

OREGON TRANSPORTATION PLAN UPDATE
Commuter Rail in Oregon

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OREGON TRANSPORTATION PLAN UPDATE

Background Paper

Commuter Rail in Oregon

Introduction

This paper investigates a potential policy gap in the 1992 Oregon Transportation Plan (OTP) with respect to commuter rail based on a recommendation made by the ODOT Rail Division. Both the current OTP and Oregon Rail Plan 2001 address passenger rail service but do not distinguish commuter rail from other types of passenger rail service. This paper defines commuter rail and distinguishes it from similar services. It also describes the state of commuter rail nationally, identifies the conditions under which commuter rail could be successful in Oregon, and identifies potential lines. Finally, it describes current state policies, suggests ways to implement these policies, and discusses the roles of various agencies.

Since the adoption of the current plan in 1992, there has been heightened interest in commuter or interurban rail services within Oregon. Several commuter rail lines have been proposed and studied. One line from Beaverton to Wilsonville is under development. On a national basis, renewed interest in transit use and transit investment including commuter rail is occurring in virtually every major city in America. Some states are joining together to build high speed rail systems linking metropolitan regions.¹ Many Americans are also expressing a desire to live in communities that are less auto dependent that have a greater sense of place and community.² Commuter rail has the potential to provide alternative travel and serve concentrated population and employment centers.

Characteristics of Commuter Rail

The term “commuter rail” can be used interchangeably with the term “interurban” rail. The latter terminology was commonly used until mid-1950. In fact, the Beaverton-Wilsonville service is planned for operation on the same line once called the “Oregon Electric Interurban” which provided service between Portland and Salem. Commuter rail has unique characteristics that distinguish it from other forms of passenger rail. Commuter rail:

- Primarily serves passengers traveling between home and their place of work.
- Runs on existing track which has been upgraded for passenger service, usually shared with freight trains.

¹ Hank Dittmar in foreword to *Transit-Oriented Development: Moving From Rhetoric To Reality* by Dena Belzer and Gerald Autler, June 2002.

² Tony Hiss, “The Experience of Place,” 1990.

- Lines range in length, up to about 85 miles from city to terminal.
- Stations are spaced at intervals of one mile or more and speeds can reach 60 mph between stations and in some cases, up to 79 mph.
- Service is typically frequent during peak periods to accommodate large numbers of commuters.
- Trains consist of one or more cars and may be self-propelled or pushed/pulled by a diesel or electric locomotive. Commuter rail typically uses rail diesel cars (RDC's), new generation diesel multiple units (DMU's), single level locomotive hauled trains or double level locomotive hauled trains. Coaches are high capacity with limited personal space.
- Differs from light rail (LRT) in that it usually does not need new track infrastructure and uses equipment with different specifications, generally heavier in weight and more compatible with freight train traffic; it does not operate in mixed traffic with motor vehicles.
- Differs from intercity rail, which serves longer distance business and pleasure travel, and recreational rail services, such as the Portland-Astoria service that are nearly exclusively geared toward recreational travel. Intercity coaches have more comfort features and personal space.⁻³

Commuter Rail in North America

Traditionally, commuter rail in North America has been confined to very large metropolitan areas where it has served to connect outlying suburban residential communities (spokes) with the large central business districts (hubs) of New York, Philadelphia, Chicago, Boston, Los Angeles and San Francisco.

Newer ventures into commuter rail serve more dispersed commercial activity in San Diego, Dallas and Miami. Smaller markets such as Vancouver, B.C. and Seattle-Tacoma have also been deemed viable for commuter rail. Chicago has recognized the increasing demand for suburb to suburb travel in their metropolitan area. Washington County is initiating commuter rail service that would connect suburban communities on the south side of the Portland metropolitan area. This service would interline with light rail in Beaverton, where passengers could travel to the central business district or to other suburban communities within the metropolitan area.

³ Dave Astle, Edward Immel and Robert Melbo, *Southern Oregon Commuter Rail Study*, June, 2001, pp. 1.1-1.3.

Oregon's Experience with Passenger Rail, 1890-1960

Oregon has a long history with passenger rail service that dates back to the 19th century. As early as the 1870s, horse-drawn streetcars operated in Portland. Later in the century, the electric trolley became a popular mode of transportation in the region with the introduction of the Albina line in 1889, interurban service to Oregon City in 1892 and Council Crest service just after the turn of the century.

Between 1900 and 1920 passenger rail service blossomed in the Willamette Valley highlighted by the addition of service to Salem, Hillsboro and Beaverton in 1908, and to Eugene, Corvallis and McMinnville between 1912 and 1918.



Salem trolley circa 1900 courtesy Salem Historical Society

During the 1920s the automobile began to rapidly gain popularity, in part due to the innovative use of mass production manufacturing at Ford Motor Company. Coinciding with the rise in automobile use was a decrease in the use of rail service. By the late 1920s and into the 1930s, passenger rail suffered from falling ridership, service reductions and eventually the elimination of services.

Only the advent of World War II and the associated energy shortages kept passenger rail and public transportation in general from declining further during the 1940s. The post war years saw popularity and service again decline sharply. By the late 1950s, passenger rail had virtually vanished from the transportation landscape in Oregon, as it had elsewhere in the United States.

The Resurrection of Passenger Rail in Oregon, 1980-the Present

After a 20-year hiatus, new interest in passenger rail culminated with the introduction of light rail transit (LRT) in the Portland area in the 1980s. Coming on the heels of popular opposition to the Mt. Hood Freeway project in the late 1970s, the Eastside MAX line began operation in 1986 and the Westside MAX line opened for business in 1997. The Eastside MAX reestablished passenger rail service between Portland and Gresham while Westside MAX reestablished the passenger rail connection between Portland and Hillsboro. Additional LRT service was added in 2001 with the opening of the line to Portland International Airport line. The Interstate Avenue Corridor line is expected to open in 2004.

In concert with the rekindling of passenger rail popularity in the Portland area, the City of Portland added streetcar service in 2001. Proposed commuter rail service between Wilsonville and Beaverton is expected to become a reality by 2006.



Flexliner Demonstration Service in Beaverton circa 2000. Courtesy of ODOT Rail Division

Outside of the Portland area, interest in passenger rail service has grown. Several projects have been envisioned. Reintroduction of service in Yamhill County and new service in Southern Oregon are some of the proposals being given consideration. At the same time, longer distance passenger rail trips are being accommodated through the Cascade Intercity passenger rail service that began operation in the 1990s, with connections between Eugene, Portland and Salem. This service already operates at speeds up to 79 mph; with major investments in track upgrades, it offers a possibility for Oregon's first true high speed rail service at about 125 mph.

Feasibility of Commuter Rail

Conditions Favorable to Commuter Rail

Listed below are factors that tend to increase the feasibility of a commuter rail. Communities considering commuter rail service may wish to use this list for guidance in assessing the feasibility of commuter rail.

- Existence of a direct rail link between participating communities that can use an existing rail line that has sufficient unused capacity to accommodate frequent peak period passenger service.
- Moderate to rapid population and employment growth in the corridor.
- Supportive land use and transportation policies that encourage concentration of commercial and residential development in and near urbanized areas in the corridor and promote higher density residential development within the corridor.

- High concentrations of business and commercial activity near station sites.
- Limited funding availability for road construction.
- Policies that encourage the consideration of alternate mode transportation options before major road capacity expansion projects may be undertaken.
- Location of a rail line that parallels a road facility used for work trip commuting in the corridor.
- Increasing traffic congestion in the corridor, particularly on road facilities that parallel the rail line.
- Limited and high cost parking at destination points.
- Competitive travel times for commuter rail versus the automobile.
- Competitive transit costs for commuter rail versus the automobile.
- Willingness of commuters in the corridor to use a commuter rail option if made available.
- Compelling circumstances such as economic, environmental or safety concerns that make it more attractive to commuters to switch to commuter rail.

Common Barriers to Establishing Commuter Rail Development

Lack of capital to make necessary improvements is the major barrier to establishing commuter rail in Oregon. Funding depends on the outcome of cost/benefit analysis. It is important to note that the outcome of a cost/benefit analysis depends on how benefits are determined and valued. If the raw economic costs of creating commuter rail are calculated, it sometimes appears to be the predominant barrier. As highway corridor congestion levels and greater desire for a more sustainable transportation system rise, the less tangible social benefits involved in the commuter rail cost/benefit ratio may increase. Adequate ridership to support the ongoing operation costs is a major barrier as well. With an estimated 4,000 riders per day, the Beaverton-Wilsonville line capital and operating costs are not yet fully funded.

Compatibility with existing rail freight activity on a proposed commuter rail line is an important factor in determining the feasibility of the commuter rail line and can be a barrier. In some cases, the commuter service occurs during the non-peak hours for rail freight, allowing freight movement during the off-peak hours. Railroad short-lines are the most likely lines for commuter rail due to their reduced volume of freight movement. The short line railroads move a variety of commodities throughout the state, including moving freight to and from the main line railroads.

Rail lines may have complex ownership or usage restrictions. In some cases, the ground beneath the rail track and the rail track may have different owners; the ground may be in public ownership and the track private. Commuter rail support facilities, such as parking lots and sidewalks, may also have multiple owners. Therefore, a consortium of owners may be necessary to make a project feasible. However, research shows that commuter rail systems with multiple ownerships tend to have less effective customer service with respect to dissemination of information.

Existing lines may also be poorly located where population centers cannot be conveniently served. Existing railroad tracks tend to be located in industrial areas of the state that may be isolated from the residential and mixed-use parts of a community. A commuter rail station could create negative impacts on the industrial land uses due to increased and incompatible traffic. Coordination of public transportation services and park and ride facilities would also likely be required, affecting the type and cost of trip necessary to use the commuter rail line.

Authority and Governance

An important aspect of commuter rail service is the authority and governance under which it operates. Authority and governance will vary for a particular commuter rail line depending on its ownership and operation. Listed below are different types of models used throughout the country:

- State owned right of way with transit district operation of service and ownership of equipment (Florida/Tri-Rail).
- Transit district that has inherited an existing commuter rail operation from the private sector (New Jersey, Chicago, San Francisco-San Jose).
- Joint powers board operating a new service or taking over operation of an existing service (Miami, Los Angeles).
- Transit district operating a new service (Beaverton-Wilsonville governed by TriMet).

In Oregon, authority and governance can be established under ORS 190, Intergovernmental Cooperation. The statute allows various types of units of government to enter into agreements with one another to perform various functions or activities. Additional legislation may be desirable depending upon the scope of the needed agreements. One particular problem occurs when the proposed rail service extends outside an operating authority's jurisdiction and the operating authority does not have powers to tax in the extended service area.

The following factors are considerations in developing agreements involving commuter rail operation:

- Relationship between public entities and the railroad(s);
- Service boundaries of participating jurisdictions (local, state, international);
- Roles and responsibilities of potential local, county or state government or private sector involvement related to planning, development, service delivery, and funding (including taxation);
- Taxation issues related to out of district operations.

Potential Commuter Rail Projects

One commuter rail project has been planned, and some studies have been conducted. The Beaverton-Wilsonville, a 14.7 miles route, will provide peak period trips every 30 minutes, and is expected to have 4,000 riders per day. Intermediate stops will be located in Tualatin, Tigard and Washington Square. Improvements are scheduled to begin to upgrade the existing line in 2006 with the Environmental Analysis (EA) complete and funding identified in the 2004-2007 State Transportation Improvement Program (STIP). The estimated total cost is \$103 million.

Studies Conducted to Assess the Viability of Potential Service

Studies conducted to date have focused on the costs of capital and operations and on the magnitude of anticipated ridership. Studies have avoided positing conclusions regarding the viability of potential service links. Instead, these studies tend to present the data, leaving decision-makers to come to their own determination regarding viability. Below is a list of lines that have been studied, followed by an explanation of what transpired following the study.⁴

Service Link	Estimated Capital Cost (Equipment, Signal Systems, etc.)
McMinnville-Milwaukie	\$112 million
Portland-Vancouver-Camas-Ridgefield	\$1,300 million
Grants Pass-Ashland	\$38 - \$84 million
Portland-Canby	\$190 million
Portland-Milwaukie/Oregon City	<i>(Not estimated due to lack of feasibility)</i>

- Service between McMinnville and Milwaukie was considered as an alternative to highway expansion in the Newberg-Dundee Bypass Study. This alternative was not selected because it did not provide significant ridership when compared with other Newberg-Dundee alternatives.

⁴ Oregon Department of Transportation, *2001 Oregon Rail Plan*, pp.104-106 augmented by updated data.

- Portland-Vancouver-Camas-Ridgefield service was considered as part of the I-5 Trade Corridor Study. Relatively low ridership and very high capital costs would seem to limit opportunities for this project to move forward.
- Service between Grants Pass-Medford-Ashland has been considered through the Southern Oregon Commuter Rail Study. The proposed project is included in the Rogue Valley Council of Governments Regional Transportation Plan but it is not funded at this time.
- Portland-Canby service was an alternative in the South Metro Corridor Study, but was not selected in part because proposed light rail services in the Portland area would serve much of the same ridership.

Other Areas for Potential Commuter Rail Service

Other regions in the state with existing railroad tracks may warrant study for feasibility for commuter rail service as population and employment centers expand:

- Portland-McMinnville-Corvallis-Eugene
- Albany-Corvallis
- Redmond-Bend
- Eugene-Cottage Grove
- Veneta-Junction City
- St. Helens-Scappoose-Portland
- Lebanon-Corvallis
- Wilsonville-Salem

State Roles and Policies

Current State Role

Currently, the state role for rail focuses primarily on regulation, and state commuter rail policy is limited in scope. The Oregon Department of Transportation has responsibility for statewide rail planning and regulatory functions for rail safety. Under state statute ODOT is to develop and maintain a state transportation policy for railroad passenger service and a comprehensive long range plan for railroad passenger service. Other ODOT Rail Division responsibilities are listed in Appendix A. Funding restrictions limit ODOT's role beyond the listed functions.

Current Oregon Transportation Plan Policy

State policy that supports the use of commuter or interurban rail is found in the 1992 Oregon Transportation Plan (OTP) and 1997 Oregon Public Transportation Plan and is restated in the 2001 Oregon Rail Plan. The existing policy focuses on providing mobility between communities. The mode or type of mobility includes highway, bus, and

passenger rail. Commuter rail (passenger rail) is one of several potential viable transportation options. As noted in the *OTP Action 2C.4*, it is the role of the state to “*Promote the development of interurban bus and rail passenger service to improve urban accessibility and achieve land use goals.*”

Commuter rail is a transportation mode that can potentially support compact, mixed-use development and development that provides connections among various transportation modes including walking, bicycling and public transit. Below is the current state policy pertaining to commuter rail; related policy is shown in Appendix B.

OTP POLICY 2C – Relationship of Interurban and Urban Mobility

It is the policy of the State of Oregon to provide interurban mobility through and near urban areas in a manner which minimizes adverse effects on land use and urban travel patterns.

***ACTION 2C.2:** Promote alternative modes and preservation and improvement of parallel arterials so that local trips have alternatives to the use of intercity routes.*

***ACTION 2C.4:** Promote the development of interurban bus and rail passenger service to improve urban accessibility and achieve land use goals.*

***Oregon Public Transportation Plan, Strategy 2B.2** similarly calls on the state to promote the development of interurban bus and rail passenger services to improve linkages among urban areas and achieve land use goals.*

***Oregon Public Transportation Plan, Strategy 2B.4** asks that the state consider acquiring and upgrading low-density rail lines where current owners are seeking to sell or abandon them.*

***Oregon Highway Plan Action 1G.1, Major Improvements** requires alternative modes be considered as part of highway capacity improvement evaluations. It may be appropriate to elevate this policy to the OTP because of its importance in promoting the development of interurban mobility through rail or bus service. This policy and others provide a policy basis for local, regional, and state planning to consider commuter rail as an alternative to providing mobility.*

Future State Role and Policy

ODOT can be useful in helping communities in the state develop plans for commuter rail. Such planning efforts are likely to be part of a regional transportation plan through one of the six metropolitan planning organizations (MPOs) in the state. It is in these population and employment centers that ridership potentially exists. Regional transportation system plans developed by the MPOs should consider commuter rail as an alternative to providing mobility. ODOT’s relationships and knowledge of railroad operations, system condition and stakeholder interests can help initiate discussions and develop plans. ODOT can also assist with advocacy at the state level and on governance issues.

In assessing the development of future commuter rail lines and the role of ODOT or other governmental units, the following should be considered:

- Resources to support commuter rail development including feasibility studies, construction or operation of commuter rail services, purchase of equipment and purchase of existing rail lines or right of way;
- Stakeholder interests (i.e. legislators, railroads, citizen groups and local officials); and
- Operational cost, governance and service boundary taxation issues.

Conclusions

Oregonians are expressing greater interest in commuter rail as an alternative mode of transportation between communities. As population and employment centers increase and highway corridors become more congested, commuter rail will likely continue to be an attractive alternative. The feasibility of commuter rail depends on many factors. Ultimately, the feasibility of commuter is based largely on the costs and ridership. The studies that have been done to date show that adequate ridership does not exist in most corridors. However, overtime as communities grow the feasibility will grow. As conditions change state, regional, and local planning should consider commuter rail as an alternative to providing mobility.

The current policy under the 1992 OTP plan is adequate to support future interest in commuter rail. Policy 2C recognizes the potential for both commuter rail and interurban bus service to improve urban accessibility and mobility. The policy also supports the promotion and development of commuter rail as one of several transportation options to provide mobility within and between communities. It is recommended that the *Oregon Highway Plan Policy 1G1* be elevated to the Oregon Transportation Plan. It calls for alternative modes to be considered as part of, or in lieu of, highway capacity improvements. Elevating *Policy 1G1* will help ensure the other state modal plans, regional and local plans give greater attention to the potential role of alternative modes to provide mobility.

While the current state policy supports commuter rail, the current funding and program organization have limits on what the state can do to promote commuter rail. Currently, there is no dedicated funding to help pay for feasibility studies. Despite the current limitations, ODOT's broad experience in transportation, institutional knowledge of railroad operations and stakeholder interests is an important resource for communities wishing to explore commuter rail service in their regions. The state may be especially helpful in developing agreements where the service extends beyond a community's traditional service boundary. The state can be an information source, play a coordination role, and provide advocacy.

Considerations for Future Commuter Rail Policy

As part of the policy element of the Oregon Transportation Plan update, the following program and policy refinement and changes should be considered:

1. Update 1992 OTP language to replace the term “interurban” with the term “commuter rail”. This would update the policy language to reflect the terminology more commonly used today.
2. Elevate the *Oregon Highway Plan Action 1G.1, Major Improvements* to the Oregon Transportation Plan. Action 1G.1 requires alternative modes be considered as part of highway capacity improvement evaluations. This would help carry out the current OTP Policy 2C, Action 2C1, by promoting the development of interurban mobility through rail or bus service.

Appendix A

ODOT Rail Division Primary Responsibilities

- Planning which includes preparing the State Rail Plan and participating in commuter rail studies such as the Southern Oregon Commuter Rail Study and the Washington County Wilsonville to Beaverton Commuter Rail Environmental Analysis. There is currently no dedicated funding for commuter rail feasibility studies, limiting the opportunities to assess potential commuter rail projects.
- Enforcing state laws, rules and regulations for trackside clearances, trackside walkways and sanitation.
- Partnering with the Federal Railroad Administration (FRA) to inspect track, locomotives and freight cars.
- Overseeing the transport of hazardous materials by rail through Oregon.
- Overseeing train operations to ensure safety, enforcing statutes for drug and alcohol testing, accident reporting, engineer certification and hours of service.
- Inspecting crossings to ensure compliance with rules, operation of signals, maintenance and record keeping.
- Overseeing the operation of transit districts with rail-fixed guidance systems.
- Regulating all aspects of highway-railroad crossings including the construction of new crossings and the alteration of existing crossings, and inspection of all public crossings.
- Representing the state and rail service customers before the Surface Transportation Board and all other federal agencies.

Appendix B

Related 1992 Oregon Transportation Plan Policies

The following OTP policies and actions support commuter rail as an option in providing a multimodal transportation system.

POLICY 1A – Balance

It is the policy of the State of Oregon to provide a balanced transportation system. A balanced transportation system is one that provides transportation options at appropriate minimum service standards, reduces reliance on the single occupant automobile where other modes or choices can be made available, particularly in urban areas, and takes advantage of the inherent efficiencies of each mode.

ACTION 1A.1

Design systems and facilities that accommodate multiple modes within corridors, where appropriate, and encourage their integrated use in order to provide users with cost-effective choices of travel and shipping within corridors.

POLICY 1B – Efficiency

It is the policy of the State of Oregon to assure provision of an efficient transportation system. The system is efficient when (1) it is fast and economic for the user; (2) users face prices that reflect the full costs of their transportation choices; and (3) transportation investment decisions maximize the full benefits of the system. (Full benefits and costs include social and environmental impacts, as well as the benefits of mobility to users, and construction, operations and maintenance costs.)

ACTION 1B.1

Employ economic, social, energy and environmental impacts as a part of the transportation planning and project design process. This should be done on a total system basis rather than optimizing the cost effectiveness of one mode at the expense of another.

GOAL 2: Livability

To develop a multimodal transportation system that provides access to the entire state, supports acknowledged comprehensive land use plans, is sensitive to regional differences, and supports livability in urban and rural areas.

POLICY 4G– Management Practices

It is the policy of the State of Oregon to manage effectively existing transportation infrastructure and services before adding new facilities.