

9 IMPLEMENTATION

OPERATING AND CAPITAL COST ESTIMATES

Operating Costs

Figure 9-1 provides operating costs associated with each set of service options and time frame. The long-term options are designed as a flexible set of service options that can be implemented incrementally based on available funding, future priorities, and service/land use targets. The full long-term cost implies that there is 15-minute service on all primary corridors and 30-minute service (either all-day or peak-hour) on most other routes.

Figure 9-1 Operating Cost Estimates, Total and Increase from Current Costs

Time Frame	Option	Total Annual Fixed-Route Vehicle Revenue Hours	Total Annual Fixed-Route Operating Costs	Total Annual ADA Paratransit Costs	Total Peak Fixed-Route Vehicles
Current	Existing System	20,700	\$1.5 M	\$1.0 M	7
Short-Term	Route 4, 5, 6 Modifications	Neutral	Neutral	Neutral	7
Near Mid-Term	Route 3/11 Changes All-Day & Sat Route 11 One additional evening trip on all routes (1 hour)	25,050 (+21%)	\$1.81 M (+\$313,000)	\$1.06 M (+\$55,000)	7
Mid-Term	Initial 30/60 Restructuring with some enhancements	32,900 (+59%)	\$2.37 M (+\$880,000)	\$1.11 M (+\$110,000)	9 (+2)
Long-Term	30/60 Minute Restructuring with all enhancements ¹	78,700 (+280%)	\$5.7 M (+\$4.2 M)	\$1.28 M (+\$280,000)	20 (+13)

Notes: Based on planning-level estimates. Cost increases listed are relative to current costs. (1) Long-term improvements are designed to be implemented incrementally and increased service levels (particularly 15-minute service) would be conditioned on service design guidelines.

ADA Paratransit Costs

The Americans with Disabilities Act (ADA) of 1991 requires that complementary ADA paratransit service (i.e., Bend Dial-A-Ride) offer ADA-eligible customers door-to-door service between origins and destinations located within 3/4-mile of regular fixed-route transit services. Bend DAR already provides geographic coverage within Bend city limits, exceeding ADA requirements, therefore no increase in ADA costs is assumed for service coverage expansion within Bend city limits. Bend DAR currently operates seven days a week, however, expanding the hours of fixed-route service beyond existing hours of ADA paratransit service will result in increased DAR operating costs beyond the current approximately \$1.0 million in annual costs.

Order-of-magnitude estimates of this increase were developed, based on assumptions for the number of DAR vehicles that will need to operate in different time periods. Implementing early evening service is estimated to increase ADA paratransit costs by about \$55,000 annually for each additional hour, or a total of \$110,000 total (+11%). Expanding early morning, later evening, Saturday, and Sunday service hours is estimated at about \$170,000 annually (+17%), or a total of about \$280,000 (+28%). Appendix B provides a more detailed breakdown of the estimated increases in ADA paratransit costs.

Peer Comparison

To assess the current level of service and level of expenditures on transit in Bend, it was compared to a set of peer cities from around the western U.S., ranging from about 50,000 to 150,000 in population and without a large college or university.²¹ Bend is approximately in the middle of the group in terms of population density. Although it has a large university, Corvallis was included because it is a comparable city in terms of population and is also located in Oregon. Peer data is summarized in Figure 9-2. Key findings from this comparison include:

- Bend has the second-lowest current transit service hours per capita, the lowest transit operating spending per capita, and the lowest level of current rides per capita.
- Placing Bend's per capita ridership (four rides per capita) in context, national research estimates a range of three to five rides per capita for a new system. This has been achieved with a level of service that is at the low-end of the peer group. With the initial restructuring concept (mid-

²¹ With the exception of Corvallis, these cities were originally used in a 2006 service plan to estimate ridership for the initial Bend fixed-route system.

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term) level of investment, Bend would still be in the bottom-tier of the peer group in terms of service hours per capita, with the lowest operating investment per capita of the group.

- Assuming all of the long-term service improvements are implemented by 2030, Bend would have the third highest-service hours per capita (0.97) and operating cost per capita (\$70), assuming current population levels. However, assuming population growth to 110,000 (the projected 2025 level) by 2030, Bend would operate 0.72 revenue hours per capita (compared to a peer average of 0.60) and operating cost per capita of about \$38 (compared to a peer average of \$59).

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Figure 9-2 Peer Comparison of Bend Transit Service Provision, Utilization, and Operating Spending

	Service Area Population (2010)	Density (Pop. Per Square Mile)	Total Annual Vehicle Revenue Hours	Annual Vehicle Hours per Capita (2010)	Fixed-Route Annual Operating Costs	Annual Operating Costs per Capita (2010)	Annual Ridership	Annual Rides per Capita (2010)
Bend	80,995	2,531	20,902	0.26	\$1,489,094	\$18.39	327,904	4.0
Route 3/11 + 6-7 pm (near mid-term)			25,050	0.31	\$1,804,000	\$22.00		
Initial Restructuring (mid-term)			32,900	0.41 ^a	\$2,369,000	\$29.00 ^a		
Full restructuring (long-term)			78,700	0.97 ^b	\$5,666,000	\$70.00 ^b		
Medford, OR	150,000	2,586	33,658	0.22	\$4,772,691	\$31.82	979,124	6.5
Redding, CA	117,478	1,175	43,736	0.37	\$3,180,273	\$27.07	672,379	5.7
Pueblo, CO	105,000	2,692	40,430	0.39	\$3,478,182	\$33.13	951,123	9.1
Yakima, WA	92,035	3,287	54,850	0.60	\$5,760,027	\$62.59	1,312,116	14.3
Santa Fe, NM	76,100	1,856	76,988	1.01	\$6,053,701	\$79.55	838,841	11.0
Everett, WA	105,000	3,088	129,830	1.24	\$14,240,792	\$135.63	2,289,587	21.8
Corvallis, OR	55,125	3,938	26,949	0.49	\$2,328,937	\$42.25	3,388,516	61.5
Peer Average (excluding Corvallis)	107,602	2,447	58,063	0.60	\$6,247,611	\$61.60	1,490,241	11.4

Notes: (a) Assumes 2010 population, but Bend's population would be higher if/when these service levels are realized. (b) Assuming the full set of long-term improvements is realized by 2030 and Bend's population is 110,000 (the current 2025 projection), vehicle hours per-capita would be 0.72 and operating costs per capita would be about \$38. (1) Corvallis is excluded from average due to high student population.

Source: National Transit Database, 2010. U.S. Census, 2010.

Capital Improvements

The primary capital improvements related to each service option include additional vehicles or installation of new stops. Figure 9-3 identifies overall capital cost estimates for each service package and time frame. Appendix B provides a more detailed breakdown of operating and capital cost estimates for individual service elements.

- Short-term costs are related to changes to Routes 4, 5, and 6. Initial implementation can be made using one additional temporary stop and existing temporary stops on 5th Street, but the costs assume permanent infrastructure. CET has an agreement with the ADA community that allows for temporary stops to be implemented contingent on a stop improvement plan for design and construction of permanent, accessible stop infrastructure.
- Near mid-term costs are related to stop infrastructure for restructuring Route 3 and 11 to serve the new OSU facility, but no additional vehicles are required.
- Mid-term (initial restructuring) capital costs include two additional vehicles to operate the new Route 7 (low-floor recommended including for Route 3 interlining) and operate 30-minute peak headways on Route 4, permanent stop infrastructure for Route 7, and stop infrastructure for bidirectional Routes 5 and 6.
- Long-term costs include increased frequency on additional routes and service expansion (Routes 2, 4, and 8).

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Figure 9-3 Overall Capital Cost Estimates for Service Packages

Time Frame	Option	Peak Vehicles	Additional Vehicles Required	Estimated Cost of Additional Vehicles ¹	Estimated Non-Vehicle Capital Improvements
Current	Existing System	7	0	None	N/A
Short-Term	Route 4, 5, 6 Modifications	7	0	None	\$12,000 ^a
Near Mid-Term	Route 3/11 Modifications	7	0	None	\$68,000 ^b
Mid-Term	Initial 30/60 Restructuring with some enhancements	9	2	\$540,000 ^c	\$116,000 ^c
Long-Term ¹	30/60 Minute Restructuring with all enhancements ¹	20	11	\$2.5 M ^d	\$266,000 ^d
TOTAL		20	13	\$3.1 M	\$462,000

Notes: Appendix B (Figure B-12) provides unit costs. (1) Intended for incremental implementation over the long-term, conditional on service design guidelines. (a) Assumes 1 major and 3 basic stops. (b) Assumes 6 major and 16 basic stops. (c) Assumes 2 new low-floor buses for Routes 7 and 3. For Route 7, assumes 10 major and 4 basic stops. Additional costs would include a planned crossing at 6th and Greenwood, at least one new protected crossing on Greenwood between 15th and Dean Swift, and a potential signal at Dean Swift. For bidirectional Route 5/6, assumes 11 basic and 4 major stops. (d) Assumes 6 new low-floor and 5 standard mid-size buses. Assumes 10 new major stops, 50 new basic stops, 5 enhanced stops (e.g., secondary hubs), and enhancements at Hawthorne Station.

TRANSIT FUNDING STRATEGIES

An overview of transit funding options is provided in Appendix C

As discussed above, existing transit operating costs for the fixed-route system are nearly \$1.5 million annually, not including about \$1 million in costs for ADA Paratransit. The initial implementation of the restructured system and service improvements proposed for the mid-term time frame (Years 4-9) is estimated to cost an additional \$880,000 in annual fixed-route operating resources, \$110,000 in additional ADA paratransit costs, and \$540,000 for additional vehicles (assuming low-floor buses). The short- and mid-term improvements (through Year 9) would also require an estimated capital investment of about \$196,000 for bus stops and related infrastructure.

A variety of federal and state funding sources are available to help fund these improvements, but in many cases must be leveraged with a local match. The City of Bend currently provides the primary source of local matching funds through its general fund. A number of public-private partnership opportunities (such as advertising, group passes, and sponsorships) each offset small portions of the cost of operating transit, but collectively are an important component of transit funding.

Increased funding for transit, which may be available for local and/or regional transit in the Bend area as a result of population growth as of the 2010 U.S. Census and the new federal transportation legislation (MAP-21), would likely require additional local resources to match these federal funds. Appendix C provides an overview of the primary existing and potential funding sources for transit, including federal, state, and local sources as well as public-private partnerships, and summarizes their potential applicability for Bend.

FINANCIAL PLAN

A ten-year financial plan will be developed and included in the final PTP. It will include operating cost and revenue projections and a capital improvement plan.

IMPLEMENTATION ACTIONS AND PHASING

A matrix listing implementation actions and phasing will be included in the final PTP.

APPENDICES

Appendix A Land Use and Transit Demand

Appendix B Future Service Concepts – Supporting Detail

Appendix C Funding Options

Appendix D Updated Bend Urbanized Area Map