies	Varies
Shuttles (LTD Vanpools) ²		X	X	X	X	X		\$50/hour	1-3
Vanpools (LTD Vanpools) ²	X		X	X	X	X		\$50/hour	1-3

¹ LTD Route 90 Series is not deviated. ² 2021 National Transit Database data. All other data provided by Link Lane or LTD.

Disclaimer on Operating Costs per Hour

Operating costs per hour reflect fully-loaded costs (including the bus operation itself, administrative overhead, and maintenance, but not capital purchases) and be used for **planning-level estimates**. Costs would need to be refined during route implementation to understand true system costs. For example, adding frequency midday may not necessitate additional administrative staff and thus be cheaper, while expanding service hours on weekends when no other services operate would trigger higher administrative cost increase.

There is **currently uncertainty concerning costs and funding** environment for transit, with high inflation, supply chain issues, driver shortages, and reduced ridership/fares impacting, and often limiting, the way providers operate transit services. Further, the most accurate estimates for service comes after all year-end reconciliation and reporting, and thus more historic years of data are more accurate to the true operating cost by service type, though they will not reflect more-recent increases in the costs of providing service.

LTD’s **costing methodology for the Route 90 series** assumes they incur about around the same proportion of LTD’s overall administrative, facility maintenance, and fleet overhead expenses as the proportion of service they reflect of the overall system (7%), many of which are likely fixed and do not increase with smaller increases to service levels. It would be misleading to conclude that LTD’s rural routes cost twice as much per revenue hour to operate than Rhody Express or Diamond Express. For example, they function as a part of the overall metro system, traveling through higher ridership segments and serving as a portion of the hub and spoke/pulse system. Beyond the metro, they function as trunkline connectors to the outlying areas where they run small coverage patterns, perhaps more directly comparable to the Rhody Express. And generally, as LTD develops capital assets in the core such as stations, implements marketing campaigns, hires talent in any department, etc., the rural routes share in that allocated FTA operating expense per this method of cost allocation. Costs reflect all of that, in addition to providing “rural service.”

Table 2. Existing Rural Lane County Fixed-Route Services

Route	Roundtrips per day (Weekday)	Roundtrips per day (Weekend)	Roundtrip Duration (Hours)	Roundtrip Length (mi)	Population Served within ¼ Mile	Employment Served within ¼ Mile	Cumulative Transit Dependent Population	Annual Service Hours	Annual Operating Cost
Link Lane									
Eugene - Florence	2	2	3.5	127	4,500	6,000	5,987	2,555	\$360,000
Florence - Yachats	4	4	2	50	1,000	600	1,090	2,480	\$248,000
Diamond Express									
Diamond Express	4	2	2.75	100	13,000	14,300	16,751	3,108	\$621,500
Rhody Express									
Fixed-Routes	8	0	1	14	6,300	2,700	9,174	2,040	\$204,000
Paratransit	-							160-200	\$160,000 - \$200,000
LTD Route 90 Series									
LTD Route 91	3	2	2.7	112	14,100	7,100	16,789	2,660	\$531,900
LTD Route 92	2.5	2.5	1.7	45	10,900	8,200	13,010	1,318	\$263,500
LTD Route 93	3	2.5	1.1	26	4,100	2,900	4,895	1,144	\$228,800
LTD Route 95	4	2.5	1.25	30	15,500	10,700	18,914	1,619	\$323,750
LTD Route 96	2	2	1	20	12,100	8,500	13,583	620	\$124,000
LTD Route 98	5	2.5	2	50	23,200	17,900	28,212	3,100	\$620,000

Need: Connectivity and Frequency of Rural Routes

The frequencies of the rural routes range from two to eight times per day, and some, but not all, of the routes operate on weekends. Increasing the frequency of these routes, as well as expanding service to weekends, would improve connectivity between the routes and reduce the time riders spend waiting for a trip. This section summarizes increases to frequency and service for all rural routes, including impacts to ridership, costs, and administrative needs. The following assumptions were made in calculating the changes to service hours, ridership, and operating costs:

- The same duration, length of trip, and route is assumed for additional trips as the current route.
- Population, employment, and transit reliant populations were obtained from Remix. As the same area is served with increased frequency and weekend service, there is no change from the existing numbers.
- 255 service days were assumed for the weekday trips, 55 service days were assumed for Saturday trips, and 55 service days were assumed for Sunday trips.
- Annual service hours are based on the weekday and weekend trips per day, duration of trip, and days of service per year.
- The planning-level cost was obtained from the most-recent data– 2021 and 2022 average cost per hour for Link Lane and 2022 cost per hour for LTD services (Diamond Express, Rhody Express, LTD Route 90 series).
- The rides per hour was obtained from recent (2021) ridership of similar services. The same rides per hour were assumed for the additional service.
- Service options shown rely on existed limited funding sources. Projected revenues are based on current fare and estimated ridership.
- For routes that do not currently have weekend service, the same number of trips were assumed for additional Saturday and Sunday trips as the current number of weekday trips.
- When increasing weekend frequency, for routes that do not currently have Saturday and Sunday service, it is assumed that the additional days of weekend service option is already implemented.

Service options were shown for both Link Lane routes and non-Link Lane routes (Rhody Express, Diamond Express, and LTD Route 90 series routes); however, Link Lane does not have control over service improvements for non-Link Lane routes. Further detail on the analysis for all routes is included in Appendix A. Increasing frequency by one trip per day would increase ridership by 1,400 to 2,800 annual rides and increase operating costs by \$140,000 for Link Lane routes. (at the end of this section) presents the alternative evaluation for all routes.

Increasing Frequency – Weekdays

Adding one or two more round trips per weekday for each service would improve connectivity in the earlier morning, midday, or later evening hours, facilitating shorter transfer times. In addition, for those routes that run two to three times per day, additional runs would greatly improve the ability for riders to make a round trip without having to wait hours for the next bus. Increasing frequency by one trip per day would increase ridership by 1,400 to 2,800 annual rides and increase operating costs by \$140,000 for Link Lane routes.

Increased Weekend Service – All Routes Operate on Saturdays

Several routes in rural Lane County already operate on Saturdays. However, the Rhody Express only operates on weekdays. Should this route operate similar service levels on Saturdays as it does on weekdays, an additional eight trips would be provided per Saturday and annual rides would increase by about 900 for the Rhody Express.

Increased Weekend Service – All Routes Operate on Sundays

Several routes in rural Lane County already operate on Sundays. However, the Florence-Yachats, Diamond Express, Rhody Express, LTD Route 91, and LTD Route 96 do not. Adding Sunday service to the Florence-Yachats route would increase ridership potential by 440 to 880 annual rides and increase operating costs by \$44,000. Other increases to Sunday service are included in Appendix A.

Increasing Frequency – Weekends

Adding one or two more round trips on Saturday and Sunday would improve connectivity, facilitating shorter transfer times. In addition, for those routes that run two to three times per day, additional runs would greatly improve the ability for riders to make a round trip without having to wait hours for the next bus. Weekend trips can better connect Lane County residents to communities throughout the county, as well as rural residents to shopping and leisure in the Eugene/Springfield metro area. Increasing weekend frequency by one trip per day would increase ridership by 1,000 to 2,100 annual rides and increase operating costs by \$105,000 for Link Lane routes, assuming Florence-Yachats Sunday service has been added similar to its existing hours, as described in the previous section. Other increases to weekend service are included in Appendix A.

Table 3 presents the evaluation for the service options above for all rural routes.

Table 3. Service Options Alternative Evaluation

Route	Alternative	Ridership Potential		Annual Service Hours (Administrative Need)	Annual Operating Cost	Change in Net Annual Operating Cost	Fare Revenues	
		Low	High				Low	High
Link Lane								
Eugene - Florence	Existing	2,555	5,110	2,555	\$255,500	-	\$12,775	\$25,550
Eugene - Florence	Add One Trip per Weekday	3,448	6,895	3,448	\$344,750	\$89,250	\$17,238	\$34,475
Eugene - Florence	Add Two Trips per Weekday	4,340	8,680	4,340	\$434,000	\$178,500	\$21,700	\$43,400
Eugene - Florence	Add One Trip on Saturday and Sunday	2,940	5,880	2,940	\$294,000	\$38,500	\$14,700	\$29,400
Eugene - Florence	Add Two Trips on Saturday and Sunday	3,325	6,650	3,325	\$332,500	\$77,000	\$16,625	\$33,250
Florence - Yachats	Existing	2,480	4,960	2,480	\$248,000	-	\$6,200	\$12,400
Florence - Yachats	Add Sunday Service	2,920	5,840	2,920	\$292,000	\$44,000	\$7,300	\$14,600
Florence - Yachats	Add One Trip per Weekday	2,990	5,980	2,990	\$299,000	\$51,000	\$7,475	\$14,950
Florence - Yachats	Add Two Trips per Weekday	3,500	7,000	3,500	\$350,000	\$102,000	\$8,750	\$17,500
Florence - Yachats	Add One Trip on Saturday and Sunday	3,140	6,280	3,140	\$314,000	\$66,000	\$7,850	\$15,700
Florence - Yachats	Add Two Trips on Saturday and Sunday	3,360	6,720	3,360	\$336,000	\$88,000	\$8,400	\$16,800
Diamond Express								
Diamond Express	Existing	18,645	27,968	3,108	\$621,500	-	\$46,613	\$69,919
Diamond Express	Add Sunday Service	20,460	30,690	3,410	\$682,000	\$60,500	\$51,150	\$76,725
Diamond Express	Add One Trip per Weekday	22,853	34,279	3,809	\$761,750	\$140,250	\$57,131	\$85,697
Diamond Express	Add Two Trips per Weekday	27,060	40,590	4,510	\$902,000	\$280,500	\$67,650	\$101,475
Diamond Express	Add One Trip on Saturday and Sunday	22,275	33,413	3,713	\$742,500	\$121,000	\$55,688	\$83,531
Diamond Express	Add Two Trips on Saturday and Sunday	24,090	36,135	4,015	\$803,000	\$181,500	\$60,225	\$90,338

Route	Alternative	Ridership Potential		Annual Service Hours (Administrative Need)	Annual Operating Cost	Change in Net Annual Operating Cost	Fare Revenues	
		Low	High				Low	High
Rhody Express								
Rhody Express	Existing	4,080	8,160	2,040	\$204,000	-	\$4,080	\$8,160
Rhody Express	Add Saturday Service	4,960	9,920	2,480	\$248,000	\$44,000	\$4,960	\$9,920
Rhody Express	Add Saturday and Sunday Service	5,840	11,680	2,920	\$292,000	\$88,000	\$5,840	\$11,680
Rhody Express	Add One Trip per Weekday	4,590	9,180	2,295	\$229,500	\$25,500	\$4,590	\$9,180
Rhody Express	Add Two Trips per Weekday	5,100	10,200	2,550	\$255,000	\$51,000	\$5,100	\$10,200
Rhody Express	Add One Trip on Saturday and Sunday	6,060	12,120	3,030	\$303,000	\$99,000	\$6,060	\$12,120
Rhody Express	Add Two Trips on Saturday and Sunday	6,280	12,560	3,140	\$314,000	\$110,000	\$6,280	\$12,560
LTD Route 90 Series								
LTD Route 91	Existing	15,957	23,936	2,660	\$531,900	-	\$27,925	\$41,887
LTD Route 91	Add One Trip per Weekday	20,088	30,132	3,348	\$669,600	\$137,700	\$35,154	\$52,731
LTD Route 91	Add Two Trips per Weekday	24,219	36,329	4,037	\$807,300	\$275,400	\$42,383	\$63,575
LTD Route 91	Add One Trip on Saturday and Sunday	17,739	26,609	2,957	\$591,300	\$59,400	\$31,043	\$46,565
LTD Route 91	Add Two Trips on Saturday and Sunday	19,521	29,282	3,254	\$650,700	\$118,800	\$34,162	\$51,243
LTD Route 92	Existing	7,905	11,858	1,318	\$263,500	-	\$13,834	\$20,751
LTD Route 92	Add Sunday Service	9,308	13,961	1,551	\$310,250	\$46,750	\$16,288	\$24,432
LTD Route 92	Add One Trip per Weekday	10,506	15,759	1,751	\$350,200	\$86,700	\$18,386	\$27,578
LTD Route 92	Add Two Trips per Weekday	13,107	19,661	2,185	\$436,900	\$173,400	\$22,937	\$34,406
LTD Route 92	Add One Trip on Saturday and Sunday	10,430	15,644	1,738	\$347,650	\$84,150	\$18,252	\$27,377
LTD Route 92	Add Two Trips on Saturday and Sunday	11,552	17,327	1,925	\$385,050	\$121,550	\$20,215	\$30,323

Route	Alternative	Ridership Potential		Annual Service Hours (Administrative Need)	Annual Operating Cost	Change in Net Annual Operating Cost	Fare Revenues	
		Low	High				Low	High
LTD Route 93	Existing	6,864	10,296	1,144	\$228,800	-	\$12,012	\$18,018
LTD Route 93	Add One Trip per Weekday	8,547	12,821	1,425	\$284,900	\$56,100	\$14,957	\$22,436
LTD Route 93	Add Two Trips per Weekday	10,230	15,345	1,705	\$341,000	\$112,200	\$17,903	\$26,854
LTD Route 93	Add One Trip on Saturday and Sunday	7,590	11,385	1,265	\$253,000	\$24,200	\$13,283	\$19,924
LTD Route 93	Add Two Trips on Saturday and Sunday	8,316	12,474	1,386	\$277,200	\$48,400	\$14,553	\$21,830
LTD Route 95	Existing	9,713	14,569	1,619	\$323,750	-	\$16,997	\$25,495
LTD Route 95	Add One Trip per Weekday	11,625	17,438	1,938	\$387,500	\$63,750	\$20,344	\$30,516
LTD Route 95	Add Two Trips per Weekday	13,538	20,306	2,256	\$451,250	\$127,500	\$23,691	\$35,536
LTD Route 95	Add One Trip on Saturday and Sunday	10,538	15,806	1,756	\$351,250	\$27,500	\$18,441	\$27,661
LTD Route 95	Add Two Trips on Saturday and Sunday	11,363	17,044	1,894	\$378,750	\$55,000	\$19,884	\$29,827
LTD Route 96	Existing	3,720	5,580	620	\$124,000	-	\$6,510	\$9,765
LTD Route 96	Add Sunday Service	4,380	6,570	730	\$146,000	\$22,000	\$7,665	\$11,498
LTD Route 96	Add One Trip per Weekday	5,250	7,875	875	\$175,000	\$51,000	\$9,188	\$13,781
LTD Route 96	Add Two Trips per Weekday	6,780	10,170	1,130	\$226,000	\$102,000	\$11,865	\$17,798
LTD Route 96	Add One Trip on Saturday and Sunday	5,040	7,560	840	\$168,000	\$44,000	\$8,820	\$13,230
LTD Route 96	Add Two Trips on Saturday and Sunday	5,700	8,550	950	\$190,000	\$66,000	\$9,975	\$14,963
LTD Route 98	Existing	18,600	27,900	3,100	\$620,000	-	\$32,550	\$48,825
LTD Route 98	Add One Trip per Weekday	21,660	32,490	3,610	\$722,000	\$102,000	\$37,905	\$56,858
LTD Route 98	Add Two Trips per Weekday	24,720	37,080	4,120	\$824,000	\$204,000	\$43,260	\$64,890
LTD Route 98	Add One Trip on Saturday and Sunday	19,920	29,880	3,320	\$664,000	\$44,000	\$34,860	\$52,290
LTD Route 98	Add Two Trips on Saturday and Sunday	21,240	31,860	3,540	\$708,000	\$88,000	\$37,170	\$55,755

Need: Unserved Areas and Populations

Link Lane operates routes along OR 126 connecting Eugene with Florence and along US 101 connecting Florence with Yachats. In addition, LTD routes connect Eugene/Springfield to smaller cities such as Junction City, Cottage Grove, and Veneta. However, there is no service along OR 36, which serves Mapleton, Swisshome, and Deadwood, and there is no service to Marcola and surrounding communities. In addition, there is a lack of local service within some of these smaller communities. There are opportunities for on-demand service, deviated fixed-route services, and other programs to fill these gaps and provide transit service for more Lane County residents.

In addition to the Lane County-specific needs described below, several other local plans have identified regionwide needs for transit connections. The Umpqua Public Transit District (UPTD) STIF Plan and Transit Master Plan proposed a lifeline service route along Highway 99 between Roseburg and Cottage Grove, which would connect to LTD Route 98. In addition, a need has been identified for expanded service along the I-5 corridor, specifically between Ashland/Portland and Eugene. Finally, the recent Highway 99 West Transit Feasibility Report identified a need for a service between McMinnville and Junction City, with a stop in Corvallis.

Provide On-Demand Service

On-demand service provides an opportunity to connect less populated, rural areas that do not have enough demand to run a fixed or deviated fixed-route service. Service could be offered a few times a week as a lifeline, or on a more regular basis to connect rural residents with fixed-route services and other key destinations. An analysis of potential service areas in the county was conducted and is outlined in the following sections. The following general assumptions were made in developing these alternatives:

- Assumes a fare of \$5 per ride.
- Assumes the same planning-level cost per hour as that of LTD's Paratransit in 2021 (\$100/hour).

Mapleton-Swisshome-Deadwood

There is currently no transit service along OR 36. Providing on-demand service to the Mapleton-Swisshome-Deadwood areas along OR-36 would expand transit access to those residents who are currently unserved by transit. The following assumptions were made in developing this scenario:

- Assume that this service operates the same days and hours as the nearby Rhody Express to start. Appendix A includes cost estimates for these service hours for 5, 6, and 7 days a week.
- This would add roughly 20 square miles along OR 126 and OR 36 near the existing Rhody Express paratransit service, with the furthest point being roughly 40 minutes from central Florence. See Figure 1 for a rough service area representation.
- Assumes that every trip out of Florence has one occupant and takes 30-40 minutes, and every return trip has one occupant and takes 30-40 minutes, there would be roughly 1-2 passengers per hour. Some downtime may be present in the OR 36 corridor due to low demand for transit services, however the vehicle could operate locally within Florence and supplement existing Rhody Express Paratransit availability.
- Assumes that no population or employees are currently served in the area.

Table 4 presents the alternative evaluation for expanding on-demand service to OR 36. As shown, the service would serve over 1,000 Lane County residents and has the potential to serve up to 4,000 rides per year. The service's estimated costs would roughly be around \$204,000, with fares covering a small portion of that cost.

Table 4. Alternative Evaluation – On-Demand Service to Mapleton-Swisshome-Deadwood

Description	On-Demand Service to Mapleton-Swisshome-Deadwood
Population Served	+1,100
Employment Served	+200
Service to Transit Reliant Populations	+ 1,568
Service Span and Frequency	Additional vehicle to serve OR 36 on weekdays, 10 AM – 6 PM
Annual Ridership Potential	+2,000 – 4,000 rides per year
Administrative Needs	+2,040 amount of new driving service hours per year Minimal overhead – program already in-place
Capital Needs	+1 new ADA-accessible van
Annual Operating Costs	\$204,000
Revenues and/or Funding Opportunities	\$10,200 - \$20,400 Relying on limited existing funding sources

Figure 1. On-Demand Service to Mapleton-Swisshome-Deadwood



Cottage Grove-Veatch-Walden

LTD Route 98 currently provides service from Eugene to Creswell to Cottage Grove. Within Cottage Grove, the service circulates to provide stops at major destinations, such as Walmart, various schools, and neighborhoods. In addition, the Cottage Grove Transit Development Plan recommends a shopper shuttle to serve the Cottage Grove area, including communities in North Douglas County.

Cottage Grove is already served by microtransit, but expanding on-demand service to the Veatch-Walden areas would expand transit access to residents of neighboring communities. Link Lane has applied for funding to operate a pilot on-demand service in this area beginning in 2023. The pilot will be built on the on-demand service currently provided by South Lane Wheels in the area, which served Dorena, Lorane, and Creswell. The following assumptions were made in developing this scenario:

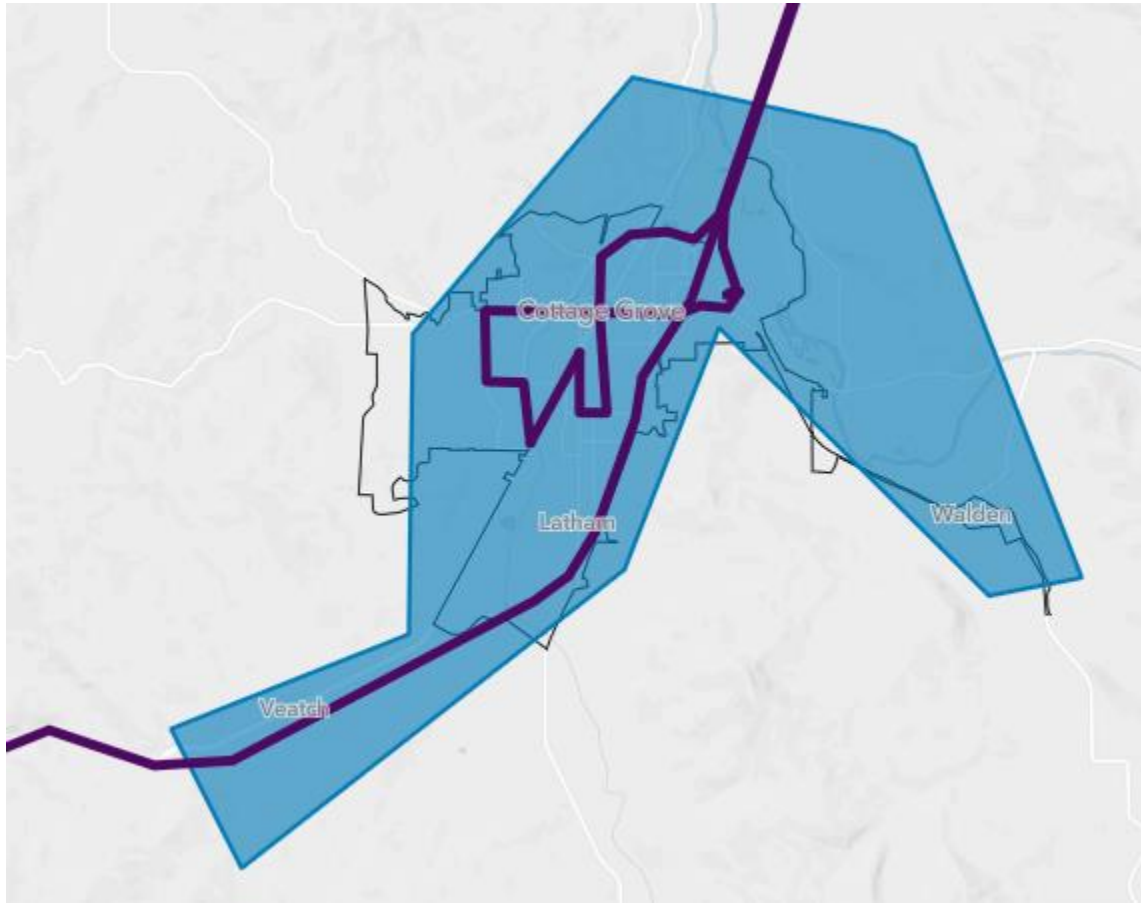
- Assume that this service operates the same days and hours as the Rhody Express. Appendix A includes cost estimates for these service hours for 5, 6, and 7 days a week.
- A service area of about 13 square miles was assumed, stretching from Veatch to north Cottage Grove and including Walden. The service area stretches about 7 miles along I-5. See Figure 2 for a rough service area representation.
- Assumes that every trip has one occupant and takes about 15 minutes, and every return trip has one occupant and takes 15 minutes, there would be roughly 2 passengers per hour. Some downtime may be present.
- Assumes that about half of population or employees are currently served in the area.
- Assumes operation on weekdays for 8 hours a day.

Table 5 presents the alternative evaluation for expanding on-demand service to the Cottage Grove area. As shown, the service would serve over 1,000 Lane County residents and has the potential to serve up to 4,000 rides per year. The service’s estimated costs would roughly be around \$204,000, with fares covering a small portion of that cost.

Table 5. Alternative Evaluation – On-Demand Service to Cottage Grove-Veatch-Walden

Description	Cottage Grove-Veatch-Walden
Population Served	+6,300
Employment Served	+1,600
Service to Transit Reliant Populations	+7,900
Service Span and Frequency	Additional vehicle to serve Cottage Grove on weekdays, 10 AM – 6 PM
Annual Ridership Potential	+4,000 – 6,100 rides per year
Administrative Needs	+2,040 amount of new driving service hours per year Minimal overhead – program already in-place
Capital Needs	+1 new ADA-accessible van
Annual Operating Costs	\$204,000
Revenues and/or Funding Opportunities	\$20,400 – \$30,600 Relying on limited existing funding sources

Figure 2. On-Demand Service to Cottage Grove-Veatch-Walden



Mohawk-Marcola

There is currently no transit service to Mohawk-Marcola or surrounding communities. Providing on-demand service to the Marcola area would serve residents who are not currently served by transit and connect those residents to LTD routes in the Eugene/Springfield area and onward to other routes that start at the Eugene Amtrak station. The following assumptions were made in developing this scenario:

- Assume that this service operates the same days and hours as the Rhody Express. Appendix A includes cost estimates for these service hours for 5, 6, and 7 days a week.
- A service area of about 10 square miles was assumed, stretching from the LTD service area to Marcola. In addition, another option would be to expand the service area to Mabel and Wendling, increasing the service area to about 17 square miles. See Figure 3 for a rough service area representation.
- Assumes that every trip has one occupant and takes about 15 minutes, and every return trip has one occupant and takes 15 minutes, there would be roughly 2 passengers per hour. Some downtime may be present.
- Assumes operation on weekdays for 8 hours a day.

Table 5 presents the alternative evaluation for expanding on-demand service to the Cottage Grove area. As shown, the service would serve over 1,000 Lane County residents and has the potential to serve up to 4,000 rides per year. The service’s estimated costs would roughly be around \$204,000, with fares covering just a small portion of that cost.

Table 6. Alternative Evaluation – On-Demand Service to Mohawk-Marcola

Description	Mohawk-Marcola	Mohawk-Marcola-Mabel
Population Served	+1,500	+1,700
Employment Served	+90	+100
Service to Transit Reliant Populations	+1,400	+1,500
Service Span and Frequency	Additional vehicle to serve Mohawk-Marcola on weekdays, 10 AM – 6 PM	Additional vehicle to serve Mohawk-Marcola, as well as Mabel and Wendling, on weekdays, 10 AM – 6 PM
Annual Ridership Potential	+4,000 – 6,100 rides per year	
Administrative Needs	+2,040 amount of new driving service hours per year Minimal overhead – program already in-place	
Capital Needs	+1 new ADA-accessible van	
Annual Operating Costs	\$204,000	
Revenues and/or Funding Opportunities	\$20,400 – \$30,600 Relying on limited existing funding sources	

Figure 3. On-Demand Service to Mohawk-Marcola (left) and Mohawk-Marcola-Mabel (right) – Zone would connect to Eugene Amtrak Station



Local Deviated Fixed-Route Services

There are a number of cities within Lane County that lack local circulators intended for residents of those cities to access local destinations. Deviated fixed-route services could be implemented in cities such as Junction City and Creswell (both in LTD’s service area) as well as Oakridge, Westfir, and/or Veneta to provide access to key destinations and expand transit service to more Lane County residents. This service could operate less often to start (for example, on Tuesdays and Thursdays) and expand as budget and demand allows. The following assumptions were made in developing this scenario:

- Assume that this service operates the same days and hours as the Rhody Express. Appendix A includes cost estimates for these service hours for 5, 6, and 7 days a week.
- Assumes approximately 30 minutes per trip and about 4 miles per trip.
- Assumes all of the population and employment of the city will be served.
- Assumes 2-4 rides per hour.
- Assumes same planning-level hourly cost as the Rhody Express Fixed-Route and Paratransit (\$100/hour).

Table 7 presents a generalized alternative evaluation for adding a deviated fixed-route service in a small city in Lane County. The evaluation presents ridership, administrative needs, and costs for operation twice a week, on all weekdays, and on weekends. For the twice a week service, annual operating costs would total about \$60,000 with the potential for over 3,000 annual rides. The service would require a new ADA accessible van and over 800 hours of new driving areas per year, as well as administrative resources to run the program.

Table 7. Deviated Fixed-Route Service

Frequency	Twice a Week	Weekdays	Weekends
Population Served	+3,100 (Oakridge) – 7,100 (Junction City)		
Employment Served	+500 (Oakridge) – 1,900 (Junction City)		
Service to Transit Reliant Populations	Varies		
Service Span and Frequency	Deviated fixed-route service on Tuesdays and Wednesdays, 8 AM – 4 PM	Deviated fixed-route service on weekdays, 8 AM – 4 PM	Deviated fixed-route service on weekends, 8 AM – 4 PM
Annual Ridership Potential	+1,700 – 3,300	+2,500 – 5,000 (from twice/week)	+1,700 – 3,300 (from weekday)
Administrative Needs	+800 amount of new driving service hours per year, not including deadheads or breaks	+1,200 amount of new driving service hours (from twice/week)	+900 amount of new driving service hours (from weekdays)
	Overhead to administer the route		
Capital Needs	+1 new ADA-accessible van or cutaway bus	Can use same vehicle from twice/week	Can use same vehicle from weekdays
Annual Operating Costs	\$83,200	+\$120,800 (from twice/week)	+\$88,000 (from weekdays)
Revenues and/or Funding Opportunities	\$1,700 - \$3,300	\$2,400 – \$4,800 (from twice/week)	\$1,800 – \$3,500 (from weekday)
	Relying on limited existing funding sources; Potential city contributions		

Car/Bike Share and Volunteer Programs

In addition to the service options presented above, Link Lane could explore the implementation of more targeted programs to better reach unserved populations. These programs all require administrative oversight and some level of capital investment and ongoing operational support, but would vary substantially depending on the extent of the program. As such, these programs are not evaluated in the same way service options were evaluated.

Example programs include:

- A vehicle sharing program, in which Link Lane or other transit providers could share vehicles with organizations like senior centers, would provide an opportunity for Link Lane to serve key destinations and groups with a smaller capital and operating cost. Similarly, group door-to-door services, which consist of planned trips for certain groups, could target key groups in outlying rural areas and provide reliable transportation for grocery, medical, work, or other trip purposes.
 - RideConnection provides this program and vehicles for different groups to use. They offer one program where both a driver and vehicle are provided to groups, and another where just the vehicle is provided. The total annual ridership is dependent on fleet utilization, with a cost per ride of roughly \$125 per ride across the 600 sq. mi. service area, averaged between the two programs.
- Bikeshare programs in Lane County could help address first/last mile connectivity and provide an option for short trips within more rural communities. In addition, it would provide bicycles for people who can't access repairs. At the Public Advisory Committee (PAC) Meeting #3, the City of Florence expressed interest in a bikeshare station at the library or other locations in town. In addition, Lane Community College (LCC) expressed interest in a bikeshare station at their campus. A bikeshare program would require administrative oversight and some level of capital investment and ongoing operational support, but costs would vary substantially depending on the extent of the program. It could operate as a library model, where bikes are made available for checkout. This model is relatively inexpensive but would require a grant to purchase inexpensive bikes and perform maintenance. Link Lane could consider partnership with community volunteers or bike shops/advocacy groups to help support maintenance.
- A volunteer driver program for door-to-door services could meet the needs of residents who live outside of transit service areas and/or need transport for specific purposes such as medical appointments, work, or pet care. Link Lane could administer the program and charge riders a small fee, while reimbursing drivers for their mileage. As this service would be volunteer-based, rides would not be guaranteed for those who request them.
 - Winnebago County Catch-a-Ride provides this program for low-income workers and subsidizes the cost per ride, with riders paying a \$2 booking fee and \$0.58 per loaded mile reimbursement to the volunteer driver. They launched the first year of program with \$130,000 in funding and were serving one person per day on average for the first several months. It is unclear how much of the funding was used to provide this amount of funding, and how ridership changed over the coming months.
 - Dial-A-Bus was recently awarded a contract to continue to be the purchased service provider for Benton Area Transit. Dial-A-Bus is 90% volunteer based, and provides low cost or free transportation to elderly and disabled residents of the county, as well as children and families who are navigating homelessness or other financial challenges.

Need: Improved Technology, Fare Payment, And Rider Comfort

A key theme of the outreach feedback was a desire for system ease of use improvements, such as information and technology, fare payment and sharing options, coordination and operations improvements, and facilities improvements. This section describes these improvements that support and improve the transit services.

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 Link Lane 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, online/mobile trip planning tools, and fare payment options. 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 via automated vehicle location (AVL) can help in analyzing the performance of existing and future service options. For example, AVL data could be assessed to adjust schedules based on delay points to improve transfer connections and maintain on-time performance.

Real-Time Vehicle Arrival Information and Automated Passenger Counters

Real-time vehicle arrival information would improve the rider experience and allow riders to plan their trips easier. *TCRP Synthesis 48: Real-Time Bus Arrival Information Systems* reports costs for AVL system implementation for smaller systems (10–25 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. Additionally, vendors often package AVL technologies with Automated Passenger Counters (APCs) that count boardings and alightings by stop, and can help to understand ridership patterns.

Trip Planning Technologies

Link Lane could consider expanding trip planning support via Google Maps, OneBusAway, Moovit, or Transit would allow the public to get travel information freely and easily. While some agencies develop proprietary trip planning tools, these can be expensive for the agency to develop/maintain and be redundant of existing tools. Further discussion on these recommendations is provided in *Technical Memorandum #4: Peer Provider Analysis and Transit Innovations*.

Fare Payment Options

Link Lane could consider expanding fare payment options to riders, including mobile ticketing and fare reciprocity with other providers. LTD's 2023 – 2025 STIF plan includes \$215,000 for purchase, implementation, and administration of fare validators that will help enable similar fare payment systems across Lane County transit providers. Link Lane could seek to “piggyback” on the Umo app, which LTD uses alongside Eugene and Medford, so riders have one platform to pay across systems with or without fare reciprocity. Fare reciprocity itself is discussed in the next section.

Fare Reciprocity and Pass Programs

Currently providers in Lane County have different fares for:

- Services provided by Link Lane: Eugene-Florence Connector and Florence – Yachats Connector

- Services provided by LTD: LTD local service in Eugene and Springfield
- Services provided by LTD via Pacific Crest Bus Lines: Diamond Express to Oakridge
- Service provided by LTD via River Cities Taxi: The Rhody Express local service in Florence
- Services provided by Lincoln County Transportation Service District: Connecting routes between Yachats and onward in Lincoln County
- Services provided by Coos County Area Transit: Connecting routes between Coos Bay and Florence

Fare reciprocity systems allow transit riders to use a single fare medium across different fare payment systems and pricing. This can be established through agreements to honor fare systems of other providers or creating a joint fare system for riders to purchase to use across providers' services. However, transit providers would need to agree upon how fares are split across providers should the price stay the same. Alternatively, transit providers could offer a higher-priced pass that works across more systems, though the higher price may deter riders and be detrimental to goals of providing low-cost transfer options. Link Lane is currently working on installing the same fareboxes on all Lane County transit provider buses with LTD.

Coordination and Operations

Improving coordination with other providers in the region and between services in Douglas, Lincoln, and Coos County can improve the efficiency and effectiveness of Link Lane'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. Link Lane currently "pulses" their Florence – Yachats Connector and Eugene – Florence Connector, providing short transfer times, though connections in Eugene are not necessarily pulsed or well-timed. Pulsing can be expensive depending on trip times and as distances and travel time increases.
- **Interlining** – Using the same bus to complete two different routes can provide a one-seat ride and not require additional service or vehicles. LTD interlines nearly all routes in their system, including rural routes, with some exceptions such as vehicle type limitations. For example, the EmX rarely interlines due to its vehicle type (articulated vehicle) and high frequency.
- **Shared Corridors** – In considering regional transit, Link Lane 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).

Pet Policies

Outlining clear animal policies to accommodate riders travelling with both pets and service animals would meet the need heard from the public for more access to veterinary care and other travel with pets. LTD has a policy that allows service animals to ride transit, as well as small pets, which must be kept in an approved carrier. Options for larger animals could include volunteer driver programs that connect volunteers with riders that need pet transport.

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 4) 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 conditions¹.



Figure 4. 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

¹Note that cost estimates in this memorandum are based on costs from the ODOT guide “[Transit in Small Cities](#)”, and inflation has increased prices since the publication of the guide.

for Link Lane, windscreens are recommended for Link Lane 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 Link Lane 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 Link Lane 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 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.² At intersections, locating a bus stop on the far side of the intersection 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.

² Source: <https://nacto.org/publication/transit-street-design-guide/stations-stops/stop-configurations/curbside-pull-stop/>
Oregon requires vehicles to fully exit the travel lane on state highways in order to serve transit stops.

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 Link Lane that serves low-density and rural communities. While Link Lane is not able to provide safe and convenient pedestrian access to transit stops on its own, Link Lane can work with local cities, Lane County, and 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. Bike storage can include simple u-rack or wave parking structures (see Figure 5) that can fit several bikes, or more comprehensive double-decker storage or bike lockers at major transit centers.



Figure 5. U-Rack (above) and wave (below)

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 connecting to Link Lane services is in Veneta. In addition, there are several park-and-ride lots in Eugene, Springfield, Junction City, Creswell, and Cottage Grove that do not connect directly to Link Lane services. It may not make sense for Link Lane to invest in a large park-and-ride program, as parking in many rural 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, and link lane should seek agreements to formalize them.

At the Public Advisory Committee (PAC) Meeting #3, a need was expressed for a park and ride lot in Old Town to encourage tourism in the area. In addition, CTCLUSI expressed interest in better connectivity to the Three Rivers Casino, in particular to facilitate transportation of their employees to and from work. CTCLUSI will be pursuing a Florence Park & Ride Plan to explore needs and feasibility as part of their FY23-24 STIF cycle.

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, the Eugene Amtrak Station is the designated transit center in the Link Lane service area, connecting Link Lane, LTD, Diamond Express, Pacific Crest Bus Lines, Cascade POINT, and Amtrak services. Major transit stops should have the following characteristics:

- 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.

As part of the Cottage Grove Area Transit Development Plan, a potential transit station was recommended in Cottage Grove at the terminus of the Row River Trail. This mobility hub would connect to the Walmart park-and-ride lot and LTD Route 98, as well as to commercial uses in the area and walking and biking trails nearby.

Service Options Evaluation Summary

Table 8 summarizes the service options evaluation at a high-level, with Appendix A providing full evaluation results for service-based options. Additionally, the following sections summarize the pros and cons of each service improvement, and identify which routes and/or areas of rural Lane County these strategies may be most applicable toward.

Table 8. Service Options Evaluation Summary

	Improvement	Needs Met	Administrative Need	Capital Needs	Annual Operating Cost	Revenues	Supporting Land Use (Density)
A	Increase Weekday Frequency	Connectivity and Frequency of Rural Routes	Low	Moderate	High	Fares/ Minimal	Higher
B	Add Weekend Service		Low	Moderate	Moderate	Fares/ Minimal	Higher
C	Add and Increase Weekend Frequency		Low	Moderate	Moderate	Fares/ Minimal	Higher
D	Provide On-Demand Service	Unserved Areas and Populations	Low	Moderate	Moderate	Fares/ Minimal	Lower
E	Provide Local Deviated Fixed-Route Services		Moderate	Moderate	Moderate	Fares/ City	Moderate
F	Car/Bike Share and Volunteer Programs		High	Low	Low	Fares/ Minimal	Lower
G	Real-Time Vehicle Arrival	Improved Technology, Fare Payment, and Rider Comfort	Moderate	High	Low	Potential for ridership growth via improved service access	Any
H	Trip Planning Technologies		Moderate	High	Low		Any
I	Fare Payment Options		Moderate	High	Low		Any
J	Fare Reciprocity and Pass Programs		Moderate	Low	Moderate		Any
K	Facility Improvements		Low	High	Low		Higher

A - Increase Weekday Frequency

- **Pros:** Improves access to services, reduces wait times, and negligible additional administrative need should a service already exist. If a vehicle is available in the fleet, does not require additional capital.
- **Cons:** Can be cost-prohibitive, with additional revenue limited to fares and a need to supplement revenue to capture operating costs.
- **Applicable Routes/Areas:** Areas of moderate or higher density, or routes providing regional connections, whose existing frequency has long headways or service span does not capture the times in which a rider may need to travel. Potential routes/areas include:
 - Eugene – Florence Connector, LTD Routes 92 and 96, which all operate less than 3 trips per weekday.
 - Rhody Express, with service beginning at 10 AM
 - LTD Route 90’s series, which depart Eugene near 5:30 PM and do not offer a later evening trip

B - Add Weekend Service

- **Pros:** Improves access to services, especially for non-typical work commutes, shopping, and recreational trips. This typically does not require an additional vehicle, as service is already provided on weekdays.
- **Cons:** Can have lower productivity than weekday ridership and have similar cost-prohibitive challenges as increasing weekday frequency. Additionally, if other services under an agency are not already operating, the cost per hour will be higher than planning-level costs due to a need to hire additional dispatchers, supervisors, etc.
- **Applicable Routes/Areas:** Routes operating on weekdays, and not weekends. Potential routes/areas include:
 - Rhody Express does not operate on weekends
 - Florence – Yachats Connector, Lane Transit District (LTD) Routes 92 and 96, and Diamond Express, as well as connecting services operated by Lincoln County Transportation Service District (LCTSD) and Coos County Area Transit (CCAT), do not operate on Sundays

C - Add and Increase Weekend Frequency

- **Pros:** Improves access to services, especially for non-typical work commutes, shopping, and recreational trips. This typically does not require an additional vehicle, as service is already provided on weekdays.
- **Cons:** Can have lower productivity than weekday ridership and have similar cost-prohibitive challenges as increasing weekday frequency. Additionally, if other services under an agency are not already operating, the cost per hour will be higher than planning-level costs due to a need to hire additional dispatchers, supervisors, etc.
- **Applicable Routes/Areas:** Routes operating on weekdays, and not weekends, and routes operating with less service on weekends than on weekdays. Potential routes/areas include:
 - Rhody Express does not operate on weekends
 - Florence – Yachats Connector, Lane Transit District (LTD) Routes 92 and 96, and Diamond Express, as well as connecting services operated by Lincoln County Transportation Service District (LCTSD) and Coos County Area Transit (CCAT), do not operate on Sundays
 - Other routes operate on weekends, but not at their weekday frequencies

D – Provide On-Demand Service

- **Pros:** Increases populations with access to transit services.
- **Cons:** New funding sources will need to be explored for on-demand services. Additionally, the proposed areas are low density and will have lower rides per hour.
- **Applicable Routes/Areas:** Rural areas. Potential routes/areas include:
 - OR 36 communities, which are close to the Eugene – Florence Connector but do not have first/last-mile access to services.
 - Cottage Grove communities, which have some service via LTD Route 98 and the existing microtransit service, but have areas that are currently unserved.
 - Marcola communities, which are close to LTD routes but do not have first/last-mile access to services.

E - Provide Local Deviated Fixed-Route Services

- **Pros:** Increases first/last-mile access for local trips and connections to regional services.
- **Cons:** Requires additional vehicles and operating costs. Requires a community be of large enough size (typically 10,000 in population or more) to warrant deviated fixed-route services.
- **Applicable Routes/Areas:**
 - Small cities with high population growth projections, such as Junction City, Creswell, Oakridge, Westfir, and/or Veneta

F – Car/Bike Share and Volunteer Programs

- **Pros:** Low cost to LCOG or other program administrators; provide services for unique trip purposes.
- **Cons:** Dependent on volunteers or other low-cost employees, resulting in potential reliability issues for riders.
- **Applicable Routes/Areas:** Areas where traditional fixed-route and even on-demand services are cost-prohibitive; trip purposes that would entice volunteers.
 - Rural areas countywide

G - Real-Time Vehicle Arrival

- **Pros:** Reduces rider wait times and uncertainty, especially on rural routes with relatively long headways. Relatively low-cost for ongoing operations/maintenance of the technology.
- **Cons:** Upfront capital investment.
- **Applicable Routes/Areas:** Countywide

H - Trip Planning Technologies

- **Pros:** Low-cost options via existing apps (ex. Google Transit) and improved rider understanding of routes and services.
- **Cons:** Best paired with travel trainers or others who can help those not familiar with the technology or services understand the system.
- **Applicable Routes/Areas:** Countywide

I - Fare Payment Options

- **Pros:** Increases ease of system use and may draw increased ridership.
- **Cons:** Upfront capital investment. Raises potential equity issues when a cash fare payment option is not available.
- **Applicable Routes/Areas:** Countywide

J - Fare Reciprocity and Pass Programs

- **Pros:** Increases ease of system use and confusion of multiple fare structures. May draw additional ridership.
- **Cons:** Potential fare revenue loss depending on fare split.

- **Applicable Routes/Areas:** Countywide

K - Facility Improvements

- **Pros:** Improves safety and comfort getting to and from bus services.
- **Cons:** Capital costs for improvements and associated ongoing maintenance.
- **Applicable Routes/Areas:** Countywide

Funding Sources

Expansion and maintenance of a sustainable and efficient transportation service network will require bolstering of existing funding sources in conjunction with identifying and leveraging new sources. Strengthened regional partnerships between local governments, LCOG, LTD, and other partners would benefit the development and potential implementation of new revenue sources, given the significant organizational, legal, and political effort required to establish new funding sources. Three categories of funding mechanisms relevant to the scale and objectives of the transportation services currently or potentially provided in Lane County include:

- **Grant Funding** mechanisms include grant programs sponsored by federal and state programs, and endowed regional and national foundations. Revenue from these sources target all identified gaps and opportunities due to the variation in grant programs. Oftentimes access to grant revenue requires local cost-sharing, which allows leverage of revenue directly generated. Grants provide the majority of funding for Link Lane's existing services.
- **Direct Revenue Generation** mechanisms derive revenue directly from users of the transportation services. Revenues from these sources could be used for a variety of operational expenses associated with expansion (such as increasing frequency or extending weekend service). These tools are easy to justify and implement at the point of use. Another source of direct revenue relates to advertising and branding. Selling space or opportunities to promote businesses—most commonly on buses and station areas—is a common method of generating revenue for transit agencies; other creative options include digital advertising on the agency website, or branding/naming opportunities for stations or routes.
- **Value Capture** mechanisms operate under the assumption that the benefits from public transportation flow to the wider community, rather than just to those directly using the service. Revenues from these sources could support the broader planning and development of services – especially those related to capital improvements such as major transit stops.

State and Federal Grant Funds

Lane County transportation providers and other transit systems serving similar populations obtain most of their budgets through state, local, and federal government entities. Nationally, rural transit systems received 48.8% of their total operating budget from the federal government as of 2020 and 45 percent from state and local funding.³ Federal Transit Administration (FTA) and the Federal Highway Administration (FHWA) offer grant funding directly to transportation operators as well as to state or local government entities who then designate a sub-recipient for

³ Federal Transit Administration. (2020) National Transit Summaries and Trends. Accessed at: <https://www.transit.dot.gov/sites/fta.dot.gov/files/2022-01/2020%20National%20Transit%20Summaries%20and%20Trends%201-1.pdf>

the grant. Lane County transportation providers have previously leveraged funding directly and through designation as a sub-recipient. In FY21-23, LTD received \$2,023,050 in FTA 5310 funding for various services and capital, \$192,839 in FTA 5311 funding for the Rhody Express and Diamond Express, \$85,600 in FTA 5311 funding for Cottage Grove, \$312,000 in FTA 5311(f) funding for the Diamond Express, and LCOG received \$1,192,000 in STIF intercommunity funding for the Link Lane routes, ⁴

Lane County services to several national forests presents new opportunities for grant funding that relate to how public transportation in the region helps to sustain and increase access to national forests. Some representative grant programs that could help move new funding systems forward include:

- **National Forest Foundation (Congressionally chartered):** the Foundation’s Innovative Finance for National Forest Grant (IFNF) program aims to improve financial sustainability of the National Forest System to ensure its preservation and the benefits to visitors and communities. The 2021 IFNF grants were disbursed to a wide range of projects from researching finance opportunities for recreational areas to developing a resilience fund for wildfire damage.⁵ One relevant example of the 2021 disbursements is the Financing Innovative Partnership for Rural Recreation Infrastructure. The award was given to Inyo National Forest in California and Mount Baker-Snoqualmine National Forest in Washington to develop plans for financing infrastructure improvements to increase tourist access. Project funding will be leveraged through permit negotiations and external sources, such as local recreation councils.
- **National Fish and Wildlife Foundation (Congressionally chartered):** NFWF grants aim to “sustain, restore, and enhance fish, wildlife, plants, and their habitats”.⁶ Grants are awarded on a competitive basis to federal, state, and local governments, and nonprofit organizations. The Foundation runs a wide-range of conservation programs with funding attached to them, with the most relevant being environmental sustainability related to emissions or waste-water run-off from structures. In 2016, the Pennsylvania Resource Council was awarded \$39,959 to create more green structures for public transit, reducing pollution to watersheds and increasing education around stormwater and watershed pollution.⁷
- **Federal Lands Access Program (FLAP):** FHWA provides funding for increasing access to the federal lands through improved road transportation and transit systems. \$270 million was allocated to this program in 2020. FLAP under the Infrastructure Investment Jobs Act allocated \$37.8 million to Oregon for 2022.

LCOG and Lane County partners can monitor for other one-off or new opportunities. For instance, the Rural Transportation Equity Program was a one-off ODOT funding opportunity to support rural communities in:

- Identifying and engaging underserved communities in rural areas to provide transportation options like biking, walking, and public transportation in order to access to critical services and destinations;
- Building capacity within local governments to maintain relationships and connections to underserved communities, with a focus on including underserved groups in future planning efforts; and/or

⁴ National Transit Database. (2021) Annual Revenue Sources Database. Accessed at: <https://www.transit.dot.gov/ntd/data-product/2021-annual-database-revenue-sources>

⁵ National Forest Foundation. (2021) IFNF Press Release. Accessed at: https://www.nationalforests.org/assets/pdfs/IFNF-Press-Release_Rnd2Awards_2021.pdf

⁶ National Fish and Wildlife Foundation. (n.d.) Apply for a Grant. Accessed at: <https://www.nfwf.org/apply-grant>

⁷ National Fish and Wildlife Foundation. (2016) A Match for a Healthy Environment Utilizing Green Roofs and Public Transit (PA). Accessed at: www.nfwf.org/grants/grants-library/profile?egid=51951

- Matching communities' needs with outside funding opportunities (i.e. Federal, State programs and resources) through strategic investment planning.

The Bipartisan Infrastructure Law (BIL) established several new programs that are being further refined. One such program is the Carbon Reduction Program, which include set-aside for small urban and rural areas. These can include public transit projects, as well as partnership activities such as walking and biking projects or transportation demand management efforts.

There are also often various annual grant programs from state and federal agencies, depending on annual budget conditions and processes. These programs often require local cost-sharing or matches, particularly for capital projects. Locally generated funds can be used to leverage these state and federal opportunities.

Direct Revenue Generation

Direct revenue generation mechanisms align costs with those who most benefit from the service. Fare, advertising, revenues from sale or renting property, and donations would constitute as direct revenue generation mechanisms.

- **Fare revenues** allow the transit rider to pay for the service directly. For rural transit providers, fare box revenues typically contribute 10-15% of the total budget on average due to small ridership and providers ensuring accessibility of the service in the form of lower fees. Fare revenues could provide a larger portion of the budget if ticket prices are increased marginally, and if ridership is increased. If fares are increased, Lane County providers could continue to provide or begin providing discounts to seniors and individuals with mobility needs to ensure transportation service remains equitable. Riders must feel that the transportation services provided are useful and efficient for demand to continue at similar levels after a fare increase. Partnering with the USFS or private businesses at recreational areas could create new opportunities for revenue through stimulating demand from visitors. For example, The Cascade East Transit (CET) services Mt. Bachelor Ski Area from Bend and was funded collaboratively by Mt. Bachelor Ski Area and public sources. CET has an average annual ridership of 65,000.
- **Advertising revenues** provide an opportunity for local businesses and institutions to collaborate with Lane County transportation providers by purchasing advertisements displayed on buses or at transit stops and sponsoring transit activities or events.
- **Donation revenues** raised through campaigns create awareness of services in addition to raising revenue. Campaigns targeted at residents, local businesses, and institutions build a better sense of a regional community.

Value Capture

Public transportation access can help to decrease traffic congestion, alleviate the need to construct additional parking lots, improve safety on roadways by decreasing foot traffic walking to and from personal vehicles, and decrease greenhouse gas emissions. These benefits are captured by both direct and indirect users of transit services. The beneficiaries of these amenities include tourists to the recreation areas and towns, residents of the County, and those who value conservation. Value capture mechanisms are designed to recuperate the costs associated with running services from all those who benefit from public transportation in the region.

Value capture allows the community to share the cost of operating the transit service in the region, even if every community member does not use the service. The implementation of this mechanism takes a variety of forms:

- **Fees:** Indirect users who benefit from the existent of services can help generate revenue through additional fees added to parking in towns and cities, additional fees added to recreational passes, and taxes on the

sale of recreational equipment sold in the County. Revenue from these sources can be predictable and have potential to generate substantial funding. Fee-based revenue sources can be implemented through collaboration with state agencies.

- **Joint Development:** FTA defines a Joint Development (JD) project, in relation to transportation, as a “project that integrally relates to, and often co-locates with commercial, residential, mixed-use, or other non-transit development”.⁸ The concept of JD leverages private and public investments to develop and maintain land for transportation services with the goal of providing revenue for transit agencies and value for real estate partners. This type of funding mechanism has low legal and public obstacles; however, most JD projects have taken place in more urban areas with larger transportation ridership needs. FTA-assisted JDs are eligible for funding through Enhanced Mobility of Seniors and Individuals with Disabilities (FTA 5310), Formula Grants for Rural Areas (FTA 5311), and Grants for Buses and Bus Facilities (FTA 5339(a)). For example, the transit agency in the City of Tyler, TX acquired a building with FTA-assistance and when it was no longer needed, the transit department leased the space to the city’s Innovation Pipeline Program which was backed by private investment. The building now serves as an Innovator’s Lab for public and non-profit use through programs that support ingenuity in technology in addition to serving as a transit stop.⁹
- **Revenue Sharing Mechanisms:** Revenue sharing occurs when parties enter into an agreement to share profits or losses of a specific activity. In this context, revenue sharing could take the form of Lane County transportation providers entering into an agreement with local businesses or government agencies to generate revenue that supports both parties. For example, a voluntary surcharge could be added to transactions at local businesses that is recovered by Lane County transportation providers, ensuring the benefits of transportation services are supported by those who value them.¹⁰ A voluntary surcharge is distinct from donations because it requires a contract with another entity and requires the customer to opt-out rather than opt-in to the additional charge. This mechanism is used widely by conservation agencies, such as 1 percent Open Space in Colorado or St. Simon’s Land Trust in Georgia, and has application here given that Link Lane services the Siuslaw National Forest and LTD services the Willamette National Forest.¹¹
¹² This tool’s efficacy as a revenue source depends on the agreements between the local entities and Lane County transportation providers, and the rate at which customers choose to opt-out of the surcharge. Lane County transportation providers and the partnering entity must have clear communication to the customer about the importance of transit service in the surrounding areas. Additionally, a voluntary surcharge could help raise awareness of services, thus directly increasing revenue through increased ridership.

Table 9 summarizes the revenue sources, descriptions, benefits, difficulties, revenue capacity, and grant types.

⁸ Federal Transit Administration. (2014) Guidance on Joint Development. Accessed at: <https://www.transit.dot.gov/sites/fta.dot.gov/files/2020-08/Joint-Development-Circular-C-7050-1B.pdf>

⁹ Federal Transit Administration. (2017) Joint Development Brochure. Accessed at: <https://www.metrotransit.org/Data/Sites/1/media/tod/joint-development-brochure.pdf>

¹⁰ United States Forestry Service (USFS). (n.d.) Conservation Finance Toolkit: Voluntary Surcharge. Accessed at: www.nationalforests.org/assets/pdfs/Con-Fin-Example-Voluntary-Surcharge-Overview.pdf

¹¹ Tamarisk Coalition Funding Webinar Series. (n.d.) Understanding Voluntary Surcharge Programs. Accessed at: riversedgewest.org/sites/default/files/resource-center-documents/Molly%20Presentation_01.17.14.pdf

¹² St. Simon’s Land Trust. (2017) Pennies for Preservation. Accessed at: www.sslt.org/donate/pennies-for-preservation/

Conclusion and Next Steps

These options and their evaluation will be presented to the Project Management Team (PMT), Project Advisory Committee (PAC), and the public via Outreach Effort #2, revised, and organized into potential project packages in *Memorandum #6: Alternatives for Transit Service*. The revised memorandum will be used to inform the Transit Development Plan by establishing potential future service options and supporting activities to enhance transit access in rural Lane County.

Table 9. Summary of Revenue Sources

Funding Source	Description	Benefits	Difficulties	Revenue Capacity	Grant Type	Local Match Requirement	Application Timeline	Funding Criteria/ Formula Factors
State and Federal Grant Funds¹³								
Diversion of Tax Revenue from Property, Income, Payroll, or Sales	Agree upon a fixed percentage range of tax revenue to be diverted to support operation and capital expenditures for a short-term horizon from local governments' general funds.	Fiscally stable and predictable funding source.	Public support needed across the County. Higher level of cooperation between government entities. Does not require voter approval.	Substantial revenue capacity.	-	-	-	-
FTA 5310 - Enhanced Mobility of Seniors & Individuals with Disabilities	Grant program aims to improve mobility for seniors and individuals with disabilities by removing barriers to transportation service and expanding transportation mobility options, including rural areas.	Flexible use cases and eligibility.	Requires disbursement from local or state government entities.	Substantial revenue capacity. Lane County providers already receive this funding, and potential for increase is limited.	Funds administered through state government to subrecipients including local government or operators of transit system.	50% Operating 20% Other 10.27% STBG Transfer	Due to ODOT via LTD, January prior to 25-27 biennium	Population-based formula, including total population and population of seniors and people with disabilities
FTA 5311 - Grants for Rural Areas	Grants within the 5311 section provide funds for operating, capital construction, and planning of transportation systems in rural areas.	Flexible use cases and eligibility.	Requires disbursement from local or state government entities.	Substantial revenue capacity. Lane County providers already receive this funding, and potential for increase is limited.	Formula. Funds administered to state or local government.	10.27% Administration, Capital, Mobility Management, Planning, Preventative Maintenance 43.92% Operations	Due to ODOT, January prior to 25-27 biennium	\$100,000 biennial base + formula based on prior biennium's service miles (60%) and rides (40%) Recipients get a minimum of 95% and maximum of 110% of the previous biennium allocation
FTA 5311(f) – Intercity Bus Program (merged with STIF Intercommunity Fund)	Grants within the 5311(f) section provide funds on a competitive basis for transit projects that develop and support intercity bus transportation in rural areas of the state.	Flexible use cases and eligibility.	Requires disbursement from local or state government entities.	Substantial revenue capacity. Lane County providers already receive this funding, and potential for increase may be limited.	Competitive.	10% for projects serving rural communities, outside of an agency's jurisdiction, filling a significant gap in state network, or substantial benefit to multiple providers 20% other projects	Due to ODOT via LTD, November 30 prior to 25-27 biennium	Formula based on population of the area and employment tax revenues collected in the area See STIF for discretionary
FTA 5339(a) - Grants for Buses and Bus Facilities	Provides funding to replace, rehabilitate and purchase buses and related equipment and to construct bus-related facilities.	Funding for new construction along expanded route.	Requires disbursement from local or state government entities.	Substantial revenue capacity. Lane County providers already receive this funding, and potential for increase is limited.	Formula. Funds administered through state or local government to subrecipients including public or non-profit entities that operate transit systems.	15% Vehicles 20% Vehicle-related equipment and facilities	Due to ODOT, February prior to 24-26 biennium	Prioritizes vehicles in the worst state of repair

¹³ <https://www.oregon.gov/odot/RPTD/Pages/Funding-Opportunities.aspx>

Funding Source	Description	Benefits	Difficulties	Revenue Capacity	Grant Type	Local Match Requirement	Application Timeline	Funding Criteria/ Formula Factors
Statewide Transportation Improvement Fund (STIF)	Introduced in 2017, this program provides funding for the operation, administration, and planning of public transportation in Oregon fully funded with a payroll tax levy. For FY2021-23, the Public Transportation Advisory Committee allocated \$10.45 million in funding.	Specific funding for public transportation improvement. Focused on technology improvements for rural transit providers.	Only available for Qualified Entities and their subrecipients.	Substantial revenue capacity. Lane County providers already receive this funding, and potential for increase is limited.	90% of funds allocated by population formula; 4% for competitive intercommunity funds; 5% for competitive discretionary funds; 1% for resource centers.	10-20%	Due to ODOT via LTD, November 30 prior to 25-27 biennium	Discretionary: Improves service levels, especially for transit-reliant populations Improves coordinated, integrated planning, technology Protects fleet, increases use of active transportation Reduces greenhouse gas, supports positive health outcomes Improves geographic connections between communities, local connections and hubs Does not substantially rely on state funding beyond pilot
FHWA Federal Lands Access Program (FLAP) Grants	Program encourages access to public lands through improved transportation systems. Funding is allocated to states based on the percentage of total U.S. public lands.	Broad usage of funding with an emphasis including construction or improvements of roadways, transit system upgrades or creation.	Requires disbursement from local or state government entities.	Substantial revenue capacity.	Competitive. Projects must be approved by state Programming Decision Committee (PDC).	Not Posted	Due to Oregon FLAP Program, April prior to 24-26 biennium	Not Posted; Willamette National Forest is a medium-rank priority
National Forest Foundation – Innovative Finance for National Forest Grant	Program focuses on preservation and increasing access to the National Forestry System.	Funding for operations that encourage tourism to the Siuslaw National Forest.	Narrower use case for funding.	Moderate revenue capacity.	Competitive.	Not Posted	Due to National Forest Foundation, March	Problem Statement National Forest System Nexus (major) Team and Partners Policy Practices and Methods Payors (i.e., direct payment or repayment) (major) Financing Sources (i.e., upfront capital) Project Site(s) and Readiness Impact and Scaling Potential (major) Measurable Outcomes Co-creation Barriers to Success Timeline, Deliverables, and Budget
National Fish and Wildlife Foundation	Grants are attached to conservation programs whose purpose is to sustain natural areas.	Funding for supporting emissions reduction measures or building/retrofitting capital for environmental sustainability.	Narrower use case for funding. This funding does not directly address the identified gaps in services.	Moderate revenue capacity.	Competitive and conservation program specific.	Dependent on grant.	Due to NFWF, timing dependent on grant.	Dependent on grant.

Funding source	Description	Benefits	Difficulties	Revenue Capacity
Direct Use				
Fare Revenue	Establish or raise fare fees.	Provides direct connection between cost of services and those who benefit.	Burdens low-income, and elderly individuals, and those with mobility needs. Less predictable funding source due to varying ridership.	Limited capacity due to scale of ridership.
Advertising Revenue	Sell space on capital resources or website for advertisement to local businesses and institutions.	Easy to implement and can be a consistent revenue source.	Installation of structures that support advertising would need to be paid for by providers, such as brackets for bus advertisements, or screens at bus stations.	Moderate revenue capacity as constrained by available space.
Donation Revenue	With local businesses and Parks and Recreation Departments, collect donations; add donation boxes to transit infrastructure; host events or activities (such as a raffle).	Increases community awareness of services. Provides direct connection between cost of services and those who benefit.	Inconsistent revenue stream as it depends on the public's willingness to contribute.	Limited revenue capacity as constrained by efforts to recuperate donations and the public's willingness to give.
Value Capture				
Revenue Sharing	With local businesses, add an opt-out voluntary surcharge at point-of-sale.	Opt-out voluntary surcharges can be more effective than soliciting donations. Provides a direct connection between costs and those who benefit from services.	Inconsistent revenue stream as it depends on the public's willingness to contribute.	Limited revenue capacity as constrained by efforts to gain support from businesses and the public's willingness to give.
Parking fee	With state park departments and local jurisdictions, raise day-use and annual parking pass fees.	Incentivizes use of transportation services thus decreasing dis-amenities from personal vehicle traffic. Predictable and stable in short-run.	Coordination and administrative oversight of criteria for transferring funds from state parks departments and city governments to service providers.	Substantial revenue capacity. (Washington State Discover Passes generated \$21 million in revenue in 2017)
Excise Tax	Gain authority through local government entities to levy an excise tax on recreational equipment, recreation rentals, and/or recreational parking passes purchased in the services area.	Semi-fiscally stable and predictable. Ease of implementation and direct translation of tax dollars to tourism use of the transit system.	Coordinate with local governments to implement an excise tax and divert funds to operate services. Requires voter approval.	Revenue dependent on sale of recreational equipment in service area.

Appendix A. Route Evaluation Results

Route	Alternative	Population Served within ¼ Mile	Employment Served within ¼ Mile	Cumulative Transit Reliant Population	Service Span/Frequency		Ridership Potential		Annual Service Hours (Administrative Need)	Capital Needs	Planning-Level Annual Operating Cost	Change in Net Annual Operating Cost	Fare Revenues	
					Trips per day (Weekday)	Trips per day (Weekend)	Low	High					Low	High
Link Lane														
Eugene - Florence	Existing	4,500	6,000	5,987	2	2	2,555	5,110	2,555		\$255,500	-	\$12,775	\$25,550
Eugene - Florence	Add One Trip per Weekday	4,500	6,000	5,987	3	2	3,448	6,895	3,448	1 new bus	\$344,750	\$89,250	\$17,238	\$34,475
Eugene - Florence	Add Two Trips per Weekday	4,500	6,000	5,987	4	2	4,340	8,680	4,340	1 new bus	\$434,000	\$178,500	\$21,700	\$43,400
Eugene - Florence	Add One Trip on Saturday and Sunday	4,500	6,000	5,987	2	3	2,940	5,880	2,940	1 new bus	\$294,000	\$38,500	\$14,700	\$29,400
Eugene - Florence	Add Two Trips on Saturday and Sunday	4,500	6,000	5,987	2	4	3,325	6,650	3,325	1 new bus	\$332,500	\$77,000	\$16,625	\$33,250
Florence - Yachats	Existing	1,000	600	1,090	4	4	2,480	4,960	2,480	-	\$248,000	-	\$6,200	\$12,400
Florence - Yachats	Add Sunday Service	1,000	600	1,090	4	4	2,920	5,840	2,920	-	\$292,000	\$44,000	\$7,300	\$14,600
Florence - Yachats	Add One Trip per Weekday	1,000	600	1,090	5	4	2,990	5,980	2,990	1 new bus	\$299,000	\$51,000	\$7,475	\$14,950
Florence - Yachats	Add Two Trips per Weekday	1,000	600	1,090	6	4	3,500	7,000	3,500	1 new bus	\$350,000	\$102,000	\$8,750	\$17,500
Florence - Yachats	Add One Trip on Saturday and Sunday	1,000	600	1,090	4	5	3,140	6,280	3,140	1 new bus	\$314,000	\$66,000	\$7,850	\$15,700
Florence - Yachats	Add Two Trips on Saturday and Sunday	1,000	600	1,090	4	6	3,360	6,720	3,360	1 new bus	\$336,000	\$88,000	\$8,400	\$16,800
Diamond Express														
Diamond Express	Existing	13,000	14,300	16,751	4	2	18,645	27,968	3,108	-	\$310,750	-	\$46,613	\$69,919
Diamond Express	Add Sunday Service	13,000	14,300	16,751	4	2	20,460	30,690	3,410	-	\$341,000	\$30,250	\$51,150	\$76,725
Diamond Express	Add One Trip per Weekday	13,000	14,300	16,751	5	2	22,853	34,279	3,809	1 new bus	\$380,875	\$70,125	\$57,131	\$85,697
Diamond Express	Add Two Trips per Weekday	13,000	14,300	16,751	6	2	27,060	40,590	4,510	1 new bus	\$451,000	\$140,250	\$67,650	\$101,475
Diamond Express	Add One Trip on Saturday and Sunday	13,000	14,300	16,751	4	3	22,275	33,413	3,713	1 new bus	\$371,250	\$60,500	\$55,688	\$83,531
Diamond Express	Add Two Trips on Saturday and Sunday	13,000	14,300	16,751	4	4	24,090	36,135	4,015	1 new bus	\$401,500	\$90,750	\$60,225	\$90,338
Rhody Express														
Rhody Express	Existing	6,300	2,700	9,174	8	0	4,080	8,160	2,040	-	\$204,000	-	\$4,080	\$8,160
Rhody Express	Add Saturday Service	6,300	2,700	9,174	8	8	4,960	9,920	2,480	-	\$248,000	\$44,000	\$4,960	\$9,920
Rhody Express	Add Saturday and Sunday Service	6,300	2,700	9,174	8	8	5,840	11,680	2,920	-	\$292,000	\$88,000	\$5,840	\$11,680
Rhody Express	Add One Trip per Weekday	6,300	2,700	9,174	9	0	4,590	9,180	2,295	1 new bus	\$229,500	\$25,500	\$4,590	\$9,180
Rhody Express	Add Two Trips per Weekday	6,300	2,700	9,174	10	0	5,100	10,200	2,550	1 new bus	\$255,000	\$51,000	\$5,100	\$10,200
Rhody Express	Add One Trip on Saturday and Sunday	6,300	2,700	9,174	8	9	6,060	12,120	3,030	1 new bus	\$303,000	\$99,000	\$6,060	\$12,120
Rhody Express	Add Two Trips on Saturday and Sunday	6,300	2,700	9,174	8	10	6,280	12,560	3,140	1 new bus	\$314,000	\$110,000	\$6,280	\$12,560
LTD Route 90 Series														
LTD Route 91	Existing	14,100	7,100	16,789	3	2	15,957	23,936	2,660	-	\$531,900	-	\$27,925	\$41,887
LTD Route 91	Add One Trip per Weekday	14,100	7,100	16,789	4	2	20,088	30,132	3,348	1 new bus	\$669,600	\$137,700	\$35,154	\$52,731
LTD Route 91	Add Two Trips per Weekday	14,100	7,100	16,789	5	2	24,219	36,329	4,037	1 new bus	\$807,300	\$275,400	\$42,383	\$63,575
LTD Route 91	Add One Trip on Saturday and Sunday	14,100	7,100	16,789	3	3	17,739	26,609	2,957	1 new bus	\$591,300	\$59,400	\$31,043	\$46,565
LTD Route 91	Add Two Trips on Saturday and Sunday	14,100	7,100	16,789	3	4	19,521	29,282	3,254	1 new bus	\$650,700	\$118,800	\$34,162	\$51,243
LTD Route 92	Existing	10,900	8,200	13,010	2.5	2.5	7,905	11,858	1,318	-	\$263,500	-	\$13,834	\$20,751
LTD Route 92	Add Sunday Service	10,900	8,200	13,010	2.5	2.5	9,308	13,961	1,551	-	\$310,250	\$46,750	\$16,288	\$24,432
LTD Route 92	Add One Trip per Weekday	10,900	8,200	13,010	3.5	2.5	10,506	15,759	1,751	1 new bus	\$350,200	\$86,700	\$18,386	\$27,578
LTD Route 92	Add Two Trips per Weekday	10,900	8,200	13,010	4.5	2.5	13,107	19,661	2,185	1 new bus	\$436,900	\$173,400	\$22,937	\$34,406
LTD Route 92	Add One Trip on Saturday and Sunday	10,900	8,200	13,010	2.5	3.5	10,430	15,644	1,738	1 new bus	\$347,650	\$84,150	\$18,252	\$27,377
LTD Route 92	Add Two Trips on Saturday and Sunday	10,900	8,200	13,010	2.5	4.5	11,552	17,327	1,925	1 new bus	\$385,050	\$121,550	\$20,215	\$30,323
LTD Route 93	Existing	4,100	2,900	4,895	3	2.5	6,864	10,296	1,144	-	\$228,800	-	\$12,012	\$18,018
LTD Route 93	Add One Trip per Weekday	4,100	2,900	4,895	4	2.5	8,547	12,821	1,425	1 new bus	\$284,900	\$56,100	\$14,957	\$22,436
LTD Route 93	Add Two Trips per Weekday	4,100	2,900	4,895	5	2.5	10,230	15,345	1,705	1 new bus	\$341,000	\$112,200	\$17,903	\$26,854
LTD Route 93	Add One Trip on Saturday and Sunday	4,100	2,900	4,895	3	3.5	7,590	11,385	1,265	1 new bus	\$253,000	\$24,200	\$13,283	\$19,924
LTD Route 93	Add Two Trips on Saturday and Sunday	4,100	2,900	4,895	3	4.5	8,316	12,474	1,386	1 new bus	\$277,200	\$48,400	\$14,553	\$21,830

Costs are planning-level and use scheduled service and estimated fully-loaded operating cost per hour to determine annual operating costs. Actual cost should be refined upon further evaluation for implementation.

Route	Alternative	Population Served within ¼ Mile	Employment Served within ¼ Mile	Cumulative Transit Reliant Population	Service Span/Frequency		Ridership Potential		Annual Service Hours (Administrative Need)	Capital Needs	Planning-Level Annual Operating Cost	Change in Net Annual Operating Cost	Fare Revenues	
					Trips per day (Weekday)	Trips per day (Weekend)	Low	High					Low	High
LTD Route 95	Existing	15,500	10,700	18,914	4	2.5	9,713	14,569	1,619	-	\$323,750	-	\$16,997	\$25,495
LTD Route 95	Add One Trip per Weekday	15,500	10,700	18,914	5	2.5	11,625	17,438	1,938	1 new bus	\$387,500	\$63,750	\$20,344	\$30,516
LTD Route 95	Add Two Trips per Weekday	15,500	10,700	18,914	6	2.5	13,538	20,306	2,256	1 new bus	\$451,250	\$127,500	\$23,691	\$35,536
LTD Route 95	Add One Trip on Saturday and Sunday	15,500	10,700	18,914	4	3.5	10,538	15,806	1,756	1 new bus	\$351,250	\$27,500	\$18,441	\$27,661
LTD Route 95	Add Two Trips on Saturday and Sunday	15,500	10,700	18,914	4	4.5	11,363	17,044	1,894	1 new bus	\$378,750	\$55,000	\$19,884	\$29,827
LTD Route 96	Existing	12,100	8,500	13,583	2	2	3,720	5,580	620	-	\$124,000	-	\$6,510	\$9,765
LTD Route 96	Add Sunday Service	12,100	8,500	13,583	2	2	4,380	6,570	730	-	\$146,000	\$22,000	\$7,665	\$11,498
LTD Route 96	Add One Trip per Weekday	12,100	8,500	13,583	3	2	5,250	7,875	875	1 new bus	\$175,000	\$51,000	\$9,188	\$13,781
LTD Route 96	Add Two Trips per Weekday	12,100	8,500	13,583	4	2	6,780	10,170	1,130	1 new bus	\$226,000	\$102,000	\$11,865	\$17,798
LTD Route 96	Add One Trip on Saturday and Sunday	12,100	8,500	13,583	2	3	5,040	7,560	840	1 new bus	\$168,000	\$44,000	\$8,820	\$13,230
LTD Route 96	Add Two Trips on Saturday and Sunday	12,100	8,500	13,583	2	4	5,700	8,550	950	1 new bus	\$190,000	\$66,000	\$9,975	\$14,963
LTD Route 98	Existing	23,200	17,900	28,212	5	2.5	18,600	27,900	3,100	-	\$620,000	-	\$32,550	\$48,825
LTD Route 98	Add One Trip per Weekday	23,200	17,900	28,212	6	2.5	21,660	32,490	3,610	1 new bus	\$722,000	\$102,000	\$37,905	\$56,858
LTD Route 98	Add Two Trips per Weekday	23,200	17,900	28,212	7	2.5	24,720	37,080	4,120	1 new bus	\$824,000	\$204,000	\$43,260	\$64,890
LTD Route 98	Add One Trip on Saturday and Sunday	23,200	17,900	28,212	5	3.5	19,920	29,880	3,320	1 new bus	\$664,000	\$44,000	\$34,860	\$52,290
LTD Route 98	Add Two Trips on Saturday and Sunday	23,200	17,900	28,212	5	4.5	21,240	31,860	3,540	1 new bus	\$708,000	\$88,000	\$37,170	\$55,755
New/Expanded Services														
On-Demand to Mapleton-Swisshome-Deadwood	Weekdays	1,100	200	1,568	7	0	2,040	4,080	2,040	1 new bus	\$204,000	\$204,000	\$10,200	\$20,400
On-Demand to Mapleton-Swisshome-Deadwood	Weekdays and Saturdays	1,100	200	1,568	7	7	2,480	4,960	2,480	1 new bus	\$248,000	\$248,000	\$12,400	\$24,800
On-Demand to Mapleton-Swisshome-Deadwood	All Days	1,100	200	15,733	7	7	2,920	5,840	2,920	1 new bus	\$292,000	\$292,000	\$14,600	\$29,200
On-Demand Cottage Grove	Weekdays	6,300	1,600	7,866	16	0	4,080	6,120	2,040	1 new bus	\$204,000	\$204,000	\$20,400	\$30,600
On-Demand Cottage Grove	Weekdays and Saturdays	6,300	1,600	686	16	16	4,960	7,440	2,480	1 new bus	\$248,000	\$248,000	\$24,800	\$37,200
On-Demand Cottage Grove	All Days	6,300	1,600	686	16	16	5,840	8,760	2,920	1 new bus	\$292,000	\$292,000	\$29,200	\$43,800
On-Demand Mohawk-Marcola	Weekdays	1,500	90	15,733	16	0	4,080	6,120	2,040	1 new bus	\$204,000	\$204,000	\$20,400	\$30,600
On-Demand Mohawk-Marcola	Weekdays and Saturdays	1,500	90	1,373	16	16	4,960	7,440	2,480	1 new bus	\$248,000	\$248,000	\$24,800	\$37,200
On-Demand Mohawk-Marcola	All Days	1,500	90	1,508	16	16	5,840	8,760	2,920	1 new bus	\$292,000	\$292,000	\$29,200	\$43,800
On-Demand Mohawk-Marcola-Mabel	Weekdays	1,700	100	15,733	16	0	4,080	6,120	2,040	1 new bus	\$204,000	\$204,000	\$20,400	\$30,600
On-Demand Mohawk-Marcola-Mabel	Weekdays and Saturdays	1,700	100	1,373	16	16	4,960	7,440	2,480	1 new bus	\$248,000	\$248,000	\$24,800	\$37,200
On-Demand Mohawk-Marcola-Mabel	All Days	1,700	100	1,508	16	16	5,840	8,760	2,920	1 new bus	\$292,000	\$292,000	\$29,200	\$43,800
Small City Circulators	Two Days per Week	7,100	1,900	Varies	16	0	1,664	3,328	832	1 new bus	\$83,200	\$83,200	\$1,664	\$3,328
Small City Circulators	Weekdays	7,100	1,900	Varies	16	0	4,080	8,160	2,040	1 new bus	\$204,000	\$204,000	\$4,080	\$8,160
Small City Circulators	All Days	7,100	1,900	Varies	16	16	5,840	11,680	2,920	1 new bus	\$292,000	\$292,000	\$5,840	\$11,680
Costs are planning-level and use scheduled service and estimated fully-loaded operating cost per hour to determine annual operating costs. Actual cost should be refined upon further evaluation for implementation.														