

OREGON TRANSPORTATION PLAN



TRANSPORTATION NEEDS 2005-2030 EXECUTIVE SUMMARY

July 14, 2005

DISCLAIMER

While the Oregon Transportation Plan (OTP) Transportation Needs 2005-2030 Executive Summary and OTP Transportation Needs Analysis 2005-2030 Summary Report, both dated July 14, 2005, contain the most detailed information on the OTP needs analysis, document users should confirm all financial information with the Adopted Oregon Transportation Plan (September 20, 2006). Some of the needs information was updated through OTP committee processes after preparation of the July 14, 2005 needs analysis reports.



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OREGON TRANSPORTATION PLAN
Transportation Needs 2005-2030 - Executive Summary
July 14, 2005

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FOREWORD

This document is the executive summary of the Oregon Transportation Plan Transportation Needs Analysis 2005-2030 Summary Report. The Oregon Transportation Plan is the state's long-range multimodal transportation plan and overarching policy document that focuses on the state, local, and public aspects of Oregon's transportation system.

Identifying the statewide transportation needs is a major component of development of the Oregon Transportation Plan. The Transportation Planning Rule (TPR) and the federal Transportation Equity Act (TEA-21) require that a minimum 20-year needs analysis be conducted. TEA-21 identifies factors that must be considered in the planning process, but the manner in which they are to be addressed is left to states and metropolitan areas. Oregon Administrative Rule 660-012-0030, Determination of Transportation Needs, provides that "The transportation system plan shall identify transportation needs relevant to the planning area and the scale of the transportation network being planned including: (a) State, regional, and local transportation needs." OAR 660-012-005 defines state transportation needs as "needs for movement of people and goods between and through regions of the state and between the state and other states."

The gap between needs and revenues is a barometer for how well Oregon is funding transportation programs. In the OTP, the needs analysis is being used to determine funding priorities and investment strategies for the state.

Copies of the full summary report, Oregon Transportation Plan Transportation Needs Analysis, 2005-2030, Summary Report, is available on the Oregon Department of Transportation OTP Website (Publications Page - Key OTP Development Documents Section) located at <http://www.oregon.gov/ODOT/TD/TP/otpPubs.shtml> or by contacting the Transportation Development Division of ODOT at 503-986-4181.

INTRODUCTION

This report summarizes the statewide transportation needs for years 2005 to 2030 for air freight and passenger, intermodal connectors, maritime and ports, natural gas and petroleum pipelines, public transportation, rail freight and passenger, transportation options, state highways and the associated programs (including the state bicycle and pedestrian program), and the local transportation system. Tables 1, 2 and 3 on pages 3 and 4 summarize the forecasted mode growth, current funding, average annual feasible needs and the gap between the two.

Methodology

The identified transportation needs are based on a concept of feasible needs. While feasible needs vary for each mode or program, in general, feasible needs refer to the funding that maintains the system at a slightly more optimal level than current levels, replaces infrastructure and equipment on a reasonable life-cycle, brings facilities up to standard, or adds capacity in a reasonable way. The standards applied to describe a “slightly more than current level” of maintenance are based on a concept of reasonableness, and in most cases the data is drawn from existing agency or program plans. This includes modal plans, capital improvement plans, and master plans. With some of the modes, such as maritime and pipeline, the feasible needs are narrowly defined because either the mode is privately owned and information is not available or the level of economic activity is low. For example, the majority of the pipelines and railroads in Oregon are privately owned. In the case of maritime, the needs for only those ports with waterborne commerce were assessed.

The base year for most of the collected data is 2004. The need amount was then forecasted out to 2030 using a demand growth rate unique to the mode or program and a 3.1 percent dollar inflation rate applied. If data was from earlier years, the need dollar amount was adjusted to 2004 dollars in order to create a consistent dollar-year. The current expenditures, current revenue, and forecast revenue were also collected and calculated in order to show the current funding gaps and future funding gaps over the plan period.

For a more detailed description of the methodology, see the full OTP Transportation Needs Analysis 2005-2030, Summary Report available on the OTP Website.

Coordination

The program administrators or mode operators for each program or mode participated in the needs assessment. The various ODOT divisions, including the Highway Division, Rail Division and Public Transit Division were interviewed and assisted. In addition, the U.S. Army Corp of Engineers, Oregon Department of Aviation, Oregon Department of Economic and Community Development, Department of Land Conservation and Development, Port of Portland, Metropolitan Planning Organizations, and transit districts contributed data. The Oregon Ports Association reviewed and contributed to the maritime needs report. A technical advisory committee (TAC) was formed with the assistance of the League of Oregon Cities and the Association of County Governments to guide the local system needs assessment and in particular, to assist with the methodology.

TABLE 1 - 2005-2030 MODAL NEEDS AND GROWTH FORECAST SUMMARY
(Millions of 2004 dollars)

| Mode | Annual Growth Rate | Current Annual Expenditures | Average Annual Feasible Needs | Annual Gap |
|--|--|-----------------------------|-------------------------------|-----------------|
| Air Freight and Passenger¹ | 2.62% - freight tons 4.24% - passengers | | | |
| Portland Int. Airport ² | | \$44.4 | \$115.3 | \$70.9 |
| Major Modernization ³ | | \$13.9 | \$15.1 | \$1.2 |
| Other Airports – Mod and Pres ⁴ | | \$10.7 | \$47.4 | \$36.7 |
| Intermodal Connectors⁵ | 1.35% - total hwy travel 1.35% - pass. hwy travel 1.40% - freight hwy travel | N/A | \$11.3 | N/A |
| Maritime and Ports⁶ | 0.97% - deep draft freight 0.29% - shallow draft freight | \$51.3 | \$56.2 | \$4.9 |
| Natural Gas and Petroleum Pipelines⁷ | | N/A | N/A | N/A |
| Public Transportation⁸ | 3.16% - ridership | \$510.0 | \$812.0 | \$302.0 |
| Rail Freight and Passenger⁹ | 1.83% - freight tons 3.6% - passengers | | | |
| Mainlines | | N/A | \$8.82 | N/A |
| Short Lines | | more than \$6.7 | \$10.0 | less than \$3.3 |
| Passenger Rail ¹⁰ | | \$4.8 | \$9.0 - \$57.0 | \$4.2 to \$52.2 |
| Safety Programs | | \$1.6 | N/A | N/A |
| ODOT Rail Division Admin. | | \$0.42 | \$0.42 | \$0 |
| Transportation Options | | \$2.8 | \$3.6 | \$0.8 |

Notes:

- ¹ Needs forecast address capital needs at Oregon’s 101 public use airports.
- ² Based on PDX Master Plan Alternative.
- ³ Identified for 8 airports other than PDX where growth is expected to exceed capacity.
- ⁴ Based on 2000 Oregon Aviation Plan needs.
- ⁵ NHS Intermodal Connectors are located in Astoria, Boardman, Coos Bay/North Bend, Eugene, Portland and Medford.
- ⁶ Needs forecast address 9 port districts that have economic activity associated with waterborne commerce.
- ⁷ Primarily private facilities – no cost information available.
- ⁸ Feasible needs are consistent with Oregon Public Transportation Plan Level 3 recommendation to increase overall ridership.
- ⁹ Only public expenditures available. Needs are inclusive of both public and private facilities. Freight rail needs include capital costs for rehabilitation and enhancements of short line, mainline and on-site rail facilities at ports.
- ¹⁰ Includes capital and operating costs for increased service. A range of costs are given since multiple proposals currently exist.

**TABLE 2 – 2005-2030 HIGHWAY-RELATED PROGRAMS SUMMARY
(2004 dollars or average 2004 dollars)**

| Program | Current Annual Funding | Average Annual Feasible Needs | Annual Gap |
|---|-------------------------------|--------------------------------------|----------------------|
| State Highway Modernization Program | \$108,100,000 | \$330,300,000 | \$222,200,000 |
| State Highway Preservation Program | \$118,000,000 | \$160,000,000 | \$42,000,000 |
| State Highway Bridge Program | \$71,000,000 | \$129,600,000 | \$58,600,000 |
| State Highway Operations Program | \$30,350,432 | \$45,627,257 | \$15,276,825 |
| State Highway Traffic Safety Program | \$20,800,000 | \$40,510,000 | \$19,710,000 |
| State Highway Landslide and Rockfall Program | \$6,930,000 | \$15,000,000 | \$8,070,000 |
| State Highway Maintenance Program | \$143,000,000 | \$192,192,000 | \$49,192,000 |
| ODOT Special Programs | | | |
| Access Management Program | \$2,100,000 | \$16,600,000 | \$14,500,000 |
| Fish Passage Culvert Program | \$3,600,000 | \$9,380,000 | \$5,780,000 |
| Large Culvert Program | \$2,400,000 | \$33,000,000 | \$30,600,000 |
| Scenic Byways Program | \$217,900 | \$523,700 | \$305,800 |
| Transportation Enhancements Program | \$3,000,000 | \$8,000,000 | \$5,000,000 |
| Transportation & Growth Management Program | \$4,400,000 | \$4,000,000 | -\$400,000 |
| ODOT Bicycle & Pedestrian Program | \$3,456,600 | \$9,930,000 | \$6,474,000 |
| ODOT Highway Division Administration and Indirect Program | \$78,600,000 | \$78,600,000 | \$0 |
| ODOT Transportation Program Development | \$29,900,000 | \$29,900,000 | \$0 |
| ODOT Transportation Safety Division | \$19,000,000 | \$19,000,000 | \$0 |
| ODOT Driver and Motor Vehicle Services | \$60,882,490 | \$63,200,000 | \$2,317,510 |
| ODOT Motor Carrier Transportation Division | \$25,594,765 | \$26,441,689 | \$846,924 |
| ODOT Central Services | \$55,200,000 | \$55,200,000 | \$0 |
| Total | \$786,532,187 | \$1,267,004,646 | \$480,472,459 |

Forecasted annual growth rate for total highway travel (VMT) is 1.35% (1.35% for passenger highway travel and 1.40% for freight highway travel)

Notes:

\$0 gap assumes funding increases with inflation.

**TABLE 3 - 2005-2030 LOCAL ROAD AND BRIDGE NEEDS SUMMARY
(2004 dollars on an annual basis)**

| | Current Spending | Feasible Needs | Gap |
|------------------------------------|-------------------------|-----------------------|---------------------|
| Local Road and Bridge Needs | \$718 million | \$1 – \$1.2 billion | \$282-\$482 million |

Travel on the local transportation system is expected to reflect the growth in travel on the state highway system (VMT) and the growth in public transportation ridership shown above.

MODAL TRANSPORTATION NEEDS AND FORECASTS

AIR FREIGHT AND PASSENGER

System Description

The needs assessment considers the airport needs of Oregon's 101 public-use airports. The Portland International Airport (PDX) is one of seven airports in Oregon that provide commercial passenger service. PDX provides 90 percent of the passenger service and 97 percent of the air cargo service in Oregon. In addition to these commercial service facilities, other Oregon airports provide key services for general aviation activities such as air cargo, air ambulance, military, business aviation, agricultural applications, resource management and fire suppression.

Demand

Table 4 – Air Freight and Passenger Growth Forecast (2004 - 2030)

| Forecasts | Base Year Estimate | Forecast Value | Annual Growth Rate |
|---|--------------------|----------------|----------------------|
| Air Passenger (millions of annual enplanements) | 6.7 (2002) | 21.5 (2030) | 4.24% (2004-2030) |
| Air Freight (thousands of annual tons) ¹¹ | 318 (1997) | 747 (2030) | 2.62% (1997-2030) |

Transportation Needs

The *2000 Oregon Aviation Plan* identifies aviation needs with the objective of preserving a core system of airports based on a 1998 system preservation level. In order to capture the planned modernization airport improvements beyond those identified in the *2000 Oregon Aviation Plan*, eight airports were inventoried (in addition to the PDX needs described below) and the estimated annual need for Federal Aviation Administration (FAA) compliance was applied to the 70 core airports. The eight airports were selected on the basis that the forecasted growth exceeds the current facility capability to serve the growth. The annual major modernization need for these eight airports is \$15.1 million. In addition to these major modernization projects, the preservation and modernization activities described in the *2000 Oregon Aviation Plan* for all Oregon airports outside of PDX are approximately \$47.4 million.

PDX's on-site improvements over the plan period are estimated to cost \$3.46 billion (2004 dollars with no inflation added) and are expected to be funded through FAA grants, airline

¹¹ Oregon Commodity Flow Forecast, Prepared for the Oregon Department of Transportation, Global Insight, April 2005, p. 11.

funds, and airport funds. Airport growth is in terms of facilities rather than the number of runways. Portland International Airport demand for a third runway is beyond the OTP 2030 time horizon and has not been included. The total annual need for PDX is \$115.3 million.

Table 5 - Summary of Oregon Aviation Current Annual Capital Spending and Capital Needs (Millions of 2004 dollars)

| | Current Annual Expenditures | Future Annual Average Needs | Annual Gap |
|--|------------------------------------|------------------------------------|-------------------|
| Portland International Airport | \$44.4 | \$115.3 | \$70.9 |
| Major Modernization – 8 Selected Airports | \$13.9 | \$15.1 | \$1.2 |
| Other Oregon Airports – Modernization and Preservation | \$10.7 | \$47.4 | \$36.7 |
| Total | \$69.0 | \$177.8 | \$108.8 |

Revenue

Table 6 – Forecasted Air Freight and Passenger Revenue (Millions of 2004 dollars)

| Forecast Revenue per Year | Recent Annual Average Revenue | Future Annual Average Revenue |
|----------------------------------|--------------------------------------|--------------------------------------|
| Aviation Projects | \$243.8 | \$278.3 |

- Major revenue sources and assumptions include:
 - FAA grants to all airport types – increase at rate of inflation.
 - State grants, primarily to general aviation airports – future growth rates tied to specific source.
 - Passenger facility charges – held constant at current rate of \$4.50.
 - Airport-specific fees, leases and airline charges – increase with enplanements.
- Revenues are for both operations and capital.
- Statewide commercial airports (non-PDX) based on expanding revenue sample using enplanement estimates for each airport.

INTERMODAL CONNECTORS

System Description

Intermodal facilities are transfer points from or to truck, bus, air, rail and marine transportation facilities that serve passenger or freight movements. Examples include airports, rail stations, bus terminals, marine terminals, and truck-rail facilities. The needs associated with the intermodal facilities themselves are addressed by mode or as a part of the local system needs report. The focus of this report is on the needs of the “intermodal connectors,” the roads that connect major intermodal facilities with the major roadway system.

The National Highway System-designated intermodal connectors in Oregon total almost 60 miles of city, county and state roadways. These NHS intermodal connectors are located in Astoria, Boardman, Coos Bay/North Bend, Eugene, Portland, and Medford. Non-NHS intermodal connectors are included in the local system needs summary.

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**Table 7 – Intermodal Connectors Growth Forecast
(Billions of annual VMT)**

| Forecasts | Base Year Estimate (2004) | Forecast Value (2030) | Annual Growth Rate |
|--------------------------|---------------------------|-----------------------|--------------------|
| Total Highway Travel | 34.8 | 49.4 | 1.35% |
| Passenger Highway Travel | | 45.8 | 1.35% |
| Freight Highway Travel | | 3.6 | 1.40% |

Transportation Needs

The total feasible needs are estimated to be \$282.5 million (2004 dollars) with well over half identified for the Portland area’s intermodal connectors. Due to the relatively short road lengths and the diversity of jurisdictions, it was not possible to collect current spending information. Based on 25 years, the annual feasible need is \$11.3 million per year (2004 dollars).

The total \$282.5 million feasible need for intermodal connectors is based on the *National Highway System Conditions and Investments Study* (1998). The *National Highway System Condition and Investment Study* was based on a survey of 63 connectors. The purpose of the study was “to characterize the nature and extent of physical and operational problems on freight connectors” and necessary investments for the *1999 Oregon Highway Plan*. While many of the deficiencies identified have been addressed, it is assumed that the identified deficiencies provide a reasonable proxy to estimate the improvement costs for intermodal connectors over the 2005-2030 plan period.

**Table 8 - Summary of Current Expenditures and Feasible Needs Per Year
(Millions of 2004 dollars)**

| | Current Annual Expenditure | Annual Average Feasible Need | Annual Gap |
|---------------------------|-----------------------------------|-------------------------------------|-------------------|
| NHS Intermodal Connectors | data not available | \$ 11.3 | no data |

Revenue

- Dedicated revenue streams do not exist for intermodal connectors.
- Since intermodal connectors are an element of the National Highway System (NHS), capital projects on these facilities are eligible for funding under the Federal NHS program.
- Intermodal connectors are also eligible for funding under most programs available for highway modernization, preservation, maintenance, safety, operations programs.

MARITIME AND PORTS

System Description

Oregon's unique location along the Pacific Ocean and Columbia-Snake River System provides valuable links for waterborne freight movement and commerce. Waterborne freight is nearly 9 percent of the total 37.1 million tons of freight in Oregon. Grains, forest products, and petroleum are the primary commodities shipped on the Columbia-Snake River System. Ocean-going vessels on the Columbia River transport annually about \$14 billion worth of U.S. products to world markets. Oregon has five deep freight terminal ports of which Portland is the most significant, and four shallow-draft freight terminals located along the Columbia River.

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**Table 9 – Maritime and Ports Growth Forecast
(Millions of annual tons)**

| Forecasts | Base Year Estimate (2004) | Forecast Value (2030) | Annual Growth Rate |
|--------------------------------------|----------------------------------|------------------------------|---------------------------|
| Deep Draft (Ocean) Marine Freight | 23.8 | 30.6 | 0.97% |
| Shallow Draft (Barge) Marine Freight | 14.0 | 15.1 | 0.29% |

Transportation Needs

The scope of the identified needs focuses on ports districts with waterborne commerce and improvements that are necessary to get goods to and from the port terminal. The ports included in this analysis are the deep draft freight terminals at Coos Bay-North Bend and Newport along the Oregon Coast, and the deep-draft terminals in Astoria, the St. Helens area, and Portland on the Oregon side of the Columbia River. The needs report also includes shallow-draft marine freight terminals along the Columbia River at The Dalles, Arlington, Boardman and Umatilla. The on-site facility needs have been limited to access roads to existing facilities, cranes, and conveyors. There are additional marine port-related needs beyond what have been identified in this report. These include facility and infrastructure improvements associated with hundreds of acres of both developed and undeveloped land owned by the port districts and the private marine businesses. In the future, it may be appropriate to identify needs associated with short sea shipping. None per se have been identified as part of this report.

The marine port needs for the nine ports including the maintenance and deepening of the Columbia River over the 25-year plan period total \$1.4 billion or \$56.24 million per year.

**Table 10 - Summary of Current Expenditures and Feasible Needs Per Year
(Millions of 2004 dollars)**

| Maritime Project Category | Current Annual Expenditure | Total Cost 2005-2030 | Annual Average Feasible Need | Annual Gap |
|--|-----------------------------------|-----------------------------|-------------------------------------|-------------------|
| Maintenance Dredging | \$35.25 | \$881.25 | \$35.25 | \$0 |
| Roadway / Access and Maritime Projects | \$12.88 | \$275.40 | \$11.02 | - \$1.86 |
| Jetty and Pile Dike Monitoring and Repair | \$3.18 | \$79.50 | \$3.18 | \$0 |
| Jetty and Pile Dike Reconstruction | 0 | \$45.90 | \$1.84 | \$1.84 |
| Columbia River Channel Deepening (Federal portion) | 0 | \$96.00 | \$3.84 | \$3.84 |
| Columbia River Channel Deepening (State of Oregon portion) | 0 | \$27.70 | \$1.11 | \$1.11 |
| Total | \$ 51.31 | \$1,405.75 | \$56.24 | \$4.93 |

Revenue

**Table 11 – Forecasted Maritime and Port Revenue
(Millions of 2003 dollars)**

| Forecast Revenue per Year | Recent Annual Average Revenue | Future Annual Average Revenue |
|----------------------------------|--------------------------------------|--------------------------------------|
| Marine Port Projects | \$131.5 | \$156.5 |

Key issues for Revenue:

- Revenue is from public (federal) and private (port) sources (more inclusive than needs)
- Public revenue sources include Harbor Maintenance Trust Fund (HMTF) and Inland Waterways Trust Fund (IWTF)
- Army Corps of Engineer’s federal budget appropriations not included
- Port revenue is for shipping activities and does not include activities such as industrial land sales, timber sales, marina revenues, and others
- Excepting Portland, few ports in Oregon receive significant revenues from cargo handling

NATURAL GAS AND PETROLEUM PIPELINES

System Description

An extensive network of pipeline facilities plays an important role in delivering petroleum and natural gas fuels throughout Oregon. Nearly 14,000 miles of transmission and distribution pipelines make natural gas available to about 80 percent of the state's population. Approximately 320 miles of petroleum product pipelines distribute fuel products in the state. Since there are no petroleum refineries in the state, Oregon relies heavily on the Olympic Pipeline connecting refineries north of Seattle to the major population centers of Oregon and points south.

Demand, Transportation Needs and Revenue

Consumption of natural gas in the U.S. is expected to increase 52 percent between 2000 and 2020, making it likely that new pipelines, expansion projects and efficiency improvements will be needed throughout the country. To date, the U.S. natural gas pipeline industry has been able to finance and install additional infrastructure to accommodate significant growth rates. Utilizing current expansion methods, the natural gas industry should continue to be able to handle the growth anticipated over the next 25 years.

Petroleum consumption in the U.S. is expected to increase 1.2 percent annually over the next two decades, leading to significant growth in the liquid pipeline industry over the next 25 years, although not as rapid as for natural gas pipelines. Despite these increases, petroleum pipeline capacity in Oregon generally appears adequate to meet current and near term demands. As the state's population and economy continues to grow, pipeline operators may need to install larger lines or improve operational efficiency to meet increasing demand. Capacity concerns on the Olympic Pipeline will likely affect the future ability to meet petroleum needs in Oregon. A Cross-Cascade pipeline project in Washington has been proposed to help free up capacity on the existing Olympic line. As pipeline capacity issues such as these become more prevalent, trucks or barges may increasingly be needed to serve unmet petroleum demand around the state.

PUBLIC TRANSPORTATION

System Description

Public transit service in Oregon is diverse with more than 230 public transportation providers ranging from large transit districts and local governments to non-profit and for-profit organizations. Large urban areas systems provide transportation options that include light rail vehicles (Portland metro area), bus systems, and demand response services. The focus of service in small communities and rural areas is to provide mobility options for those who cannot drive using community public transportation services and subsidized taxi services.

Demand

**Table 12 – Public Transportation Growth Forecast
(Millions of annual passengers)**

| Forecasts | Base Year Estimate (2002) | Forecast Value (2030) | Annual Growth Rate* |
|----------------|---------------------------|-----------------------|---------------------|
| Public Transit | 104.0 | 248.5 | 3.16% |

*Note: The mode growth forecast varies from the growth rate shown under Table 13. The 3.16 percent growth rate shown in Table 12 is the same as the Portland Metro 2000 Regional Transportation Plan financially constrained plan. This growth rate is pertinent because Portland's transit ridership accounts for about 90 percent of the statewide transit usage. The forecast data shown under Table 13 and annual gap under Table 14 are based on a slower growth rate of 1.46 percent annual growth from the Oregon Public Transportation Plan. Table 13 data was used in developing the needs work.

Transportation Needs

The public transportation needs assessment defines “feasible needs” as Level 3 in the *Oregon Public Transportation Plan* (See Table 12) expanding service through 2030 consistent with the regional transportation plans. Growing public transportation service consistent with metropolitan (MPO) areas' Regional Transportation Plans (RTPs) provides 42 trips per capita by the end of the planning cycle (2005-2030) creating a 60 percent increase in overall transit ridership. Capital costs in urban areas increase based on the preferred scenarios in Regional Transportation Plans (where available). By 2030, public transportation would be providing over 205 million trips annually, and the total cost to operate and expand the system would be \$812 million per year.

Table 13 - Summary of Public Transportation Scenarios in Year 2030*

| Public Transportation Service | Service Level 1 | Service Level 2 | Service Level 3 |
|--|------------------------------------|----------------------------------|---|
| | Freeze Service at Base Year Levels | Keep Pace with Population Growth | <i>Oregon Public Transportation Plan</i> Recommended Service Level (Feasible Need) |
| Annual Ridership in Million Trips | 127 | 172 | 205 |
| Trips Per Capita | 26 | 35 | 42 |
| Vehicles in Fleet | 1,558 | 2,175 | 2,675 |
| Annual Cost (millions of 1997 dollars) | \$342 | \$525 | \$764 |
| Annual Cost (millions of 2004 dollars) | \$364 | \$558 | \$812 |

*Note: Based on scenarios in 1997 Oregon Public Transportation Plan. Number of rides inflated based on 2005-2030 timeframe and conversion to 2004 dollars shown.

Table 14 - Summary of Public Transportation Expenditures and Feasible Need (Millions of 2004 dollars)

| | Current Annual Expenditures* | Feasible Need (OPTP Level #3 Recommendation) | Annual Gap |
|-----------------------|------------------------------|--|------------|
| Public Transportation | \$510.0 | \$812.0 | \$302.0 |

*Note: Includes operating and vehicle replacement on a 15-year cycle.

Revenue

Table 15 – Forecasted Public Transportation Revenue (Millions of 2004 dollars)

| Forecast Revenue per Year | Recent Annual Average Revenue | Future Annual Average Revenue |
|---------------------------|-------------------------------|-------------------------------|
| Public Transportation | \$447.4 | \$612.9 |

- Major assumptions include:
 - Revenue for major urban transit systems (Tri-Met, Lane, and Salem-Keizer) estimated from constrained plans and revenue forecasts, covering all revenue sources, for these systems.
 - Revenue for other large urban transit systems estimated using the National Transit Database and ODOT’s *Financial Assumptions for the Development of Metropolitan*

Transportation Plans, 2005-2030. Farebox recovery assumed at 34 percent and local funding at 24 percent of total revenue.

- For non-urban transit programs, Federal formula and discretionary programs and state grants do not expire and increase at the annual population growth rate of 1.2 percent.
- TriMet will continue to attract capital funding from the 5309 federal discretionary program consistent with recent history.
- Revenues for all smaller system not included.
- Major revenue sources include:
 - Federal Transit Administration (FTA) formula funds (5307, 5310, and 5311 programs), FTA discretionary grants (5309 program) and Congressional earmarks (11 percent of total).
 - State formula and discretionary grants for operations, bus replacement, and elderly and disabled services (18 percent of total).
 - Local and regional taxes (49 percent of total).
 - Farebox revenue (11 percent of total).

RAIL FREIGHT AND PASSENGER

System Description

Oregon's rail system, comprised of 22 railroads and 2,413 miles of track, serves both freight and passengers. The freight system is owned by the Union Pacific and BNSF Railway Company and 20 short line railroads. Amtrak operates one passenger train between Seattle and Los Angeles and two state-sponsored trains between Portland and Eugene each day. The ODOT Rail Division ensures compliance with state rail-related regulations, manages and markets inter-city passenger rail operations, and manages railroad improvement projects.

Demand

Table 16 – Rail Freight and Passenger Growth Forecast

| Forecasts | Base Year Estimate | Forecast Value | Annual Growth Rate |
|---|---------------------------|-----------------------|---------------------------|
| Rail Passenger (thousand annual boardings + detrainings) | 666 (2004) | 1,670 (2030) | 3.6% (2004-2030) |
| Rail Freight (millions of annual tons) ¹² | 55.2 (1997) | 100.6 (2030) | 1.83% (1997-2030) |

Transportation Needs

Although Oregon's mainlines are in relatively good shape, its short lines have inherited a maintenance deficit and do not generate enough capital to maintain their facilities or fund improvements to handle heavier rail cars. Needs for replacing rails and bridges total close to \$250 million (2004 dollars). Needed improvements to tunnels on the mainlines and to the rail facilities in the Portland area total \$190.6 million. Outside the Portland area, the Ports of Coos Bay, St. Helens, Morrow and Umatilla have identified needs costing \$30.05 million.

Expenditures for passenger services for the Willamette Valley trains will steadily increase as trains are added, but operating expenditures are expected to break even when the fifth train is added. Expenditures for the Beaverton-Wilsonville commuter rail line reflect the expected opening of the line in 2008. For the purposes of this needs analysis, expenditures for the proposed Wilsonville-Salem commuter line begin in 2020 and re-institution of services from Portland to Boise in 2022.

¹² Oregon Commodity Flow Forecast, Prepared for the Oregon Department of Transportation, Global Insight, April 2005, p. 11.

**Table 17 - Summary of Current Expenditures and Feasible Needs Per Year
(Millions of 2004 dollars)**

| | Current Expenditures | | Annual Feasible Needs - Public and/or Private | Annual Gap |
|-----------------|----------------------|------------------|--|--|
| | Public | Private | | |
| Freight | | | | |
| Mainlines* | No data | No data | \$8.82 | No data |
| Short lines | \$6.0 | More than \$0.67 | \$10.0 | Less than \$3.33 |
| Passenger | \$4.8 | No data | Range from \$9-\$57 a year including reasonable estimate for track improvements and train sets | \$4.2 to \$52.2 with out private funding |
| Safety Programs | \$1.6 | No data | | No data |
| ODOT Admin. | \$0.42 | | \$0.42 | \$0 |

*Note: Includes port rail facilities.

Revenue

**Table 18 – Forecasted Rail Public Revenue
(Millions of 2004 dollars)**

| Forecast Revenue per Year | Recent Annual Average Revenue | Future Annual Average Revenue |
|---------------------------|-------------------------------|-------------------------------|
| Rail | \$17.0* | \$17.3 |

*Note: Four-year average between fiscal years 2000 and 2003; excludes Revenue Bonds issued 2001-2003.

- Major future revenue sources and assumptions include:
 - Only public funding included in the revenue estimate. Private rail company funding for capital upgrades is not included.
 - Passenger rail farebox revenue not included.
 - Federal Railroad Administration grants, and Federal Highway Administration Section 130 grade crossing elimination funding.
 - State General Fund, fuel tax, and special allocations.
 - Local fees and revenue bonds.
 - Federal sources increase at inflation rate.

- State passenger sources keep pace with General Fund growth. Other state sources increase at inflation rate.
- Local sources increase at inflation rate. Revenue bonds expire in 2018.

TRANSPORTATION OPTIONS

Transportation Options programs are carried out at the state, regional, and local levels. Programs exist in ODOT's Public Transit Division and the Oregon Department of Energy. The programs help maximize the existing transportation system and help hold down transportation costs by promoting least cost options (such as walking, cycling and rideshare). Collectively, both state Transportation Options programs and local programs helped achieve an estimated statewide, 209 million mile annual reduction in vehicle miles traveled, or six percent of the state total, in 2002. Based on 2002 program costs of \$2.45 million, the state spent one cent for each VMT removed. To keep pace with population growth and maintain the current programs, an estimated \$3.62 million average annual investment in Transportation Options programs will be needed over the plan period. This represents a \$.79 million annual funding gap over the current spending.

**Table 19 - Summary of Current Expenditures and Feasible Needs Per Year
(Millions of 2004 dollars)**

| | Current Annual Expenditure | Annual Average Feasible Need | Annual Gap |
|------------------------|-----------------------------------|-------------------------------------|-------------------|
| Transportation Options | \$2.83 | \$3.62 | \$.79 |

STATE HIGHWAY-RELATED NEEDS AND FORECASTS

System Description

ODOT is responsible for almost 7,500 miles of state highways, ranging from eight-lane freeways to two-lane gravel roads. The state highway system is about one-third of the total road centerline miles in Oregon but carries about two-thirds of the total annual vehicle miles traveled in Oregon.¹³ State highway related programs spanning the network include modernization, preservation, bridge, operations, traffic safety, landslide and rockfall, maintenance, bicycle and pedestrian, and a number of ODOT special programs. In addition, specific ODOT division expenditures for the Highway Division, transportation program development, Transportation Safety Division, Driver and Motor Vehicle Services, Motor Carrier Transportation Division and Central Services are a part of the expenditures and needs of the highway system. Refer to Table 2 on page 4 for a summary of the highway program needs, expenditures and gaps. Below are program by program descriptions for the state highway system.

Demand

**Table 20 – Highway Passenger and Freight Travel Growth Forecast
(Billions of annual VMT)**

| Recommended Forecasts | Base Year Estimate (2004) | Forecast Value (2030) | Annual Growth Rate |
|---------------------------------|---------------------------|-----------------------|--------------------|
| Total Highway Travel | 34.8 | 49.4 | 1.35% |
| Passenger Highway Travel | | 45.8 | 1.35% |
| Freight Highway Travel | | 3.6 | 1.40% |

Revenue

**Table 21 – Forecasted State Highway Revenue
(Millions of 2004 dollars)**

| Forecast Revenue per Year | Recent Annual Average Revenue | Future Annual Average Revenue |
|---------------------------|-------------------------------|-------------------------------|
| State Highways | \$786.3 | \$988.2 |

- Major revenue sources and assumptions:
 - Highway user taxes – gas tax, vehicle license fee.
 - Federal High Priority Projects Program remains constant over 30 years (\$21.6 million per year).

¹³ ODOT, Transportation Key Facts 2002, page 10.

- Additional 1¢ per year gas tax for Operations, Maintenance and Preservation (OM&P).
- Additional \$15 per biennium vehicle license fee every 8 years for Modernization.
- 1% of state highway funds is reserved for bicycle and pedestrian projects.

State Highway Modernization Program

Modernization projects are those that add capacity to the highway system including added lanes, reconstruction with major alignment improvements and highways on new alignments. In 2004 the Modernization Program (including preliminary engineering (P.E.) and right-of-way (ROW)) was \$108.1 million for the year including \$78.1 million in regular funding and an additional \$30 million from the Oregon Transportation Investment Act (OTIA) I and II.

OTIA III is funding \$250 million for the Modernization Program in 2008 and 2009 through bonds. Since the bonds will have to be repaid from the Modernization Program beginning in 2008 at \$25 million per year, the state-funded Modernization Program will be reduced to \$26.5 million per year. This means that the Modernization Program will total \$276.5 million in 2008 and 2009, but total only about \$26.5 million a year from 2010 until the bonds are repaid in 2033. This figure does not include any federal ear-marked funds but does include \$3.5 million for the Immediate Opportunity Fund.

The calculation for feasible modernization needs is built upon the detailed analysis done for the *1999 Oregon Highway Plan (OHP)* using the Highway Economic Requirements System for Oregon. The calculation assumes that population and highway needs have increased faster than the projects built since 1997. It updates the analysis on the basis of the traffic volume growth rates.

The 20-year OHP feasible needs investment for modernization is \$6.8 billion (in 1997 uninflated dollars). Adding 7.3 percent for traffic volume growth to that number (about \$496 million) increases the feasible modernization needs to \$7.3 billion (1997 dollars) inflated to \$8.59 billion in 2004 dollars or \$330.3 per year until 2030. This figure includes P.E. and ROW costs.

State Highway Preservation Program

The Pavement Preservation Program makes improvements to rebuild or extend the service life of existing highways. The current funding strategy is intended to maintain the 1997 statewide average pavement condition of 77 percent fair-or-better through 2010. The 2003 statewide average pavement condition of 84 percent fair-or-better was the result of funding from OTIA I and II, the Low Volume Road Program and a change in rating procedures. Under the Low Volume Road Program, ODOT provides maintenance treatments to Regional and District Highways with less than 2500 average daily travel (ADT). The goal of the Preservation Program is to preserve state highways at an average condition of 90 percent fair-or-better.

Existing and feasible needs including P.E. and ROW for the Preservation Program are summarized in the following table:

Table 22 - Current Funding and Feasible Needs for Preservation
(Millions of 2004 dollars or average 2004 dollars)

| | Existing Preservation Funding (Average annual from 2001-07) | Feasible Preservation Needs (2004 dollars) |
|---------------------------|--|---|
| Interstate | \$59 | \$67 |
| Non-Interstate | \$59 | \$91 |
| Low Volume Road Shortfall | | \$2 |
| Total | \$118 | \$160 |

Although the Preservation Program has steadily improved pavement conditions over the last several years, the largest gains have been to rural highways and low volume highways. In order to optimize treatment timing and condition targets, preservation investments have favored rural highways in fair condition. Highways in poor condition which need extensive rehabilitation or which require costly upgrades to meet current standards are typically too expensive to include in the STIP. Many of these highways are in higher volume urban areas. Raising conditions to feasible needs levels requires a relatively disproportionate increase in funding to make needed improvements to the higher volume sections of the highway system such as I-405 and parts of I-5 in Portland that have relatively high improvement costs.

State Highway Bridge Program

The state owns and is responsible for 2,680 bridges. These include bridges 20 feet or longer in length, culverts, viaducts, bicycle and pedestrian structures, and movable bridges. Bridge needs include improvements or work needed to rebuild or extend the service life of existing bridges and structures. While the OTIA III program will result in more new bridge construction than at any other time since the Interstate Era, those bridges will have aged in the time it takes to pay off the bonds.

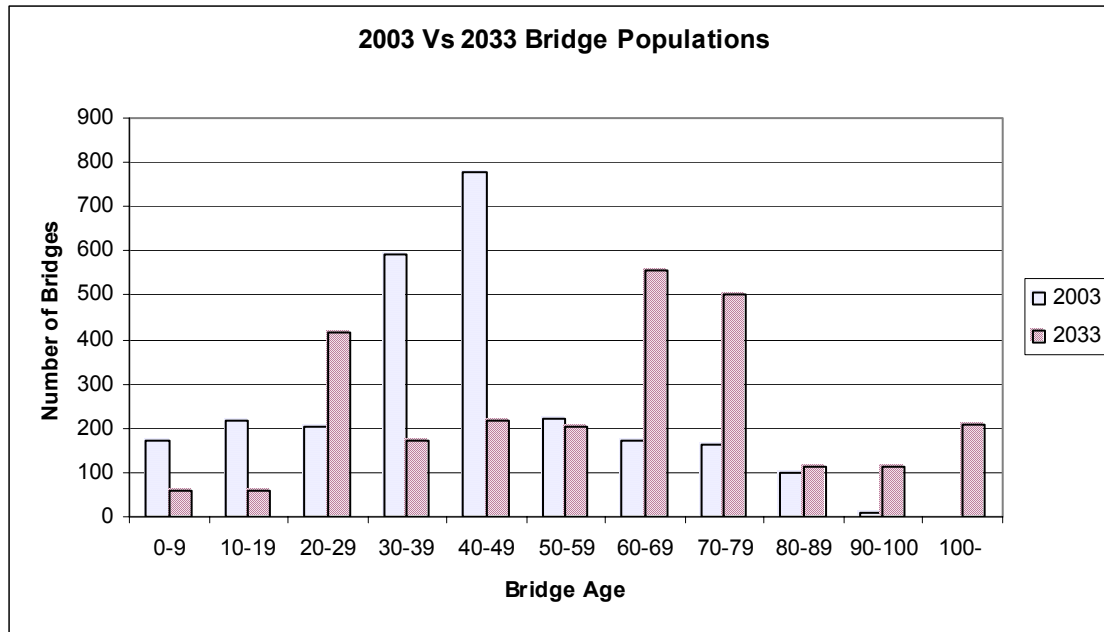


Figure 1 – 2003 vs. 2033 Bridge Populations

Figure 1 shows how the bridge population shifts from 2003 to 2033. The bridges built in the major bridge building periods still dominate the population although in lesser numbers as they are slowly being replaced. At the current funding levels, even with the money delivered through the OTIA program, the bridge population will be older in 2033 than it was in 2003.

Current funding for the 2004 State Bridge Program is \$71 million. The program will be reduced to approximately \$54 million when OTIA III debt service begins in 2008. The analysis identifies feasible needs of approximately \$129.6 million per year over the 25-year period of the OTP in addition to the \$1.3 billion investment accomplished through OTIA III. This amount is for state-owned bridges and includes:

1. Replacement or rehabilitation of bridges not part of the OTIA III program.
2. Preservation of historic, moveable and coastal bridges.
3. Major bridge maintenance

State Highway Operations Program

Operations projects enhance transportation system efficiency and safety through improvements through traffic signals and signs, Intelligent Transportation System (ITS) techniques (ramp metering, incident management, traffic management, operations centers, etc.) and transportation demand management (covered in the Transportation Options needs analysis).

The total needs greatly exceed the current investment levels for Operations. Funding has worked satisfactorily to date because many of the operations needs have been met through

projects funded from other STIP categories. Regardless of funding source, a comprehensive plan to maintain operations infrastructure and to meet operations needs is essential.

**Table 23 – Current Funding and Feasible Needs for Operations
(2004 dollars)**

| | Category | 2004 Funding | 2004 Funding | 2004 Feasible Needs | Gap |
|---|--|---------------------|---------------------|---------------------|---------------------|
| ITS Program Costs | Traffic Operations Center and Incident Response | \$5,919,214 | \$3,836,039 | \$3,836,039 | \$0 |
| | Earmarks and Grants | | \$965,060 | \$965,060 | \$0 |
| | ITS Program | | \$818,115 | \$818,115 | \$0 |
| | 511 Operations | | \$300,000 | \$300,000 | \$0 |
| Traffic Operations Program Costs | Signal Timing | \$3,798,218 | \$284,575 | \$445,600 | \$161,025 |
| | Traffic Analysis | | \$510,402 | \$510,402 | \$0 |
| | Traffic Investigations | | \$1,120,909 | \$1,120,909 | \$0 |
| | Speed Zones | | \$283,578 | \$383,578 | \$100,000 |
| | Traffic Operations | | \$1,598,754 | \$1,598,754 | \$0 |
| STIP | Operations Undistributed | \$20,633,000 | \$6,893,000 | \$0 | -\$6,893,000 |
| | SSI (Signs, Signals and Illumination) | | \$5,184,000 | \$23,728,000 | \$18,544,100 |
| | SSI Replacement | | | \$21,374,100 | |
| | SSI Growth annualized | | | \$2,354,000 | |
| | ITS | | \$8,040,000 | \$11,920,700 | \$3,880,700 |
| | ITS Replacement | | | \$700,700 | |
| | ITS Growth annualized | | | \$11,220,000 | |
| | STIP Transfers | | \$516,000 | \$0 | -\$516,000 |
| Total | | \$30,350,432 | \$30,350,432 | \$45,627,257 | \$15,276,825 |

Total operations funding for FY 2004 is \$30,350,432. The feasible needs for FY 2004 are over \$45 million. The defined feasible needs are 90 percent of what is required to meet the desired levels of service. The identified budget gap between current funding levels and feasible needs for 2004 is \$15.3 million.

State Highway Traffic Safety Program

The Highway Traffic Safety Program focuses on improvements to address priority safety problems at highway locations and corridors in order to reduce the number of fatal and serious injury crashes. The Oregon Transportation Safety Committee and the Transportation Commission’s goal is to reduce the fatality rate to 0.99 per 100 million vehicle miles traveled by year 2010. The annual needs for the program based on a four-year average are the following:

**Table 24 - Current Annual Funding and Feasible Needs for Traffic Safety
(Millions of 2004 dollars or average 2004 dollars)**

| | Current Funding | Feasible Needs |
|------------------------|-------------------------|--|
| Highway Traffic Safety | \$20.8 (4-year average) | \$40.51 per year to 2010 \$40.51 per year after 2010 to maintain goal |

State Highway Landslide and Rockfall Program

The Landslide and Rockfall Program strives to improve the safety and function of the state highway system by improving slope stability and addressing problem areas along road cuts. The projects in this program are usually major and typically cost about \$1 million to \$5 million each. Table 24 identifies an annual funding gap between current funding levels and feasible needs of \$8.07 million for the program.

**Table 25 – Current Funding and Feasible Needs for Landslide and Rockfall Program
(Millions of 2004 dollars or average 2004 dollars)**

| | Current Funding (2002-2005 Average) | Annual Feasible Needs | Annual Gap |
|--------------------------|--|----------------------------------|-------------------|
| Landslides and Rockfalls | \$6.93 | \$15.00 | \$8.07 |

State Highway Maintenance Program

The Maintenance Program develops and implements programs to ensure efficient, effective and consistent maintenance of the transportation infrastructure. Typical activities include installing or repairing guardrails, applying asphalt treatments, improving drainage, maintaining bridges, roadside vegetation and traffic signals, and providing snowplow and road sanding treatments.

**Table 26 – Current Funding and Feasible Needs for Maintenance
(2004 dollars)**

| Program Area | Current Level of Service (2004 Funding) | Desired Level of Service (2004 Costs Plus 18 Percent) | Preferred Level (Feasible Need Level of Service) | Difference Between Current Levels and Feasible Need |
|------------------------------|--|--|---|--|
| Surface and Shoulders | \$30,208,847 | \$35,646,439 | \$40,600,690 | \$10,391,843 |
| Drainage | \$10,041,424 | \$11,848,881 | \$13,495,674 | \$3,454,250 |
| Roadside Vegetation | \$27,269,593 | \$32,178,120 | \$36,650,334 | \$9,380,741 |
| Traffic Services | \$31,562,143 | \$37,243,329 | \$42,419,520 | \$10,857,377 |
| Structures | \$8,513,080 | \$10,045,434 | \$11,441,579 | \$2,928,499 |
| Snow and Ice | \$26,120,617 | \$30,822,328 | \$35,106,109 | \$8,985,492 |
| Extraordinary Maintenance | \$5,796,662 | \$6,840,061 | \$7,790,714 | \$1,994,052 |
| Permits | \$3,487,634 | \$4,115,408 | \$4,687,380 | \$1,199,746 |
| Total | \$143,000,000 | \$168,740,000 | \$192,192,000 | \$49,192,000 |

Table 25 shows a \$49.2 million dollar gap between 2004 funding and preferable levels of service, or feasible needs, across the Office of Maintenance program areas. Current funding levels would need to be increased by approximately 34 percent in order to fully address the feasible needs.

In addition to the increased funding needed to meet preferable levels of service, approximately \$110 million in deferred maintenance costs would need to be addressed in order to achieve 100 percent of desired levels including improving substandard guard rails, replacing culverts, bringing rest areas up to desirable levels and updating older electrical systems. Updating these electrical systems would reduce future needs by \$1 to \$2 million annually.

ODOT Special Programs

Access Management Program

Access management involves permitting driveway and roadway access to state highways and regulating the spacing of existing and new driveways to increase the safety and mobility of the highway. Currently, about \$2.1 million/year is allocated to the Access Management Program. If ODOT wants to pursue a more aggressive program, up to \$16.6 million per year is needed. The majority of the additional funds would be used for property acquisition.

Fish Passage Culvert Program

The Fish Passage Culvert Improvements Program helps implement *The Oregon Plan for Salmon and Watersheds* by funding culvert restoration on streams where historically there have been fish runs but where the culvert has created a barrier to fish passage. Current funding for the Fish Passage Culvert Program is \$3.6 million per year. To replace or retrofit

the culverts identified by the Oregon Department of Fish and Wildlife as being barriers to fish passage, the program would cost \$244 million or \$9.38 million per year from 2005 to 2030.

Large Culvert Program

The Large Culvert Program is currently funded at \$2.4 million per year to repair and replace the structurally deficient large culverts that are not eligible for National Bridge Inventory funding. Approximately \$33 million per year will be needed to replace existing culverts that have reached the end of their lifespan and to keep up with the anticipated failures each year in the future. The gap is \$30.6 million annually.

Scenic Byways Program

The state and national Scenic Byways Programs highlight scenic federal, state and local highways and roads throughout Oregon. Oregon has 14 Scenic Byways covering 2,204 miles and 9 Tour Routes covering 580 miles. Funding for the Scenic Byway Program was \$217,900 in FY 2003/2004.

The Scenic Byway Program is primarily federally funded with a 20 percent match by state and local governments. Using estimates for the Pacific Coast Scenic Byway needs for marketing, restoration and improvement of facilities, parking, access, safety and other improvements, the Program Manager estimated statewide needs for these purposes at \$445,000 per year in 1997 dollars (\$356,000 federal funds and \$89,000 state and local match) or \$523,700 in 2004 dollars, an annual gap of \$305,800.

Transportation Enhancements Program

The Transportation Equity Act for the 21st Century (TEA-21) allows each state to reserve 10 percent of its Surface Transportation Program (STP) allocation for the Transportation Enhancement Program; for Oregon the full 10 percent set-aside is about \$8 million. In FY 2004 and 2005, the Oregon Transportation Commission (OTC) limited Enhancement funding to \$3 million per year in order to make more federal funds available for pavement and bridge preservation, but increased Enhancement funding to \$5 million per year beginning in FY 2006. Transportation Enhancement is a reimbursement program requiring a non-federal funding match of at least 10.27 percent.

Project demand has been high. In 2004 there were 79 applications requesting more than \$50 million for the FY 2007-2008 funding cycle. The ratio of awards to requests is about one in six. If the program were to receive the full 10 percent set-aside of \$8 million, more of this demand could be met. Increases in the set-aside will depend on increased federal appropriations and OTC decisions on how much of the overall allocation is available for projects.

Transportation and Growth Management Program

The Transportation and Growth Management (TGM) Program provides resources to help Oregon communities prepare transportation and land use plans to respond to pressing transportation-related growth management issues and to develop transportation system plans (TSPs) and plan updates and ordinances that implement the Transportation Planning Rule and the *1999 Oregon Highway Plan*. The current funding level of \$4.4 million per year for the TGM program is expected to decline to \$4 million per year in the future, reflecting declining needs as many TSPs have been completed.

ODOT Bicycle and Pedestrian Program

In urban areas bicycle and pedestrian facilities consist of sidewalks, crosswalks, crossing islands, pedestrian signals, and marked bike lanes. In rural areas the highway shoulders serve as bikeways and walkways. The Oregon Department of Transportation's focus is to provide pedestrian and bicycle facilities primarily on urban state highways. ODOT's Bicycle and Pedestrian Program also assists cities and counties with bicycle and pedestrian funding and planning. It is estimated that 272 miles or about half of the ultimate sidewalk and bikeway system is in place.

The estimated feasible annual need for the walkways and bikeways on specific segments of urban state highways over the plan period is \$9.93 million per year (in 2004 dollars). This figure is based on an average unit cost of \$700,000 per mile for sidewalk construction with curbs, drainage, crossings, and ADA ramps for both sides of the 253 miles of urban highway. The average unit cost is relatively high because the majority of easy to construct areas have already been addressed. The 253 miles represent 3.5 percent of the total state highway system. Currently, \$3.46 million is spent on state bicycle and pedestrian capital improvements and administration of the state program. This leaves a \$6.47 annual gap in meeting the feasible need.

ODOT Highway Division Administration and Indirect Program

In FY 2003/2004 administrative costs for the Highway Division construction and maintenance totaled \$7.3 million. Indirect costs for Highway Division construction and maintenance were \$71.3 million. They include items like training, financial and clerical support staff, building and maintenance and Asset Management. The Department of Transportation believes that the needs for these activities will increase with inflation in the future, but not increase with the amount of construction activity; that is, spending should increase with inflation.

ODOT Transportation Program Development

Transportation Program Development (TPD) coordinates the future use of transportation resources among federal, state, regional and local agencies. Responsibilities include statewide plans and special studies, technical assistance and coordination, and analysis and research. Current funding for FY 2004 is \$29.9 million, including consultant and contract payments. The level of feasible needs is projected to remain at \$29.9 million per year with increases for inflation.

ODOT Transportation Safety Division

The Transportation Safety Division organizes, plans and conducts a statewide transportation safety program involving educational, enforcement and engineering actions. Both current funding and feasible needs are \$19 million a year with increases needed to adjust for inflation.

ODOT Driver and Motor Vehicle Services

Driver and Motor Vehicle Services (DMV) promotes driver safety, protects financial and ownership interests in vehicles, and collects revenue for Oregon's roads. DMV is in charge of licensing the 2.5 million drivers and registering the 4 million registered vehicles in Oregon. Expenditures for the DMV Driver and Vehicle Services totaled \$60,882,490 for FY 2003 and are shown in Table 26.

**Table 27 – Current Expenditures for DMV
(2003 dollars - See below for details)**

| Program | FY03 |
|---------------------|--------------|
| Vehicle | \$27,850,751 |
| Driver | \$30,859,996 |
| Admin. Costs | \$2,171,743 |
| Total | \$60,882,490 |

Needs beyond current expenditures for computer programs, facility upgrades and equipment replacement are expected to cost \$57.7 million in 2003 dollars or \$2.89 million per year over a 20-year period as shown in Table 28.

**Table 28 – 20-Year Feasible Needs
(2003 dollars – See below for details)**

| Program | Computer Programs | Facility Upgrades | Equipment Replacement | Total |
|-----------------|--------------------------|--------------------------|------------------------------|---------------------|
| Driver | \$19.4 million | \$5.2 million | \$8.6 million | \$33.2 million |
| Vehicle | \$18.8 million | \$4.8 million | \$0.9 million | \$24.5 million |
| Total | \$38.2 million | \$10 million | \$9.5 million | \$57.7 million |
| Per Year | | | | \$2.89 million/year |

During the development of this needs analysis, the OTP planning period was extended to 2030 or 26 years rather than the 20 years used above, and the expenditures were changed to FY 2004 dollars. The additional feasible needs were extended over the 26-year period and inflated 2.66 percent from 2003 dollars to \$59.23 million. That means DMV needs close to \$2.3 million per year during the next 26 years in addition to its current expenditures of \$60.9 million or a total of \$63.2 million per year.

ODOT Motor Carrier Transportation Division

The Motor Carrier Transportation Division strives to promote a safe, efficient and responsible commercial transportation industry. Its programs and services oversee the enforcement of motor carrier requirements; ensure compliance with state regulations for truck taxes and fees; conduct truck, driver and accident inspections; train enforcement officers, conduct the Green Light Program (weigh-in-motion); and register and permit trucks. The Division serves the approximately 25,000 trucking companies and 300,000 trucks that operate in Oregon.

**Table 29 – Current Expenditures for Motor Carriers
(2003 dollars – See below for details)**

| Program | 2003 |
|--------------------------------|---------------------|
| Administrative – Manger | \$1,138,400 |
| Field Services | \$8,127,557 |
| Audit | \$3,325,106 |
| Safety | \$6,895,792 |
| Salem Services | \$6,197,910 |
| Total | \$25,594,765 |

Total expenditures for the Division’s four program areas and administrative/manager costs were over \$25.59 million in FY 2003.

The Motor Carrier Division needs additional money to maintain/repair weigh stations, to purchase portable weigh-in-motion scales, to automate scale crossing analysis, to add five auditors to the program, to maintain and upgrade Green Light facilities, to automate the

over-dimension permit and routing system, to install Internet kiosks and to replace the headquarters' phone system.

Table 30 – Feasible Needs
(2003 dollars – See below for details)

| Program | Additional 20-year Needs |
|---------------------------------|---------------------------------|
| Administrative - Manager | 0 |
| Field Services | \$6,200,000 |
| Audit | \$2,649,480 |
| Safety | \$8,300,000 |
| Salem Services | \$4,300,000 |
| Total | \$21,449,480 |
| Total per year | \$1,072,474/yr |

During the development of this needs analysis, the OTP planning period was changed to 2030 or 26 years rather than the 20 years used above, and the expenditures were changed to FY 2004 dollars. For the purposes of this analysis, the Motor Carrier numbers do not change materially. The additional feasible needs were extended over the 26-year period and inflated 2.66 percent to 2004 dollars at \$22.02 million. That means that the Motor Carrier Division needs at least an additional \$847,000 per year for feasible needs or a total of about \$26.4 million per year during the 26-year period.

ODOT Central Services

Revenues for the Central Services expenditures come from assessments against the various ODOT divisions. The Rail Division and the Public Transit Division assessments have been included in those division expenditures. The figure here includes assessments involving the Motor Carriers, DMV, Transportation Safety, Transportation Development and Highway Divisions. The average annual budgeted funding for Central Services for 2003-2005 was almost \$55.2 million. This amount will increase with inflation and with additional staff in the future.

LOCAL ROAD AND BRIDGE NEEDS AND FORECASTS

System Description

The local system is an integral part of Oregon’s transportation system. It is the portion of the road system most frequently experienced by Oregonians. About one-third of the 33 billion annual vehicle miles traveled in Oregon are on the local portion of the road system; however, the local road system represents 65 percent of Oregon’s total road centerline-miles.¹⁴

This report addresses the maintenance and modernization of city and county roads and streets and the maintenance and replacement of city and county bridges. “Modernization” denotes projects that increase capacity. Bicycle and pedestrian facilities (sidewalks, pedestrian crossings, street trees, etc.) are part of modernization.

Table 31 - Local Centerline Miles of Roads

| | Paved | Unpaved | Total |
|--------------|--------------|----------------|---------------|
| County Roads | 15,978 | 17,458 | 33,436 |
| City Streets | 8,629 | 647 | 9,276 |

Source: ODOT Transportation Key Facts, 2002

Demand

Table 32 – Local Transportation System Growth Forecast

| Forecasts | Base Year Estimate (year) | Forecast Value (year) | Annual Growth Rate |
|---|--------------------------------------|----------------------------------|-------------------------------|
| Total Highway Travel (billions of annual VMT) | 34.8 (2004) | 49.4 (2030) | 1.35% |
| Public Transit (millions of annual passengers) | 104.0 (2002) | 248.5 (2030) | 3.16% |

Local street network and local public transportation demands are assumed to be reflective of the forecasted growth in statewide highway travel and state public transportation demand. The annual growth rates for the local transportation system are the same as those used for the state highway travel and the public transportation mode earlier in this summary report.

¹⁴ ODOT, Transportation Key Facts 2002, pages 9-10. Centerline miles are the number of miles of two-way roads including paved, unpaved, and multi-lane facilities.

Transportation Needs

Two methods are used to identify the 25-year local transportation needs. Included in the assessment are city and county road maintenance and modernization and bridge maintenance and replacement costs. Bicycle and pedestrian needs are included in the road modernization category. The needs methodology was reviewed by both a technical committee consisting of city, county, and state staff and by the project consultant team.

The estimated local transportation system need on an annual basis ranges between \$1 billion and \$1.2 billion (2004 dollars). Road maintenance is the largest category of need at \$645 million per year followed by modernization at about half that amount; current spending shows the opposite trend of more funds being spent on construction than preservation. Based on this analysis, there is a \$282-\$482 million annual gap between local spending and transportation needs.

**Table 33 - Feasible Needs Per Year
(Millions of 2004 dollars)**

| | County | City | Total |
|--|---------------|--------------|---------------------------|
| Roadway Maintenance | \$398 | \$246 | \$645 |
| Bridge Maintenance | \$7 | \$1 | \$8 |
| Bridge Replacement | \$124 | \$28 | \$152 |
| Road Modernization (range – constrained and unconstrained RTPs and TSPs) | | | \$217 to \$355 |
| Total | \$529 | \$275 | \$1,022 to \$1,160 |

**Table 34 - Summary of Local Transportation System Funding Gap
(2004 dollars on an annual basis)**

| | Current Spending | Local Need | Gap |
|------------------------|-------------------------|-------------------|---------------------|
| Local Road and Bridges | \$718 million | \$1-\$1.2 billion | \$282-\$482 million |

Revenue

**Table 35 – Forecasted Local Streets and Roads Revenue
(Millions of 2004 dollars)**

| Forecast Revenue per Year | Recent Annual Average Revenue | Future Annual Average Revenue |
|----------------------------------|--------------------------------------|--------------------------------------|
| Local Streets and Roads | \$687.7 | \$716.5 |

- Major revenue sources and assumptions include:
 - Local fees – collections to grow with population; fees increase with inflation.
 - State highway user taxes - additional 1¢ per year gas tax and \$15 vehicle license fee every 8 years in accordance with ODOT forecasts.
 - US Forest Service funding reduced in 2007.
 - Local and state general fund receipts are assumed to grow with the state general fund – as forecast by the Oregon Department of Revenue through 2011; 2.6 percent thereafter.
 - OTIA revenue is included (locals receive annual average of 12 percent of OTIA funds each year).

**Oregon Transportation Plan, Transportation Needs, 2005-2030 Executive Summary –
July 14, 2005
Errata Sheet**

This errata sheet corrects the following error(s).

| The Oregon Transportation Plan, Transportation Needs, 2005-2030 Executive Summary – Section Name | Page # | Location on Page | Current Text | Corrected Text | Date of Correction |
|---|---------------|-------------------------|--|---|---------------------------|
| Transportation Options | 18 | Line 7 | traveled, or six percent of the state total, in 2002. | ¹ traveled, or 0.6 percent of the state total, in 2002. | January 2009 |

¹ This correction does not impact the current annual expenditures, the average annual feasible need estimate, or the annual gap estimates in Table 19 – Summary of Current Expenditures and Feasible Needs per Year (Millions of 2004 dollars), or other tables in the Oregon Transportation Plan, Transportation Needs, 2005-2030 Executive Summary – July 14, 2005; or other publications listed on the Oregon Transportation Plan Update web page at <http://www.oregon.gov/ODOT/TD/TP/ortransplanupdate.shtml> unless otherwise noted.