

# **The Cost of Congestion to the Economy of the Portland Region**

## **Executive Summary December 2005**

**Prepared for: Portland Business Alliance, Metro, Port of Portland and Oregon Department of Transportation**

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### **Conclusion**

*The region's economy is transportation-dependent.* Despite Portland's excellent rail, marine, highway and air connections to national and international destinations, projected growth in freight and general traffic cannot be accommodated on the current system. Increasing congestion -- even with currently planned improvements -- will significantly impact the region's ability to maintain and grow business, as well as our quality of life.

Action is needed to remain competitive with other regions that are planning large investments in their transportation infrastructure. This report finds that:

- Being a trade hub, Portland's competitiveness is largely dependent on efficient transportation, and congestion threatens the region's economic vitality.
- Businesses are reporting that traffic congestion is already costing them money.
- Failure to invest adequately in transportation improvements will result in a potential loss valued at of *\$844 million annually by 2025 – that's \$782 per household -- and 6,500 jobs.* It equates to 118,000 hours of vehicle travel per day – that's 28 hours of travel time per household annually;
- Additional regional investment in transportation would generate a benefit of at least \$2 for each dollar spent.

### **Background**

As a first step to addressing the Portland region's rising congestion problem, public and private sector partners commissioned a study to provide base-line information about the relationship between investments in transportation and the economy.

This report does not recommend a level of funding for transportation improvements, nor does it endorse a specific package of improvements. Instead, it is intended as a springboard for discussions about planning for and investing in the Portland metropolitan region's transportation system.

### **Congestion and the Economy**

- 1. The region's economy is transportation-dependent, especially on its roads and highways, for the movement of freight.*

In comparison with other U.S. metropolitan areas of similar size, Portland's competitiveness is largely dependent on the region's role as a gateway and distribution center for domestic inland and international markets. Some other metropolitan areas have larger bases of research, venture capital, and higher education or are surrounded by greater population centers that enable their economies to be competitive even with more congested highway conditions.

- **"Traded" industries, which bring new money into the region and enable the rest of the economy to prosper, require an efficient transportation system.**

Portland's economy depends on industries that could locate elsewhere, but have been attracted to the area because of its advantageous trading position. Those industries include computer equipment, wood products, metal products, tourism, publishing, wholesale distribution activities and gateway port activities.

Because traded industries depend on the movement of freight, reasonably good transportation access must be maintained if those industries are to remain and grow in the Portland area in the years to come.

- **All modes -- roads, transit, air, marine, and freight rail -- are important to an efficient transportation system, but few alternatives exist to a smoothly functioning road and highway system for on-the-clock business travel.**

Portland is located at the confluence of two navigable rivers and is served by two intercontinental rail lines and an international airport. However, these modes commonly require a road system to get to and from a terminal or parking lot. While alternatives such as rail and bus transit help alleviate congestion for many commuters, these transit services do not meet the specialized needs of business travel for delivery of freight and other services. As many business-related trips are subject to schedule requirements, businesses become "prisoners of congestion," significantly increasing their cost of doing business.

- **In addition to road congestion, there are limitations with rail, air, and marine service and connections, which are critical to business needs as well.**

## ***2. Congestion is already impacting large and small businesses and hurting their competitiveness.***

Interviews with local business leaders reveal how traffic congestion is affecting their operations. Many businesses have already made schedule changes to avoid peak afternoon traffic conditions. However, businesses have expressed a growing concern that the relatively few windows of time when congestion is not a problem are shrinking.

Businesses reported the following impacts of congestion:

- Costs for additional drivers and trucks due to longer travel times;
- Costly "rescue drivers" to avoid missed deliveries due to unexpected delays;
- Loss of productivity due to missed deliveries;
- Shift changes to allow earlier production cut off;
- Reduced market areas;

- Increased inventories;
- Costs for additional crews and decentralized operations to serve the same market area.

Specific examples of how businesses are being harmed by congestion:

- Intel has moved their last shipment departure time up two hours for outbound shipments through PDX because of increased pm peak congestion. A missed flight affects production across the globe and can result in costly operational changes.
- Sysco Foods opened a new regional distribution center in Spokane to better serve their market area because it was taking too long to serve its market from the Portland area; others are following suit.
- Providence Health Systems reported medical deliveries, which have to be rapid and frequent, are getting very difficult on the west side, with routine runs requiring more than four hours. As a result, Providence is planning a relocation of warehousing and support operations at a cost (independent of construction) from \$1-1.5 million in 2006/7.
- OrePac has increased inventories by 7% to 8% to mitigate for congestion delays, which represents a lost opportunity for other investment.
- Other businesses have managed to restructure their operations to deal with congestion, but many have reached the point at which operational changes are resulting in real costs. As an example, PGE estimates that it spends approximately \$500,000 a year for additional travel time for maintenance crews.

As congestion continues to worsen, businesses in this region will be at a competitive disadvantage. Businesses that serve local needs either absorb the added costs and reduce their profits, or pass these costs on to the region's consumers through higher prices. Trade-oriented businesses, however, can respond by moving their operations, and the jobs they provide, to locations outside the region.

Failure to address the negative impacts of congestion is likely to result in the loss of jobs as existing businesses expand elsewhere or relocate and the region attracts fewer new businesses. This also has a ripple effect on other businesses and suppliers throughout the region and the state.

## **Overall Impacts of Congestion on the Economy**

Transportation forecasting models show that currently planned transportation investments will not keep up with traffic growth, resulting in severe congestion delays.

This will affect how well the region can compete for new jobs and cost each household an additional 50 hours of lost time annually by 2025. Simply put, congestion reduces the advantage of location, which is particularly troubling for the Portland metropolitan region because its traded industries are dependent on transportation.

The study compares a Planned Investments Scenario, anticipated to be funded over the next twenty years, to an Improved System Scenario, which would double transportation investment over the next 20 years. The Improved System Scenario would result in significantly less

congestion growth during morning and afternoon peaks, key times for businesses. It would also save 28 hours of travel time per household annually by 2025.

- **Economic benefit: The total value of benefit from such an investment is \$844 million annually by 2025. It also supports 6,500 additional permanent jobs as of 2025, as well as 2,000-3,000 construction jobs annually.**

This total combines the value-added income generated in the region and the value of time savings to individuals. Under a higher investment scenario, businesses are able to convert travel time savings into additional sales, resulting in \$426 million a year of value-added benefit and 6,500 jobs. The benefit to businesses would also be complemented by significant time savings and higher quality of life for residents, valued at \$418 million a year. This scenario, while not eliminating congestion, will improve reliability, which is also critical to business travel.

- **Return on Investment: Under an Improved System Scenario, each dollar invested returns at least \$2 in value.**

Some significant costs are incurred in the early years of the study period, and benefits continue to phase in over a longer time period. Looking at both the cost stream and the benefit stream in terms of their net present value, the analysis shows a potential benefit/cost ratio of about \$2 to every dollar invested.

## Next Steps

The stakes are high for the economy and quality of life in the Portland metropolitan region, representing thousands of jobs and billions of dollars.

Many other regions, including Chicago, Atlanta, LA, Houston, Seattle and Vancouver BC, have undertaken similar studies and are taking action to address congestion. Examples from around the country illustrate the range of policies and programs that can be adopted to mitigate future congestion growth. More importantly, these examples demonstrate the need for the Portland metropolitan region to act now to reduce the impacts of congestion and preserve our continued economic competitiveness.

This study is intended to provide useful information to the public, the business community and government decision-makers as they work to formulate transportation policy, projects and funding decisions. The study should be used as a springboard for future discussions about planning for and investing in the Portland metropolitan region's transportation system.

This report also outlined a number of potential tools, such as road and transit capacity enhancement, system management, and pricing strategies that are being considered in other cities, and should also be considered here as we look at solutions. Local business and government leaders should immediately have a discussion about the impacts of congestion and solutions in order to protect and enhance the local economy and quality of life.