KITTELSON & ASSOCIATES
851 SW 6th Avenue, Suite 600
Portland, OR 97204
P 503.228.5230

Technical Memorandum #5

October 11, 2022

Project# 23021.039

To: Kathy Bernhardt
Curry County Public Transportation Service District
PO Box 1771
Brookings, OR 97415

From: Susan Wright, PE, Bincy Koshy, Sophia Semensky, Kittelson & Associates, Inc.

CC: Ian Horlacher, ODOT

RE: Final TM#5: Future Service Opportunities (Task 3.2)
Curry County Transit Development Plan

Contents

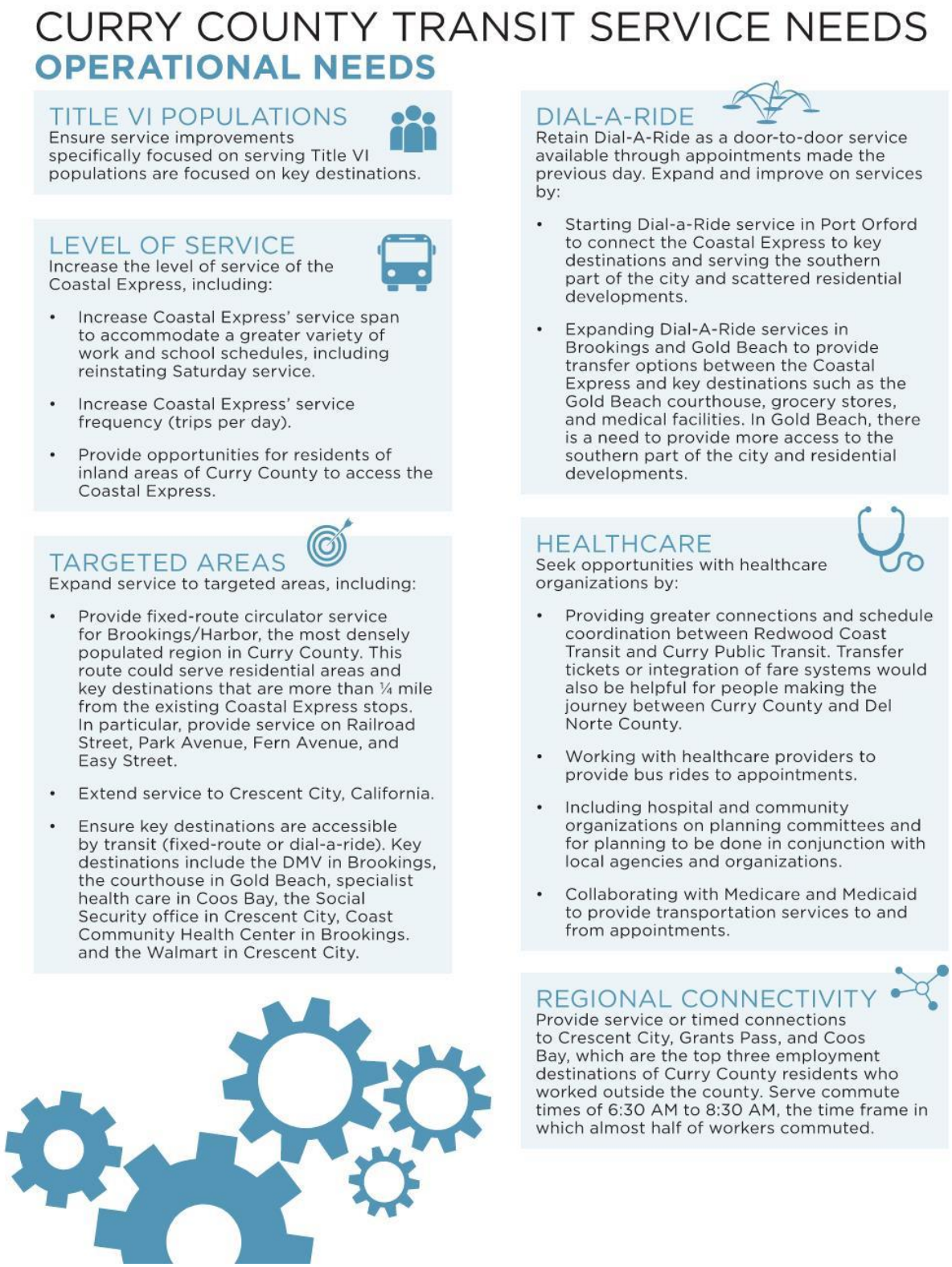
INTRODUCTION

This memorandum identifies future transit service opportunities for Curry Public Transit (CPT) based on outreach efforts, goals and benchmarks from *Memorandum #2: Transit Goals, Policies and Practices* and *Memorandum #3: Transit Benchmarks and Monitoring Program*, and the unmet needs identified in *Memorandum #4: Unmet Transportation Needs*. It also identifies capital alternatives, facility improvements, and public transportation system technologies.

NEEDS SUMMARY

Potential needs were identified primarily from service gaps identified from the population and land use analysis, previous planning processes, and existing service analysis conducted as part of *Memorandum #1: Existing System Conditions*, and gaps identified through public involvement and outreach. *Memorandum #4: Unmet Transportation Needs* described these potential needs and gaps. Figure 1 presents the operational needs for Curry County Transit.

Figure 1. Curry County Transit Operational Needs



SERVICE MODELS, TRANSIT MARKETS, AND HIGH PRIORITY SERVICE ENHANCEMENTS

The potential needs addressed in this section are the result of the analysis and identification of gaps documented in this memorandum, as well as gaps discovered through public comments and the outreach performed earlier in this project. Potential needs are described below and have been grouped by transit markets and service enhancements and efficiencies.

Service Models

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); and
- The surrounding land use context and intensity of development (e.g., population and employment densities).

Local 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. The Americans with Disabilities Act (ADA) requires complementary paratransit service within ¾ mile of the fixed route during the hours that fixed-route service operates, which entails extra costs.

Deviated fixed-route services: These services combine elements of fixed-route and demand-response service (e.g., a route serves specific stops at specific times) but is allowed to deviate from the route to pick up and drop off passengers. 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. Deviation areas can be defined and are not required to extend ¾ mile from the route. Due to the geographical and topographical constraints, and limited expanse of the roadway network in Curry County, the deviated fixed-route model is not suitable for CPT. In the case of developments and leveling of land that may take place in the future, deviations can be considered in areas of future growth.

Demand-response services: These services do not follow fixed routes or serve fixed stops and therefore can provide curb-to-curb service between origins and destinations. Currently, CPT provides Dial-A-Ride services in Brookings and Gold Beach, and has secured funding to operate Dial-A-Ride services in Port Orford in the near future. Dial-A-Ride trips require reservations via the CPT Dispatcher, with four hours notice preferred; reservations stop being accepted one hour before departure time. For both Brookings and Gold Beach, buses run south on the hour and north on the half hour, with a 30-minute pick-up window.

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 demand-responsive.

Vanpools: Vanpools can be considered public transportation services. Vanpools are well-suited to commute trips between clustered residences and job locations, and vanpool fares can cover much of the expense of operating the program.

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 can connect to local services (where they exist) within each city. Intercity frequency is based on market size and can be scaled to meet demand; some routes may operate every day, while others are "Lifeline" routes that operate once a week or less frequently.

- CPT operates the Coastal Express intercity service three times per day on weekdays from North Bend to Smith River.
- Coos County Area Transit (CCAT) provides hourly connections to Charleston from the VA Clinic/Safeway stop in North Bend.
- CCAT provides infrequent intercity connections to other communities, including:
    - Coquille and Myrtle Point via the Timber Express (from the Tioga Hotel–Market Street stop in Coos Bay and the VA Clinic/Safeway stop in North Bend); Monday-Friday; two loops per day
    - Roseburg via the Roseburg Express (from the two Coos Bay stops), two days per week; one eastbound and one westbound route
    - Florence via the Florence Express (from the VA Clinic/Safeway stop in North Bend), four days per week; two loops per day
- SouthWest POINT provides one round-trip per day, except Sunday, to Josephine County, with onward connections available to Jackson and Klamath Counties (from the Brookings stop).
- Redwood Coast Transit connects with the Coastal Express in Smith River, California, providing connections to Crescent City and points further south along the California coast.

Express service: This service typically is similar to rural intercity or commuter service in that it is a longer-distance fixed route service that connects two destinations. In addition, this service will only stop at the two major destinations on the route, skipping locations that may fall in between. This service may include intra-city routes with limited stops; for example, serving stops every mile as compared to non-express services serving every ¼ mile. This service type is most appropriate where there is considerable demand or commute patterns between two fixed locations.

Walking and biking are also modes of transportation that people use depending on travel distance, trip purpose, pedestrian and bicycle facilities availability, and physical ability. These are common modes of transportation in terms of first- and last-mile connectivity – people tend to walk/bike to and from bus stops. Bus stops that are far away from intersections/crossings and/or lack suitable sidewalk and bike facility connections are challenging to access, especially for people with disabilities and people with no vehicles.

Service Enhancements and Efficiencies

Table 1 documents high-priority improvements identified as general needs not specific to geographic or demographic transit markets. These improvements could help improve the existing rider experience, attract new ridership, and improve the efficiencies of partnerships and CPT's operations.

Table 1. High-Priority Service Enhancements

High-Priority Service Enhancements	
Improved schedule coordination with local transit providers	Increased schedule coordination with regional transit providers, including CCAT and Redwood Coast Transit.
Increase service frequency, extend service hours, and provide weekend service	Increased frequency, extended service hours, and weekend service.
Electrification of vehicle fleet	CPT's fueling costs have been increasing substantially with the change in fuel prices. Cleaner fuel sources, such as electrification, could be considered for future vehicle purchases and facilities. The upfront higher cost may be worth lower and more stable fuel costs.
Bus stop amenities and access	Specific bus stop amenities improvements identified through outreach include shelters, signs, and benches.
Update tools and technology	Additional fare payment options, mobile trip-planning tools, and real-time vehicle arrival information

FUTURE SERVICE OPPORTUNITIES

This section describes short-, medium-, and long-term future service opportunities. These opportunities were developed based on stakeholder input; population, employment, and land use growth forecasts; and existing and forecasted future transit demand. Future memos will evaluate projects and services identified in this memo, including a financial assessment for projects and a list of preferred projects.

Following this section, a summary of onboard survey #2 is provided.

Short-Term Future Service Opportunities (1-2 Years)

Table 2 documents the short-term future service opportunities for Curry Public Transit.

Table 2. Short-Term Future Service Opportunities

Short-Term Future Service Opportunities	
Port Orford Dial-A-Ride	Add Dial-A-Ride services in Port Orford.
Coordination of Dial-A-Ride with Coastal Express	Coordinate Dial-A-Ride services with Coastal Express arrivals in Brookings, Gold Beach, and Port Orford.
Inter-County Service Coordination	Coordinate with other providers to improve efficiency by reducing transfer times and distances, while coordination with cities and Coos County can improve rider access to bus stops.
Langlois Public Library Stop	Make the Langlois Public Library, which is currently a flag stop, a formal stop on the Coastal Express route. A flag stop is a location where riders can 'flag' down a bus, although there is no formal stop.
Staff Capacity and Transition	Increase the number of staff employed by CPT, including bus operators and administrative staff. Develop a transition plan for the current manager of CPT.
Marketing and Advertising	Improve marketing and advertising by provide maps and brochures, investing in training programs and advertising through newsletters, radio, television, social media and email blast.

PORT ORFORD DIAL-A-RIDE

Port Orford is currently served by a single Coastal Express stop. Residential developments and key destinations in the town center are not well-served. Feedback from the community and focus groups, as well as a land use evaluation, indicate that there is a need to serve grocery and public services destinations in the southern part of town that are further away from the Coastal Express stop, as well as residential developments, which are scattered throughout town.

Although funding to operate Dial-A-Ride service in Port Orford is available, there is a lack of workforce/drivers to operate the service.

COORDINATION OF DIAL-A-RIDE WITH COASTAL EXPRESS

Dial-A-Ride currently operates in Brookings and Gold Beach. There is an opportunity to coordinate these services with the Coastal Express so that riders can easily access key destinations from the intercity stops, such as the Brookings DMV, the Gold Beach Court House, and medical services. Service coordination would make riding the Coastal Express more accessible for riders who cannot easily walk or bike to their destination, as well as provide more convenient connections to destinations further away from the Coastal Express stop. To accomplish this, an additional Dial-A-Ride bus could meet the Coastal Express when it arrives collecting passengers and bringing them to the Coastal Express stop and then taking passengers from the Coastal Express to their destinations. Another option would be to reserve existing Dial-A-Ride capacity for trips to/from the Coastal Express stops during a period of time (30 minutes) before and after each Coastal Express arrival. Implementation would depend on funding and vehicle/driver availability.

INTER-COUNTY SERVICE COORDINATION

Currently, the Coastal Express connects to Redwood Coast Transit in Del Norte County, to CCAT in Coos County, and to SouthWest POINT in Brookings.

Redwood Coast Transit

Table 3 and Table 4 present the southbound and northbound connection times to Redwood Coast Transit. Red cells indicate a missed connection opportunity based on the scheduled arrival and departure times.

Table 3. Smith River Southbound Connections

Coastal Express Arrival	Redwood Coast Transit (Route 20) Departure
6:30 AM	6:45 AM
9:15 AM	9:20 AM
2:15 PM	2:15 PM
6:30 PM	6:35 PM

Source: Curry Public Transit; Redwood Coast Transit

Table 4. Smith River Northbound Connections

Redwood Coast Transit (Route 20) Arrival	Coastal Express Departure
6:35 AM	6:45 AM
9:05 AM	9:15 AM
2:05 PM	2:15 PM
6:35 PM	6:30 PM

Source: Curry Public Transit; Redwood Coast Transit

As shown, schedules are well coordinated, with a maximum wait time of 15 minutes. However, the afternoon trips should be evaluated for schedule modifications. The 2:15 PM Coastal Express arrival could be moved earlier to ensure that delays do not make riders miss the Redwood Coast Transit 2:15 PM trip; however, the drivers may currently try to ensure that this connection is not missed. In addition, the 6:30 PM Coastal Express northbound departure should be moved to occur after the 6:35 PM Redwood Coast Transit arrival, as this is currently a missed connection opportunity according to the schedules.

Coos County Area Transit

NEWMARK CENTER, NORTH BEND

Table 5 shows the transfer opportunities for Coastal Express riders at the Newmark Center in North Bend to CCAT buses across the street at Wal-Mart. Coastal Express passengers can also transfer to the Pirate Express in Coos Bay and to the Bulldog Express and Charleston Express at the VA Clinic/Safeway stop in North Bend. Red cells indicate a missed connection opportunity based on the scheduled arrival and departure times.

Table 5. North Bend (Newmark Center) Connections

Coastal Express Arrival (NB)	CCAT Departure (Bulldog Express)	CCAT Departure (Charleston Express outbound)	CCAT Departure (Pirate Express)	CCAT Arrival (Charleston Express inbound)	Coastal Express Departure (SB)
	10:40 AM	—	10:35 AM	10:20 AM	**11:10 AM**
10:55 AM	11:27 AM	11:36 AM	11:35 AM	—	
	1:27 PM	—	1:48 PM	2:20 PM	**2:40 PM**
2:35 PM	2:37 PM/3:02 PM	2:36 PM/3:36 PM	3:00 PM	—	
6:20 PM	no service	no service	no service	—	

Source: Curry Public Transit; Coos County Area Transit

The early-morning Coastal Express trip does not serve Newmark Center. The mid-morning Coastal Express trip is well-timed for transfers with CCAT; riders have ample time to cross the street between Newmark Center and Walmart. Connection times to the mid-afternoon Coastal Express trip are longer (generally 50 minutes or longer). There is not enough time to transfer from the mid-afternoon Coastal Express to the next departing Bulldog Express or Charleston Express; however, these connections can be made more easily at the previous stop at the VA Clinic/Safeway. The late afternoon Coastal Express trip arrives after CCAT service has ended for the day.

SAFEWAY/VA CLINIC, NORTH BEND

Table 6 shows the transfer opportunities for Coastal Express riders at the Safeway/VA Clinic stop in North Bend. This stop also serves CCAT's Roseburg Express and Timber Express, but these connections are better served at the Coos Bay stops, as discussed below. Red cells indicate a missed connection opportunity based on the scheduled arrival and departure times.

Table 6. North Bend (Safeway/VA Clinic) Connections

Coastal Express Arrival (NB)	CCAT Departure (Bulldog Express)	CCAT Departure (Charleston Express)	CCAT Departure (Florence Express)*	CCAT Arrival (Charleston Express)	CCAT Arrival (Florence Express)*	Coast Express Departure (SB)
	no service	—	—	7:30 AM	no service	**7:25 AM**
10:35 AM	11:15 AM	10:30 AM	7:30 AM	—	—	
	11:15 AM	—	—	10:30 AM	11:17 AM	**11:20 AM**
2:30 PM	2:25 PM	2:30 PM	3:30 PM	—	—	
	2:25 PM	—	—	2:30 PM	7:17 PM	**2:45 PM**
6:15 PM	no service	—	—	no service	no service	

*Florence Express operates Monday, Tuesday, Thursday, and Friday.
Source: Curry Public Transit; Coos County Area Transit

The first Coastal Express trip of the day departs before the start of service on CCAT's local routes and 5 minutes after the first trip of the day from Charleston. One connection per day, four days per week, is possible to and from Florence—from Florence in the late morning and to Florence in the mid-afternoon.

TIOGA HOTEL–MARKET ST, COOS BAY

Table 7 shows the transfers for the Tioga Hotel–Market St stop in Coos Bay. Riders can transfer to the Pirate Express and Timber Express at CCAT's 4th and Central stop, and to the Roseburg Express at the Coos Bay City Hall stop. Riders can also transfer to the Roseburg Express at the Fred Meyer Coos Bay stop; buses depart 2 minutes later than at Tioga Hotel–Market Street and arrive 2 minutes earlier. Red cells indicate a missed connection opportunity based on the scheduled arrival and departure times.

Table 7. Coos Bay (Tioga Hotel–Market St) Connections

Coastal Express Arrival (NB)	CCAT Departure (Pirate Express)	CCAT Departure (Roseburg Express* outbound)	CCAT Departure (Timber Express outbound)	CCAT Arrival (Roseburg Express inbound)	CCAT Arrival (Timber Express inbound)	Coast Express Departure (SB)
	no service	—	—	no service	no service	**7:30 AM**
10:25 AM	11:14 AM	7:42 AM	7:27 AM/ *1:27 PM*	—	—	
	11:14 AM	—	—	no service	*8:57 AM*	**11:35 AM**
2:15 PM	2:27 PM	no service	1:27 PM	—	—	
	2:27 PM	—	—	4:18 PM	2:57 PM	**2:45 PM**
6:00 PM	5:49 PM	no service	no service	—	—	

*Roseburg Express operates Tuesday and Wednesday.

Source: Curry Public Transit; Coos County Area Transit

The first southbound trip departs and the last northbound trip arrives outside CCAT's service hours, meaning that passengers living beyond walking or biking distance of downtown Coos Bay would need to be driven by someone else to get to or from Coastal Express service. CCAT's Roseburg Express departs Coos Bay before the first northbound Coastal Express arrives and returns after the last southbound Coastal Express departs, meaning that same-day connections between Curry County and Roseburg are not possible on days that the Roseburg Express operates. One connection a day is possible to and from Coquille and Myrtle Point, but involves wait times of 2.5–3 hours.

FUTURE CCAT CONNECTION OPPORTUNITIES

Early-morning weekday service from Curry County to Coos County (arriving in North Bend by 7:30 AM) would provide opportunities for Curry County residents and visitors to connect to the first northbound Florence Express trip, which in turn provides opportunities for same-day onward connections to the northern Oregon coast, Eugene, and the Willamette Valley. In addition, a same-day connection would be possible to the Roseburg Express, which serves the VA hospital for Curry County.

A late-afternoon weekday departure from Coos County to Curry County (departing Coos Bay at 4:15 PM or later) could in the future provide similar same-day travel opportunities back to Curry County. However, CCAT would first need to add an extra midday trip on the Florence Express and/or expand the days of service of the Roseburg Express to create these connection opportunities.

Ongoing coordination with CCAT is desirable to optimize transfer connections in Coos Bay/North Bend, particularly to the Charleston Express and Timber Express routes.

SouthWest POINT

SouthWest POINT operates one round-trip per day, except on Sunday, between Brookings and Cave Junction, with onward connections possible to Grants Pass, Medford, Ashland, and Klamath Falls. The

eastbound trip departs Brookings at 10:45 AM, which connects with the first southbound Coastal Express trip from Coos County. The westbound trip arrives in Brookings at 5:25 PM, which is 2.5 hours after the last northbound Coastal Express trip departs.

LANGLOIS PUBLIC LIBRARY STOP

CPT serves flag stops in the Langlois. The flag stops include the Langlois Public Library and Langlois Store. A flag stop is a location where riders can 'flag' down a bus, although there is no formal stop. There are currently no formal stops in Langlois.

CPT has requested that ODOT formally designate the Langlois Public Library stop (northbound) as an official CPT bus stop and work to implement this change is currently underway. The following opportunities are recommended for this stop:

- Provide a CPT bus stop sign to indicate bus stop location
- Install a bus stop shelter[1]
- Provide sidewalks and bike lanes along US-101 and Waller Lane to provide easy access to the stop for pedestrians and bicyclists
- Provide trash cans near the stop and arrange for trash pickup service
- Provide street lighting at the bus stop

STAFF CAPACITY AND TRANSITION

Similar to many other transit agencies nationwide, CPT is currently experiencing difficulty finding sufficient drivers to operate the service it has the budget to operate. CPT should continue its efforts to hire and retain drivers to serve its existing service, as well as to expand service as funding becomes available. Additional administrative staff may also be needed as service is expanded over time.

In addition, a transition plan for the current manager of CPT is needed. This would include finding a successor, knowledge transfer, and training.

MARKETING AND ADVERTISING

The following describes actions to improve customer service and information that can be implemented in the short term and that should be maintained on a long-term basis.

Provide Maps and Brochures in a Single User-Friendly Brochure: Printed brochures and pamphlets can be designed and distributed to various target audiences to promote transit service. The communication style will vary by target group, while encouraging all to use the same transit service. A printed brochure or pamphlet should include a route map or maps showing all routes with bus stop locations, deviation zones (if used), landmarks, and key destinations. How-to-ride information should also be included. Contact information including website, telephone number, and information about available trip-planning tools should also be provided. Providing information in other languages spoken in the community (e.g., Spanish) helps reach members of the community who speak English as a second language.

[1] Each City owns and maintains CPT bus stop shelters; CPT is not responsible for the bus stop shelters.

Invest in Training Programs: The faces of the transit operator are the bus operators and customer service staff. Ongoing investment in training resources will help staff continue to contribute to the region's positive image.

Advertise: Advertising via different media (e.g., newspaper, radio, social media, booths at community events) can help reach a range of potential riders. Currently, CPT mainly advertises through local radio, local organizations, and word of mouth. Securing a Transportation Options Innovation Grant from ODOT could help with advertising efforts.

Medium-Term Future Service Opportunities (3-5 Years)

Table 8 documents mid-term future service opportunities.

Table 8. Medium-Term Future Service Opportunities

Medium-Term Future Service Opportunities	
Brookings Circulator	Run a city circulator in Brookings.
Increased Frequency and Service Hours of Coastal Express and Dial-A-Ride	Increasing frequency and service hours of Coastal Express and Dial-A-Ride services increases the number of trip types that transit can serve and helps address identified local and regional transit gaps. Adding an additional run (additional bus) will help to increase frequency.
Weather-Resistant Bus Shelters	Upgrade shelters to be more weather-resistant to wind and rain.
Coastal Express Expansion	Expand Coastal Express to serve Crescent City.
Marketing and Advertising	Continue marketing activities.

BROOKINGS CIRCULATOR

Surveys and focus group feedback, documented in *Memorandum #4: Unmet Transportation Needs*, indicated that there is a need for a local circulator in Brookings/Harbor. This route's purpose would be to serve residential and commercial developments in the city, including the city center, key destinations such as the Brookings DMV, and substantial residential developments on the north end of town.

IMPACTS ON RIDERSHIP

Ridership on the Brookings Circulator is expected to be driven primarily by riders living away from the US 101 corridor who would like to travel to travel to government offices (e.g., DMV), middle and high schools, medical services, grocery stores, and similar essential destinations, as well as connecting to the Coastal Express for longer-distance trips.

Transit Cooperative Research Program (TCRP) Report 161 presents a method for estimating rural and small city transit demand. The method can estimate demand for four specific markets: general public rural passenger transportation, passenger transportation specifically related to social service or other programs, travel on fixed-route services in small cities (less than 50,000 population and less than 70 vehicle hours of service per day), and travel on commuter services from rural areas to urban centers. The proposed Brookings Circulator, was treated as a 'small city fixed route' for this analysis.

Based on the transit service assessment, annual ridership is estimated at 26,700 annual 1-way passenger trips. *Appendix A includes the detailed analysis per the TCRP Report 161 methodology.*

SERVICE ALTERNATIVES

The routing alternatives prioritize service to eight key destinations in Brookings and Harbor:

- Brookings Harbor High School (Easy Street)
- Azalea Middle School (Pacific Avenue)
- Northwest residential areas
- Jerstad Manor Apartments (Pine Street)
- Ferns Avenue/Redwood Street
- Highway 101/N Bank Chetco River Road
- Brookings DMV
- Brookings Post Office

Each of the alternatives is shaped like a dumbbell with loops at either end in Brookings and Harbor connected by a trunk along US 101. Loops at either end of the route provide the benefit of increasing the service area compared to a line route that travels both directions on the same route. The disadvantages of loops are the increased travel time associated with out-of-direction travel along the one-way loop as well as the ease of understanding of where the bus will take you and how to ride the bus. However, dumbbell routes, particularly that are under 30 minutes in length, minimize out-of-direction travel and can be very effective for small cities.

Remix, a transit planning software package, was used to develop four routing alternatives. Remix provides estimated run times; population and employment within ¼ mile of stops for the alternatives and estimated mileage. A layover buffer of 10% of the runtime is included in the total trip time for each route to account for breaks for the driver, recover from delays and/or allow time for a driver to change. The four routing alternatives and their results are described below and summarized in Table 9.

Table 9. Service Route Alternatives

Alternative	Runtime (minutes)	Layover Buffer (minutes)[1]	Total Trip Time (minutes)	Number of Priority Stops Served	Population Coverage[2]
A	24.2	2.4	26.6	7 of 8	1,700
B	27.8	2.7	30.5	8 of 8	2,200
C	25.3	2.5	27.8	8 of 8	1,700
D	39.3	3.9	43.2	7 of 8	2,600

[1]The layover buffer was calculated at 10% of the runtime.
[2]Remix calculates populations within ¼ mile of bus stops

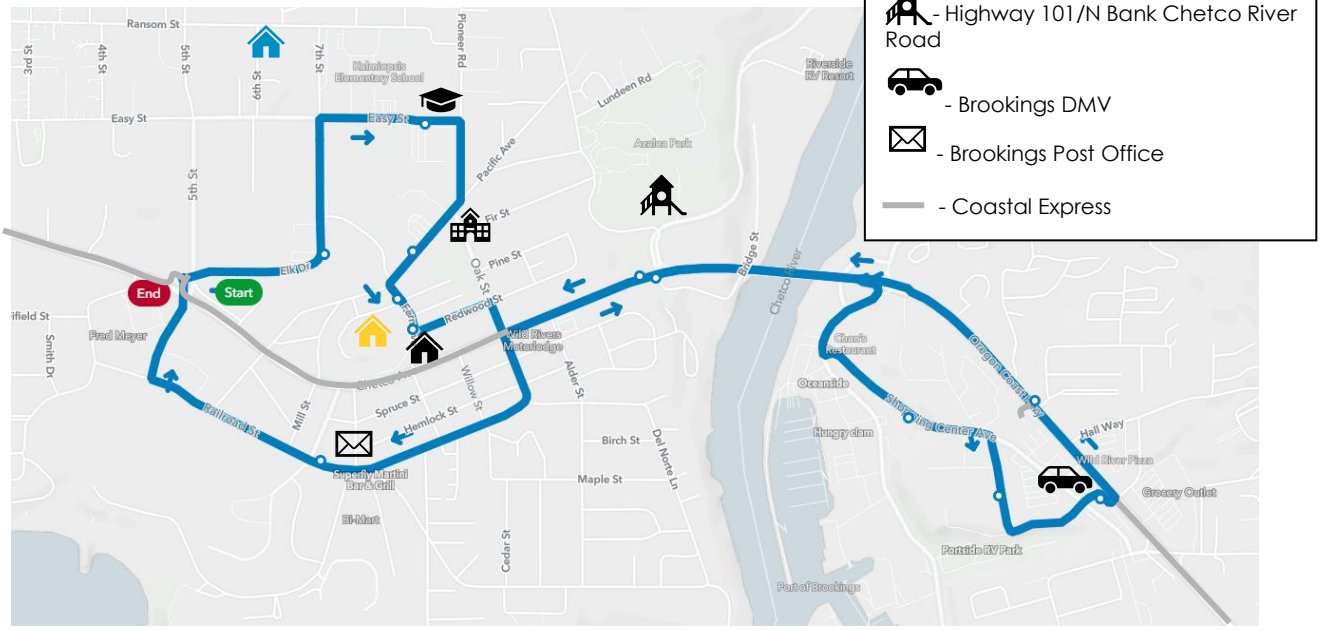
ALTERNATIVE A

Alternative A covers 7 out of 8 key destinations. It includes a clockwise loop starting at the layover point, 5th Street/Bankus Park, and serving the Church of Jesus Christ of Latter-day Saints (Elk Drive), Brookings Harbor High School (Easy Street, Azalea Middle School (Pacific Avenue), Jerstad Manor Apartments (Pine Street), Ferns Avenue/Redwood Street, Highway 101/N Bank Chetco River Road, Shopping Center Avenue, Brookings Harbor Shopping Center, Brookings DMV, Umpqua Bank (Harbor), and Brookings Post Office. This route does not serve the northwest residential areas along 5th Street, Ransom Street and W Easy Street. This route serves the 5th Street/Bankus Park Coastal Express stop and the Umpqua Bank (Harbor) close to the Chevron Coastal Express stop.

Alternative A is shown in Figure 2. Statistics for this alternative include:

- Runtime – 24.2 minutes
- Layover buffer – 2.4 minutes
- Total trip time – 26.6 minutes
- Route length – 4.83 miles
- ¼-mile capture area – 1,700 people

Figure 2. Alternative A



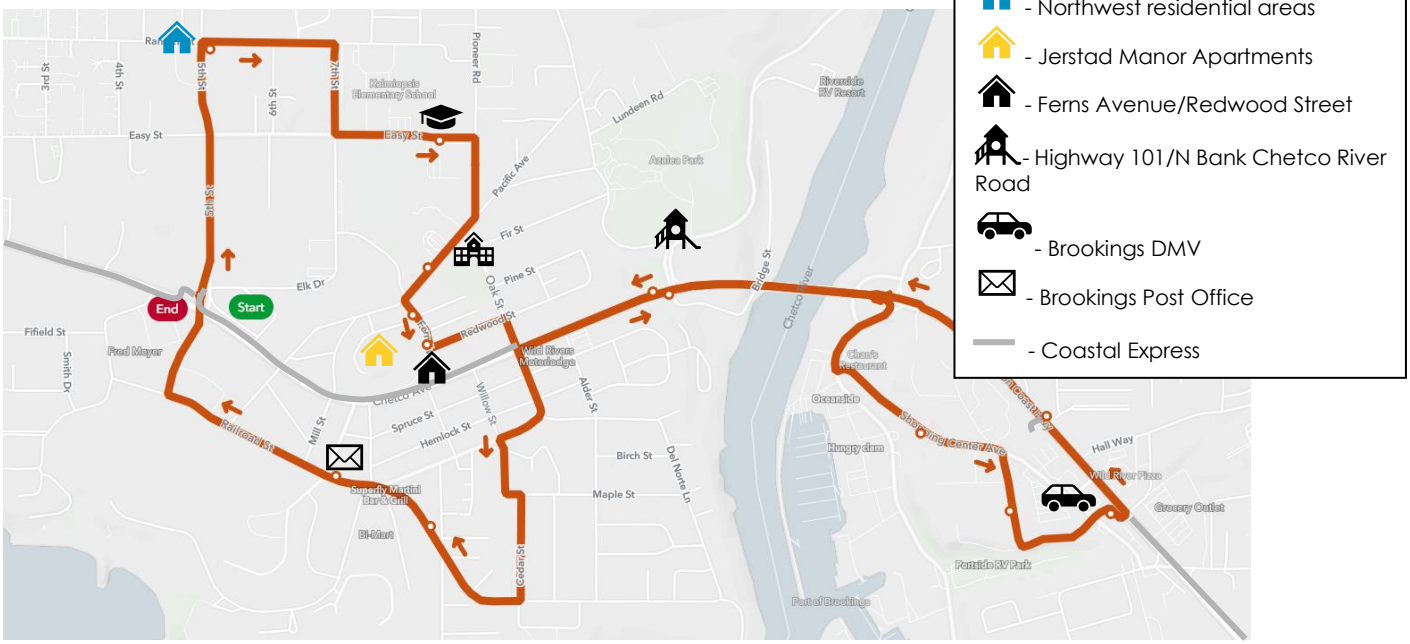
ALTERNATIVE B

Alternative B covers 8 out of 8 key destinations. It includes a clockwise loop starting at the layover point, 5th Street/Bankus Park, and serving northwest residential areas (5th Street/Ransom Avenue), Brookings Harbor High School (Easy Street, Azalea Middle School (Pacific Avenue), Jerstad Manor Apartments (Pine Street), Ferns Avenue/Redwood Street, Highway 101/N Bank Chetco River Road, Shopping Center Avenue, Brookings Harbor Shopping Center, Brookings DMV, Umpqua Bank (Harbor), Bi-Mart, and Brookings Post Office. Although Alternative B is similar to Alternative A, this route serves the northwest residential areas along 5th Street and Ransom Street and also provides service to Bi-Mart, south of Highway 101. This route serves the 5th Street/Bankus Park Coastal Express stop and the Umpqua Bank (Harbor) close to the Chevron Coastal Express stop.

Alternative B is shown in Figure 3. Statistics for this alternative include:

- Runtime – 27.8 minutes
- Layover buffer – 2.7 minutes
- Total trip time – 30.5 minutes
- Route length – 5.55 miles
- ¼-mile capture area – 2,200 people

Figure 3. Alternative B



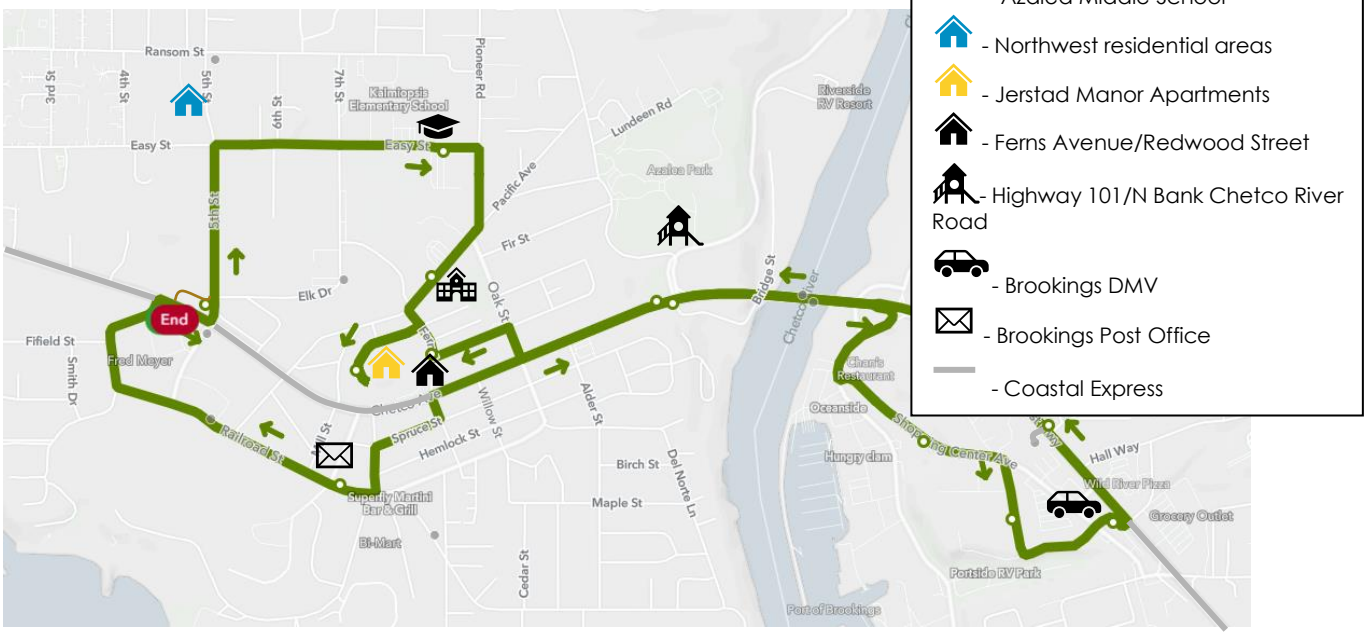
ALTERNATIVE C

Alternative C covers 8 out of 8 key destinations. It includes a clockwise loop starting at the layover point, 5th Street/Bankus Park, and serving the Brookings Harbor High School (Easy Street, Azalea Middle School (Pacific Avenue), Jerstad Manor Apartments (Pine Street), Ferns Avenue/Redwood Street, Highway 101/N Bank Chetco River Road, Shopping Center Avenue, Brookings Harbor Shopping Center, Brookings DMV, Umpqua Bank (Harbor), and Brookings Post Office. Alternative C is similar to Alternative A and B, this route serves the northwest residential areas along 5th Street and W Easy Street and also provides service along Chetco Avenue and Spruce Street. This route serves the 5th Street/Bankus Park Coastal Express stop and the Umpqua Bank (Harbor) close to the Chevron Coastal Express stop.

Alternative C is shown in Figure 4. Statistics for this alternative include:

- Runtime – 25.3 minutes
- Layover buffer – 2.5 minutes
- Total trip time – 27.8 minutes
- Route length – 5.06 miles
- ¼-mile capture area – 1,700 people

Figure 4. Alternative C



ALTERNATIVE D

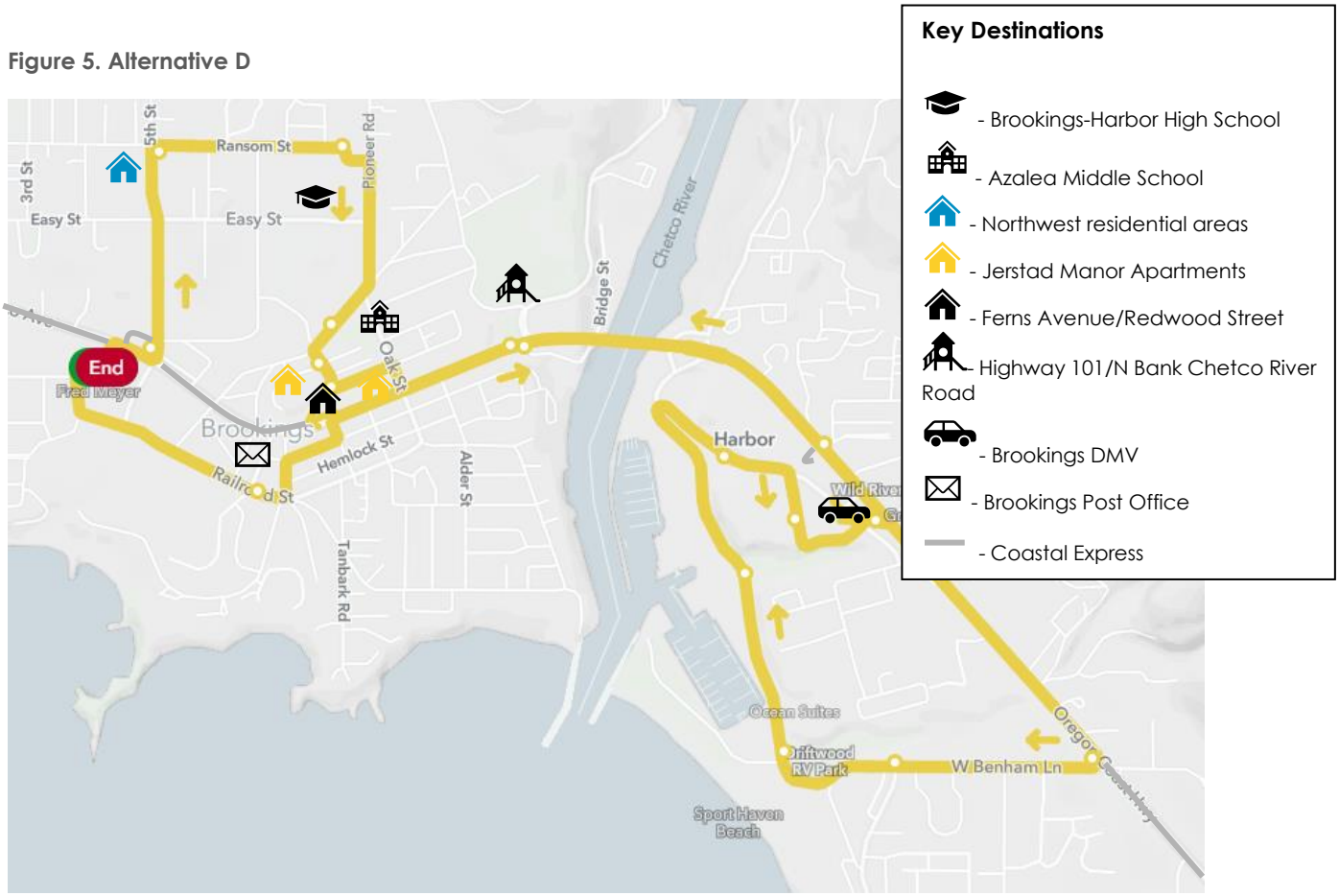
Alternative D covers 7 out of 8 key destinations. It includes a clockwise loop starting at the layover point, 5th Street/Bankus Park, and serving the residential areas to the north, Azalea Middle School (Pacific Avenue), Jerstad Manor Apartments (Pine Street), Ferns Avenue/Redwood Street, and Highway 101/N Bank Chetco River Road. In Harbor, the route serves commercial developments along Highway 101, Benham Lane and Lower Harbor Road with stops at Harbor Inn, D&D Oasis Beach House, Driftwood Park Store, Portside RV Park (close to residential areas in south Harbor), Brookings-Harbor Shopping Center, Brookings DMV, Umpqua Bank, and Brookings Post Office in downtown Brookings. Alternative D serves the residential areas to the north of Brookings and also provides service along Chetco Avenue and Spruce Street in Brookings. The route also

serves commercial developments in south Harbor closer to the waterfront. This route serves the 5th Street/Bankus Park Coastal Express stop and the Umpqua Bank (Harbor) close to the Chevron Coastal Express stop.

Alternative D is shown in Figure 5. Statistics for this alternative include:

- Runtime – 39.3 minutes
- Layover buffer – 3.9 minutes
- Total trip time – 43.2 minutes
- Route length – 7.86 miles
- ¼-mile capture area – 2,600 people

Figure 5. Alternative D



SERVICE SPAN AND FREQUENCY

Possible service span alternatives for the Brookings Circulator are provided in Table 10.

In the near-term, only 13 service hours can be provided per weekday. Based on the onboard survey results, the highest-priority improvements for survey respondents were extended hours and increased frequency among others. For the first year, 6 AM – 7 PM (connecting with the first southbound Coastal Express trip at 6:15 AM and the last northbound Coastal Express trip at 6:55 PM) is prioritized and recommended.

In future years or mid-term when additional funding is secured, CPT should consider extending service to the weekend. Weekday service could be maintained and should provide connections to the Coastal Express, adding 11 AM – 4 PM on Saturday.

In the long term, CPT could evaluate ridership by weekdays and weekends, as well as by time of day, once ridership patterns are established. Rider surveys could seek feedback about adjusting service hours or adding service frequency.

Table 10. Brookings Circulator Service Alternatives

Days	Span and Frequency		Headway	Target Markets	Notes
	Mid-Term	Long-Term			
Weekdays Only	6 AM – 7 PM, 13 hours daily, 65 weekly hours	6 AM – 8 PM, 14 hours daily, 70 weekly hours	60 minutes	Education, residential, commercial	Consistent schedule Higher frequency No weekend service
Weekdays and Saturdays	6 AM – 7 PM Weekdays, 11 AM – 4 PM Saturday, 70 weekly hours	6 AM – 8 PM Weekdays, 11 AM – 4 PM Saturday, 70 weekly hours	60 minutes	Education, residential, commercial	Consistent schedule Same frequency Provides Saturday service No Sunday service
Weekdays and Weekends	6 AM – 7 PM weekdays, 11 AM – 4 PM weekends, 75 weekly hours	6 AM – 8 PM weekdays, 11 AM – 4 PM weekends, 80 weekly hours	30 minutes	Education, residential, commercial	Consistent schedule Same frequency Weekend service

COMPLEMENTARY ADA SERVICE

Because the Brookings Circulator would be a local fixed-route service, the ADA would require that complementary demand-responsive service be provided for passengers unable to use the fixed route. The existing Brookings Dial-a-Ride service can fill this role. Dial-a-ride service would need to be offered during the same service hours[2] as the Brookings Circulator, with service provided to areas within at least ¾ mile of the Brookings Circulator stops.

INCREASED FREQUENCY AND SERVICE HOURS OF COASTAL EXPRESS AND DIAL-A-RIDE SERVICES

Memorandum #4: Unmet Transportation Needs documents a need for additional Coastal Express trips. These trips would provide more flexibility for making intercity trips and reduce passenger wait times, particularly for return trips after an errand has been completed. In the future, depending on funding availability and ridership, an additional bus could be used to provide another Coastal Express trip. An additional northbound and southbound afternoon run is recommended to provide more frequency and opportunities for

[2] Currently Dial-A-Ride service in Brookings is offered 8 AM to 5 PM Monday through Friday and 8 AM to 4 PM on Saturdays.

connection; an early morning northbound trip would greatly improve intercity connections. Dial-a-Ride service hours should allow for connections to be made to and from all Coastal Express trips.

WEATHER-RESISTANT BUS SHELTERS

Feedback from focus groups and the community indicate a need for more robust, weather-resistant shelters. Weather conditions in Curry County, which include high winds and strong rains, make typical shelters inadequate, especially for long waits. In the medium term, existing shelters should be updated with weather-resistant shelters and, as budget and space allow, stops with no shelters should have weather-resistant shelters installed. Shelters located on the northbound side of the Coastal Express route could potentially be turned around where space permits, so that the screen blocks wind and rain from the direction of the ocean.

COASTAL EXPRESS EXPANSION

Based on outreach conducted, survey respondents and focus group members indicated that there is a need to provide service to Crescent City as riders often travel to Wal-Mart and Sutter Coast Hospital. Two daily run from Brookings to Crescent City are recommended (one from Brookings and one to Brookings); this will provide connections to key destinations in Crescent City and further transfers via Redwood Coast Transit. As funding, vehicle and driver availability become clearer in the future, expansion of Coastal Express can be explored.

Another potential option could be to combine the Brookings to Crescent City service with the Brookings Circulator, thereby providing service every two to three hours between Crescent City and Brookings/Harbor, eliminating the need for one or two transfers for a relatively short trip.

MARKETING AND ADVERTISING

Continue the marketing and advertising activities described in the Short-Term Future Service Opportunities section in the medium term.

Long-Term Future Service Opportunities (>5 Years)

Table 11 documents the long-term future service opportunities

Table 11. Long-Term Future Service Opportunities

Long-Term Future Service Opportunities	
Gold Beach Circulator	Run a city circulator in Gold Beach.
Add Stop at Southwestern Oregon Community College (SWOCC)	Provide services to SWOCC by adding a transit stop in Brookings as ridership increases.
Marketing and Advertising	Continue to improve marketing and advertising in the long run.

GOLD BEACH CIRCULATOR

Based on Dial-A-Ride service demand and by monitoring where requests are made for Dial-A-Ride services in Gold Beach, informed decisions can be made about where to prioritize any new routes. Current key destinations include county offices in Gold Beach, shopping centers and state offices in Brookings/Harbor.

The circulator's purpose would be to serve residential and commercial developments in the city, including the courthouse at Gold Beach, residential areas and commercial areas in the northern half of the city. Depending on demand and ridership in the future, the route can also serve as a connector to Brookings/Harbor that operates in between Coastal Express runs; the route could serve a dual role as circulator for Gold Beach and the northern part of Brookings.

ADD STOP AT SWCC

There is demand for a stop at Southwestern Oregon Community College: Curry Campus in Brookings. Currently, there is no place for the bus to pull in or pull out from, so coordination with SWCC is recommended to create a bus stop and add the stop to the Coastal Express route in the future.

MARKETING AND ADVERTISING

Continue the marketing and advertising activities described in the Short-Term Future Service Opportunities section in the long-term. Promote CPT on new media channels that may be popular in the future, such as new radio stations or newspapers.

Onboard Survey #2 & Virtual Outreach Effort

A second onboard survey was conducted by Kittelson on August 29th, 2022 for the project and a virtual outreach effort (online survey) was also conducted. This survey focused on ranking of service enhancements and alternatives (Brookings Circulator). A total of 23 onboard surveys were completed and collected in-person while no responses were received for the online survey. *Appendix B includes the detailed onboard survey #2 report.*

Key findings include:

- Majority of the survey respondents reported that they ride or would ride Coos County Area Transit District (CCATD) buses if transfers between CPT and CCATD buses were made easier. Some of the respondents also indicated that they ride or would ride Redwood Coast Transit and SouthWEST POINT if transfers between these buses and CPT were made easier.
- Some respondents reported they would ride the local Brookings/Harbor proposed route in the future if it were in place while other respondents indicated that they wouldn't ride the route. Majority of the respondents were not from the area (visitors) and did not have an opinion.
- In ranking five options from low priority to high priority, 'Easier transfers with other buses in Coos County, North Bend and Smith River' and 'Coastal Express service in Crescent City' received the highest number of number 1 ratings and 'More Dial-A-Ride hours' and 'A local bus route in Brookings/Harbor' received the highest number of number 5 ratings.
- Respondents mentioned that they would want to go to Azalea Park, Fred Meyer, convenience stores, local businesses, Harbor waterfront, US Coast Guard station area (Harbor) if they were to ride the proposed Brookings/Harbor local route.
- Additional recommendation voiced by respondents included:
    - Provide service to Eugene

- Need for more frequent buses
- Service to the California border

CAPITAL ALTERNATIVES

This section reviews the opportunities for the existing and future fleet, including fuel types and low-floor bus options. Clean and operational vehicles improve rider experience and properly maintained and replaced vehicles reduce the likelihood of vehicle breakdowns and/or disruptions to service. The following sections describe the existing transit fleet and potential fleet improvements.

VEHICLE TYPES

CPT currently owns and operates 12 regular buses and two vans. The average age of the active fleet is 4.4 years of use. Eight vehicles are beyond their expected useful life (EUL) timelines in years and two vehicles are past their EUL in miles. There is currently a large backlog in vehicle production and delivery. CPT has purchased seven new vehicles and is expecting them to be delivered in 1.5–2 years. Cleaner fuel sources, such as electricity, could be considered for future vehicle purchases and facilities. In fiscal year 2020, CPT operated approximately 284,176 vehicle revenue miles. Historically, CPT operated approximately 242,000 vehicle revenue miles per year. With EULs of 150,000 miles for buses used by CPT, about two replacement vehicles are anticipated to be needed each year. This replacement schedule, alongside any increases to service that accelerates the rate of fleet replacement, should be taken into consideration when developing a fleet plan.

The fleet plan should also address the types of vehicles to be purchased. Transit agencies face the issue of balancing the efficiency advantages of fleet standardization with the benefits of matching vehicle size and other vehicle attributes with specific service needs. Benefits of fleet standardization are greater flexibility in vehicle assignments and a reduced need for spare vehicles since sub-fleets each require their own spare vehicles, and smaller fleets typically require a greater spare ratio. In addition, fleet standardization reduces maintenance costs by requiring less parts inventory and letting mechanics focus on a reduced number of vehicle models, which allows them to become more familiar with the specific maintenance requirements of those vehicles. The benefit of having several diverse vehicle types is that a vehicle can be more closely tailored to a specific service need or operating environment. For example, the expanded demand-response services continue to be appropriately served by a small, shuttle-type vehicle, while a longer route, such as the intercity services, would be better served by a larger bus with amenities such as softer seats and reading lights.

Other recommendations for the fleet include:

- Purchase vehicles in larger batches. There is an advantage in having multiple vehicles that are identical in terms of parts and maintenance needs. Even very similar vehicles purchased in different years will have differences that may impact maintenance costs.
- Maintain an average fleet age less than half of the average life span of the vehicles. For example, a sub-fleet of buses with 10-year EULs should have an average fleet age of five years or less.

FLEET SIZE

The size of the fleet is determined by the service needs, and a final size recommendation will be made once the future service plan has been established and financial forecasts are finalized.

Typically, a 20 percent spare ratio is recommended. Adequate spare buses are particularly important for small fleets, since one or two buses that are out of service for an extended period can have a significant impact on the transit provider's ability to meet service needs. In addition, with some routes operating with long headways, missing a trip due to not having an available spare bus will have a significant impact on customer service.

There are two approaches to establishing the spare fleet. One approach is that spares are composed of older buses that are no longer cost-effective for daily service but are maintained to the point that they can be used on a limited basis. Typically, the maintenance costs to keep the older buses in running condition are higher than for a newer bus.

The other option is to have a spare fleet that is similar in age to the in-service fleet. In this case, the spare buses can be rotated into service, which can reduce the mileage accrued on individual vehicles and extend vehicle life. In addition, the incidence of road calls with a newer spare fleet is likely to be lower.

FUEL TYPES

CPT has been purchasing gasoline-powered vehicles. CPT could consider the purchase of lower-emission vehicles, such as buses using hybrid-electric propulsion. A bus with hybrid-electric propulsion costs $150,000 to $200,000 more than a similar bus with diesel propulsion but will generally reduce fuel costs by approximately 25 to 30 percent. Given these costs and savings, the payback on the initial higher purchase price is unlikely to be sufficient to justify the purchase of hybrid-electric buses simply on a direct cost–benefit basis. However, some transit agencies believe that there is additional value to hybrid technology resulting from reduced emissions and an improved community perception of the transit agency. In addition, occasional federal funding incentives for the purchase of low-emission buses may make the purchase of hybrid-electric buses more feasible.

There have also been substantial advancements in all-electric buses. A promising option for all-electric bus technology appears to be quick re-charging of batteries while the bus is stopped at a station or at a layover spot, often without substantial service delay. TriMet is testing a quick re-charge station at the Sunset Transit Center and a few transit agencies in Oregon have purchased several all-electric buses and installed charging stations at their vehicle storage yards. Other agencies can learn from their experiences and should consider accommodating higher-voltage electrical connections at new or reconstructed stations, which can simply involve incorporating the appropriate conduit when the facility is constructed.

A third fuel type option is compressed natural gas (CNG) buses. Natural gas is an abundant, domestically produced fuel that is used in transit vehicles throughout the United States. Advantages of CNG buses include the current low cost of natural gas, which is typically from 25 to 45 percent lower than a gallon of diesel fuel. Another advantage is that CNG buses typically produce approximately 20 percent less greenhouse gases when compared with diesel buses. Challenges in using CNG are the additional cost of purchasing new vehicles (typically $25,000 to $50,000 more than comparable diesel models), the need to have dual fueling facilities, the availability of natural gas, and CNG storage.

CPT should monitor progress from other agencies to learn how they are transitioning their fleet to clean vehicles. A constraint includes charging the vehicles; the Coastal Express fleet would need to be charged

overnight in the facility in Coos Bay and in Brookings, while Dial-A-Ride vehicles in Port Orford and Gold Beach will also require overnight charging. In addition, switching to any new fuel or power type requires the development of an implementation schedule for fleet conversion.

LOW-FLOOR BUSES

The transit vehicle market is trending toward low-floor buses. Low-floor buses eliminate the steps in the vehicle, provide easier access for riders, speed boarding and alighting, and the ramps are much easier for drivers to operate than traditional lifts. These aspects are particularly important for riders with mobility challenges and for people who may have strollers or carts. However, routes with challenging topography or stops where it is difficult to maintain an ADA-compliant slope on the ramp are best served by buses with lift systems. Many agencies find the low-floor buses to be best for their circulators, but the traditional cutaway buses are needed for their intercity routes such as the Coastal Express due to the durability. Eventually, as part of the normal bus replacement schedule and as sidewalk infrastructure improves, CPT could replace any remaining high-floor buses used for circulator routes or Dial-A-Ride services with low-floor models. One challenge includes deployment of the low-floor ramp at an ADA-compliant angle at rural stops without curbs.

FACILITY IMPROVEMENTS[3]

BUS STOP IMPROVEMENTS

Bus stop improvements can be a low-cost way to make riding transit more comfortable, increasing ridership from existing users, and making transit service more visible, attracting new riders. 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. In general, cities in Curry County own and maintain CPT bus stop shelters; CPT is not responsible for the bus stop shelters. Other options for funding transit amenities include:

- Cities having a local development code to require certain types of larger development (e.g., a subdivision, a big box retailer) to fund construction of transit amenities (e.g., shelters) as a condition of approval, working with the local transit provider to identify appropriate locations. The development needs to be big enough to establish a nexus between the requirement and the development's impacts (e.g., big box generates a lot of trips, some of these could come by transit).
- CPT pursuing a partnership with local businesses or organizations to sponsor stops. A business could, for example, pay for trash pickup at a trash can at a stop serving their stop, or for electricity for a shelter located at the stop, with the transit agency posting a sign acknowledging the sponsorship. Larger-ticket items such as shelters could also be sponsored by businesses or come through fund-raising efforts from local organizations.
- CPT working with an advertising company to pay to install and maintain the shelter in return for the rights to place advertising on the side. This option is mainly applicable to busy roadways such as US 101 where a lot of people would see the advertising.

Table 12 provides recommended improvements at each bus stop.

[3] Topics covered in this section (such as bus stop improvements, park-and-rides, and transit centers) will also be address by model development code or zoning ordinance language provided in the draft TSP.

Table 12. CPT Bus Stop Improvement Recommendations

Stop	Short-term Improvements	Long-term Improvements
Newmark Center, North Bend	• Provide CPT bus stop sign to indicate bus stop location[4] • Provide at least one bike rack	• Improve sidewalk and bicycle connectivity to provide easy access for students to the college campus from E Entry Way. • Provide bike lanes along Newmark Ave (OR-540) • Provide crossing opportunities at Fir Street/ Newmark Ave (OR-540)
Safeway/VA Clinic at Marion Avenue, North Bend	• Provide trash cans near the stop • Provide at least one bike rack	• Provide bike lanes along Marion Avenue and Virginia Avenue (OR-540) to provide access to bicyclist to the bus stop • Install street lighting at the bus stop • Provide crossing opportunities at 11th Street/ Marion Avenue (OR-540)
Tioga Hotel–Market Avenue, Coos Bay	• Provide CPT bus stop sign to indicate bus stop location • Provide at least one bike rack • Coordinate with CCAT to determine if a bus stop shelter with benches is warranted, and provide bike racks and trash cans near the stop	• Provide bike lanes along Market Avenue, N 2nd Street and nearby streets to improve bicycle connectivity • Improve ADA ramps condition • Provide marked crossings at E Market Avenue/N 2nd Street
Fred Meyer, Coos Bay	• Provide CPT bus stop sign to indicate bus stop location • Provide at least one bike rack	• Provide bike lanes along US-101, Johnson Avenue and nearby streets to improve bicycle connectivity • Improve sidewalk connectivity on the east leg of Johnson Avenue • Improve ADA ramps condition • Provide marked crossings at Johnson Avenue/Front Street
Ray's Food Place, Bandon	• Provide a bench in the covered area • Provide at least one bike rack	• Provide bike lanes along NE 2nd Street and SE 1st Street to improve bicycle connectivity • Improve sidewalk connectivity on the northside of NE 2nd Street • Improve ADA ramps condition • Provide crossing opportunities at US-101/NE 2nd Street
Langlois Public Library	• Provide CPT bus stop sign to indicate bus stop location • Install bus stop shelter • Provide trash cans near the stop • Provide at least one bike rack	• Provide sidewalks and bike lanes along US-101 and Waller Lane to provide easy access to the stop for pedestrians and bicyclists • Install street lighting at the bus stop
Langlois Store	• Install bench/waiting area • Provide trash cans near the stop • Provide at least one bike rack	• Provide sidewalks and bike lanes (northbound) along US-101 to provide easy access to the stop for pedestrians and bicyclists

[4] CPT is not responsible for implementation of bus stop signs outside Curry County but CPT can coordinate with local governments to implement CPT bus stops elsewhere.

		• Install street lighting at the bus stop
Ray's Food Place, Port Orford	• Provide CPT bus stop sign to indicate bus stop location • Provide at least one bike rack at the bus stop	• Provide sidewalks and bike lanes along 15th Street to improve pedestrian and bicycle connectivity • Improve ADA ramps condition • Provide crossing opportunities across US-101
Ray's Food Place, Gold Beach	• Provide trash cans near the stop • Provide at least one bike rack	• Provide bike lanes along US-101, 6th Street and nearby streets to improve bicycle connectivity to the stop • Improve ADA ramps conditions
5th Street/Bankus Park, Brookings	• Provide trash cans in parking lot near the stop • Provide at least one bike rack	• Provide bike lanes along 5th Street to provide access to bicyclist to the bus stop • Install street lighting at the bus stop
Chevron Station, Harbor	• Provide CPT bus stop sign to indicate bus stop location • Install bus stop shelter with benches if ridership warrants • Provide trash cans near the stop • Provide at least one bike rack	• Provide bike lanes along Hoffeldt Lane and Zimmerman Lane to improve bicycle connectivity • Improve sidewalk connectivity along Hoffeldt Lane and Zimmerman Lane
McKay's Market, Harbor	• Provide CPT bus stop sign to indicate bus stop location • Install bus stop shelter with benches if warranted • Provide trash cans near the stop • Provide at least one bike rack	• Provide bike lanes along Hoffeldt Lane and Zimmerman Lane to improve bicycle connectivity • Improve sidewalk connectivity along Hoffeldt Lane and Zimmerman Lane • Improve ADA ramps condition
Rancheria, Smith River	• Provide CPT bus stop sign to indicate bus stop location • Coordinate with Redwood Coast Transit on need for a bus stop shelter • Provide at least one bike rack	• Provide bike lanes along N Indian Road • Improve ADA ramps condition • Provide crossing opportunities across US-101

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 a well. Benches that attach to the bus stop pole, such as the Simmi-Seat (see Figure 6) take up very little space, have low maintenance, and are relatively inexpensive. Benches with backs and wider seating can be more comfortable for elderly and people with disabilities. Installed benches vary in price from $500 to $1,500, depending on materials, the quality of the product, and the installation conditions.

Figure 6. 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 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 documented in the bus stop audit in *Technical Memorandum #1: Existing System Conditions* should be considered, although the final prioritization will depend on the future service plan.

As previously mentioned, weather-resistant shelters are recommended at CPT bus stops (see Figure 7). Moreover, consideration should be given to shelters located on the northbound side of the Coastal Express route as they could potentially be turned around where space permits, so that the screen blocks wind and rain from the direction of the ocean. 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. In particular, vandalism may be more prevalent on shelters with windscreens. However, due to the rain and wind conditions in Curry County, windscreens are recommended for CPT 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.

Figure 7. Weather-Resistant Bus Shelter
Brasco International – Bayline Shelter (202)

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 excluding any potentially needed engineering or permitting. Designated bus stops have the following advantages:

- They provide awareness of the service, improving the visibility of CPT 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 if 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. An existing CPT sign with a schedule and route times is shown in Figure 8. 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 major bus stops is recommended. This option is especially important in areas where visitors tend to use CPT service, because they are less likely to be familiar with the fares, routes, and schedules.

Figure 8. CPT Bus Stop Sign
Kittelson & Associates 2022

Bus stops should be located to allow for safe bus and passenger access. Where possible, bus stops would be located at locations that have existing or planned sidewalks or other pedestrian connections, and that allow for safe pedestrian crossing of the street. On major roadways with speeds of 35 mph or more, such as state highways, transit agencies may consider bus stops that allow the bus to stop out of the traffic lane to avoid rear-end collisions and to discourage unsafe passing of the bus by motorists.[5] At intersections, locating a bus stop on the far side of the street helps maintain pedestrian visibility at crosswalks and allows buses to reenter the travel lane more easily. Major bus stops should have some lighting and provide bicycle parking accommodations such as racks.

Table 13 presents a list of recommended amenities for new bus stops based on stop level.

[5] Source: https://nacto.org/publication/transit-street-design-guide/stations-stops/stop-configurations/curbside-pull-stop/

Table 13. Bus Stop Amenity Recommendations by Stop Level

Amenity	Typical Cost	Stop Level
Signage & Route Information	$300 to $1,000	All Stops
Lighting	$5,000 to $10,000	All Stops
Bench	$500 to $1,500	3+ Boardings per Day
Shelter (small)	$6,000	20+ Boardings per Day
Shelter (large)	Varies	Major Bus Stops/Transit Centers
Trash Can	$1,000 to $1,500	Major Bus Stops/Transit Centers, as-needed
Bike Racks	$150 to $300 (two-bike rack)	Major Bus Stops/Transit Centers, near bike routes
Information Cases (systemwide route information: advertising)	$1,000 to $10,000	Major Bus Stops/Transit Centers
Bike Lockers	$2,000 to $3,000 per locker	Major Bus Stops/Transit Centers, near bike routes

Source: Small Cities Transit Stop Design Guide; Umpqua Transit Master Plan

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 CPT that serves low-density and rural communities. While CPT is not able to provide safe and convenient pedestrian access to transit stops on its own, CPT can work with local cities, Curry 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 or provided by other projects, including private development 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. Figure 9 presents an example of a bike rack at a bus stop.

Figure 9. Bike Rack
NACTO Transit Street Design Guide

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. It may not make sense for CPT to invest in a large park-and-ride program, as parking in many areas is free and widely available. Instead, agreements with local business, local government, and community organizations that allow use of a few spaces for "informal" park-and-ride usage is recommended.

TRANSIT CENTER

CCAT plans for the VA Clinic/Safeway stop in North Bend to be a "mobility hub" site, where multiple modes connect. Continued coordination with CCAT to improve timed connections at the transit mobility hub are recommended. No other transit centers in the CCAT service area are recommended at this time. However, depending on how transit service evolves in the longer term in Brookings, a larger on- or off-street site may become necessary to facilitate connections between intercity, local circulator, and dial-a-ride services.

NEXT STEPS

The service opportunities will be reviewed with the Project Management Team and the Advisory Committee; recommendations will be used to conduct the financial assessment of service opportunities and will be refined to be included in the Draft TDP and Draft Coordinated Plan.

Appendix A

Rural Transit Need and Demand Spreadsheet

Note: This spreadsheet is intended to accompany the B-36 Workbook, and should not be used without first reviewing the Workbook.

Instructions

1) Click on the 'Analysis Setup' tab, enter a description of your analysis at the top, then check the boxes associated with the analysis procedures that you would like to apply.
2) Click on 'Input' tab and enter data in the boxes provided. The shaded boxes represent data that is not needed for your analysis, based on the analysis procedures that you chose in Step 1.

3) After entering all of the necessary data on the "Input' tab, the 'Output' tab will display the results of the selected analyses.

4) To print out a report of your inputs and results, click here:
Reports will be printed on your default printer.

Click here to start over.

Click here to clear the Peer Data Worksheet.

Note: If macros are disabled, the above buttons will not function. This will not affect spreadsheet calculations. The reports can still be printed using the File -> Print command. The data fields on the 'Input' form can be cleared manually to begin a new analysis. It is recommended to save a blank copy of the spreadsheet, which can be used to begin new analyses.

NOTE: If you are having trouble with Macros, click on the BLUE 'Macro Instructions' tab.

Rural Transit Need and Demand Analysis Setup

Service Area:	Curry County
Analysis Description:	
Additional Description:	

Select the analysis procedures that you would like to apply by clicking on the appropriate boxes.

Need - Number of Persons	☐	
Need - Number of Trips	☐	
Demand - Program	☐	
Demand - Non Program	☐	
General Public Rural Passenger Transportation (eligible for reporting to NTD)	☐	
Demand - Small City Fixed Route	☑	*Urban center population must be less than 50,000* *Revenue-hours must be greater than zero and less than or equal to 20,000*
Demand - Commuter by Transit to an Urban Center	☐	*Commuters <u>by all modes</u> from the rural county to the urban place must be less than or equal to 10,000.*

SERVICE AREA CHARACTERISTICS INPUT TABLE -- Fill In All Unshaded Boxes

Service Area:	Curry County
Analysis Description:	
Additional Description:	

Transit Need Inputs

Number of persons residing in households with income below the poverty level:

Number of households residing in households owning no vehicles:

	Households	Persons
1-Person households:		
2-Person households:		
3-Person households:		
4-or-more-Person households:		

Mobility Gap:
Enter State (from drop-down list):

General Public Rural Non-Program

		American Community Survey Table Number
Population Age 60+		B01001
Population Age 18 - 64 with a Mobility Limitation		S1810
Persons Living in Households with No Vehicle Available		B08201

General Public Rural Passenger Transportation

Need:		
Annual Vehicle-miles of Service:		Annual Revenue-Miles

Small City Fixed Route Inputs

Population of City:	6,744	Persons
College and University Enrollment (Total):	0	Students
Annual Revenue-Hours of Service:	3,380	Annual Revenue-Hours

Demand - Commuter by Transit to an Urban Center

Workers Commuting from Rural County to Urban Center		
Distance from Rural County to Urban Center		Miles
Is the Urban Center a State Capital?	☐	Check Box for Yes

Program Demand Inputs

Program Name	Program Type	Number of Program Participants:	Number of Events per Week:	Percentage of Participants who attend on an **AVERAGE** day:	Percentage of Participants who are Transit Depdendent or Likely to Use Transit:	Number of Weeks Program is Offered (Annually):

The prefered source of demographic data is the American Community Survey, available at:
http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml
At that website enter the referenced ***Table Number*** *in the appropriate box. Some table numbers may not be available for communities under*

RURAL TRANSIT NEED/DEMAND ESTIMATION - OUTPUT TABLE

Service Area:	Curry County
Analysis Description:	
Additional Description:	

Estimation of Transit Need

Total need for passenger transportation service:		Persons
Total households without access to a vehicle:		Households
State Mobility Gap:		Daily 1-Way Psgr.-Trips per Household
Total need based on mobility gap:		Daily 1-Way Passenger-Trips
		Annual 1-Way Passenger-Trips

General Public Rural Non-Program Demand

Estimate of demand for general public rural transportation		
Rural transit trips:		Annual 1-Way Passenger-Trips

General Public Rural Passenger Transportation

Estimate of demand for rural transportation		
Total Rural Non-Program Demand		Annual 1-Way Passenger-Trips

Small City Fixed Route

Annual Ridership:	26,700	Annual 1-Way Passenger-Trips

Demand - Commuter by Transit to an Urban Center

Proportion of Commuters using Transit:		
Commuter trips by transit between counties:		Daily 1-Way Passenger Trips
		Annual 1-Way Passenger-Trips

Rural Program Demand

Annual Program Trip Estimation

		Annual 1-Way Passenger-Trips
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		Annual 1-Way Passenger-Trips
Total Rural Program Demand		Annual 1-Way Passenger-Trips

Peer Data Worksheet

Input Data from Peer Transit Systems or Existing Transit Service										
Name of Peer System										
Population of Area										
Size of Area Served (Square Miles)										
Annual Vehicle-Miles of Service Provided										
Annual Vehicle-Hours of Service Provided										
Service Type (Fixed Route, Route-Deviation, Demand-Response)										
Number of One-Way Trips Served per Year										
Degree of Coordination with Other Carriers (Low, Medium, High)										

Results of Peer Data Comparison		**Population**	**Annual Vehicle-miles**	**Annual vehicles-hours**
Input Data for My System:		0	0	0
	Observed Trip Rates	**Demand Estimate Based On:**		
Peer Values		Population	Annual Vehicle-miles	Annual vehicles-hours
Trips per Capita				
Maximum				
Average				
Median				
Minimum				
Trips per Vehicle-Mile				
Maximum				
Average				
Median				
Minimum				
Trips per Vehicle-Hour				
Maximum				
Average				
Median				
Minimum				
Values expected for my system				
Maximum				
Average				
Median				
Minimum				

Appendix B

KITTELSON & ASSOCIATES
851 SW 6th Avenue, Suite 600
Portland, OR 97204
P 503.228.5230

Onboard Survey

October 11, 2022

Project# 23021.039

To: Kathy Bernhardt
Curry County Public Transportation Service District
PO Box 1771
Brookings, OR 97415

From: Susan Wright, Bincy Koshy, Sophia Semensky, Kittelson & Associates, Inc.

CC: Ian Horlacher, ODOT

RE: Onboard Survey (Task 3.3)
Curry County Transit Development Plan

ONBOARD SURVEY #2 SUMMARY

The following provides a summary of the onboard survey #2 conducted for the Curry County Transit Development Plan (TDP) on August 29th, 2022. The onboard survey consisted of questions asking about service enhancements, and the proposed local bus route alternatives for Curry Public Transit Inc. (CPTI). A total of 23 onboard surveys were completed. The onboard survey results are included in Attachment A.

Key Findings Include:

- Majority of the survey respondents reported that they ride or would ride Coos County Area Transit District (CCATD) buses if transfers between CPT and CCATD buses were made easier. Some of the respondents also indicated that they ride or would ride Redwood Coast Transit and SouthWEST POINT if transfers between these buses and CPT were made easier.
- Some respondents reported they would ride the local Brookings/Harbor proposed route in the future if it were in place while other respondents indicated that they wouldn't ride the route. Majority of the respondents were not from the area (visitors) and did not have an opinion.
- In ranking five options from low priority to high priority, 'Easier transfers with other buses in Coos County, North Bend and Smith River' and 'Coastal Express service in Crescent City' received the highest number of number 1 ratings and 'More Dial-A-Ride hours' and 'A local bus route in Brookings/Harbor' received the highest number of number 5 ratings.
- Respondents mentioned that they would want to go to Azalea Park, Fred Meyer, convenience stores, local businesses, Harbor waterfront, US Coast Guard station area (Harbor) if they were to ride the proposed Brookings/Harbor local route.
- Additional recommendation voiced by respondents included:
    - Provide service to Eugene
    - Need for more frequent buses
    - Service to the California border

Attachment A

#	Analyst	1. Rank the following service enhancements by highest priority					2. What other buses do you ride or would you ride, if it was easier to transfer?			3A. If Brookings/Harbor had its own local bus route, would you use the service?	3B. Where would you want the bus route to take you in Brookings/Harbor?	Other Comments
		Easiest transfers with other buses in Coos Bay, North Bend, and Smith River	*Extra Coastal Express morning run*	*Coastal Express service in Crescent City*	*More DAR hours*	*Local bus route in Brookings/Harbor*	*Coos County (CCAT Routes)*	*Del Norte County (RCT Routes)*	*SouthWEST POINT*			
1	Sophia	3	2	1	5	4	X	X	-	If I was in the area, yes I would.	I know not the area to make an adequate decision. I would say places that people visit most that doesn't have a route in place.	
2	Sophia	3	2	1	5	4	-	-	-	No	N/A	
3	Sophia	5	1	1	1	1	X	-	-	No (I don't live here)	N/A	
4	Sophia	3	1	1	3	3	-	X	-	Yes	It's fine	
5	Sophia	1	4	3	2	5	X	X	X	Possibly. We are new to the Coastal Express bus system, but we love the convenience of it. It is much better that taking our own car to explore. We are not from the coast; we are hiking the OCT.	Not from coast, but any route you would add to be helpful to local community, we would love to explore.	
6	Sophia	3	1	2	4	5	X	-	-	Yes but not from around here.	Unknown. Not familiar with area.	
7	Sophia	8	8	8	5	5	X	-	-	No, because I don't live there. If I did I would definitely.	I'm not familiar with the area.	
8	Bincy	2	3	4	5	1	X	X	X	Yes, if I am traveling through town.	Azalea Park, Fred Meyer's	
9	Bincy	X	-	X	X	X	X	-	-	Push button calls.	N/A	
10	Bincy	1	1	5	5	5	-	-	X	No	Gold Beach	
11	Bincy	3	3	-	2	2	X	-	-	N/A	N/A	
12	Bincy	-	X	-	-	-	X	-	-	No	Same as it is	
13	Bincy	1	3	2	4	5	X	-	-	No	Store	
13	Bincy	3	3	1	3	3	-	-	-	Yes	Unsure	
14	Bincy	-	X	-	X	-	X	-	-	Yes	Around town	
15	Bincy	1	-	-	-	-	X	-	-	N/A	N/A	*Go to Eugene
16	Bincy	1	4	4	4	2	X	-	-	Yes	All points to california border	
17	Bincy	-	-	X	-	-	X	X	-	No	N/A	
18	Bincy	X	X	X	X	X	X	X	X	Yes, I really would appreciate transportation services via bus. Without a shadow of a doubt.	To local shopping businesses, to the harbor, and also to the Coast Guard parking lot where all of the boats are moored and docked too.	
19	Bincy	-	-	-	-	1	-	-	-	Yes	Would go everywhere!	System is perfect.
20	Bincy	1	1	1	1	1	X	-	-	No	None	
21	Bincy	X	-	-	-	-	X	-	-	I am just visiting. No opinion.	No opinon.	Intercity bus service along the coast made my hike of the OCT possible. Thank you to: Tillamook County Transit, Coos County Transit, Curry County Transit, Lincoln County Transit
22	Bincy	-	-	-	-	-	-	-	-	No	No	More frequent buses
23	Bincy	2	3	4	1	2	-	-	-	Doesn’t apply to me	N/A	