

TRANSPORTATION 2040

The region's new transportation plan

Executive Summary: A Snapshot of the Alternatives

Introduction

The Puget Sound Region Council is updating the current regional transportation plan, *Destination 2030*. The new plan, *Transportation 2040*, will extend the region's long-range transportation vision to the year 2040 and respond to the recently updated regional growth strategy, VISION 2040. Six alternatives – the baseline plus five action alternatives – have been created during the initial planning process.

The alternatives are designed with components that work together to achieve the region's goals. However, historic transportation funding has not kept pace with the region's needs, and it is necessary for Transportation 2040 to identify both sufficient and sustainable new funding sources. Therefore, each alternative includes a funding strategy. The structure of the alternatives makes it possible for one to be the early phase of another.

The alternatives consider two related approaches to transportation investment: improving efficiency and strategic expansion. Improving efficiency means that we make better use of the system to move people and goods and that we attempt to reduce the demands on the system during peak hour travel. Efficiency also depends on better use of land to reduce the need to drive and to increase bicycle and pedestrian options.

Strategic expansion means increasing capacity with investments in capital facilities: roadway chokepoints and bottlenecks; transit lanes, services, and fleets; vanpools; bicycle and pedestrian trails, sidewalks, and paths; and ferry terminals and service.

All alternatives include a core set of investments to improve safety, security, and to support options for special needs populations. All the alternatives contain components to expand and complete the bicycle and pedestrian network and to connect the network to transit stations and ferry terminals. Each alternative also includes programs and technologies to reduce vehicle miles traveled and to reduce greenhouse gas emissions.

The alternatives differ in their approach to investing in efficiency and expansion. They range from modest improvements with limited funds to a dramatic shift in priorities resulting in a new type of transportation system. Tolling plays a part in every alternative to both manage congestion and to pay for improvements. Reliance on tolling shifts from modest to robust across the alternatives.

The alternatives respond to varied viewpoints and needs to help shape how the region should address transportation issues and demands on the system.

The Draft Alternatives Report is available at www.psrc.org/projects/mtp/index.htm and provides a list of the projects included in each alternative. This list will remain draft to allow minor changes and to allow time for various ongoing project decisions, including but not limited to the following:

- **Alaskan Way Viaduct and Seawall Replacement** – Each alternative will include this critical regional project as defined by the current planning and project selection process.
- **SR 520-Bridge Replacement and HOV Lane** – Alternatives 1-5 include a new 6-lane replacement bridge on SR 520.
- **Passenger-Only Ferry Study and Washington State Ferries (WSF) Long-Range Plan** – The Transportation 2040 plan will incorporate the results of the PSRC Passenger-Only Ferry Study and the 2009 Legislature's decision on the WSF Long-Range Plan.



The Baseline Alternative

What is the basis of comparison for the Transportation 2040 alternatives? Will the new regional transportation plan build on established policies, plans, and funded projects? How can the current system benefit from the new plan?

The Baseline Alternative is the starting point for comparing the Transportation 2040 alternatives. Alternatives 1 through 5 are built on the policies, plans, and funded projects described in the Baseline. The Baseline also is considered the "No Action" alternative for the purpose of environmental review. Funds for the transportation investments in the Baseline Alternative are available with "current law funding" – meaning funds are either on hand or that authorization exists to make funds available in the future.

SYSTEM EFFICIENCY

Demand Management. The Baseline Alternative assumes that participation in employer demand management programs will continue at existing levels (714 sites). Support continues for Growth and Transportation Efficiency Centers¹ (GTEC) programs in Seattle, Bellevue, Tacoma, and the regional growth center in the Redmond/Overlake area. Parking management programs will vary from jurisdiction to jurisdiction as will investments in "complete streets," bicycle and pedestrian networks, and local development regulations to induce mixed use development near transit centers and rail stations.

System Management. This will include ramp metering, Intelligent Transportation Systems (ITS), corridor management, transit signal priority, incident detection and management, active traffic management and speed harmonization programs, 511 and traveler information systems, etc. The Baseline assumes that the state and the region can maintain and preserve existing ferry routes (and service levels), terminals, the fleet, and current passenger-only service.

STRATEGIC EXPANSION

Roadways. The roadway improvements in the Baseline Alternative are limited to those funded by the "Nickel" and Transportation Partnership Act, and tolling is limited to those facilities where it exists or is planned (on the ferry system and the Tacoma Narrows Bridge until the tolls are lifted).

Transit. The Baseline Alternative assumes that funds are available to maintain current levels of transit services for core, community connector, and specialized types of service. Core service operates all day at a high frequency serving a high volume of riders. Community connector transit provides peak hour express services. Specialized transit offers service to specific destinations at limited times of day.

The Baseline includes funding to complete Sound Transit's Phases 1 & 2 programs, which will expand the light rail, commuter rail, and express bus network. The region's other transit agencies will implement 6-year plans including King County Metro's Bus Rapid Transit (BRT) projects and Community Transit's SWIFT services along SR 99 in Snohomish and King counties. Plans anticipate a modest 2 percent annual increase in transit service hours.

Bicycle and pedestrian. The Baseline includes completion of selected trail extensions and bike lanes. Sidewalk completions or improvements are subject to funding availability and based on local plans and regulations.

Funding. The Baseline Alternative would be funded using current law revenues primarily from traditional sources (gas tax, sales tax, etc.) Toll revenues would also be available from the ferry system (fares), tolls on the SR 167 HOT lane, and from the Tacoma Narrows Bridge.

¹ GTECs are defined areas (generally with higher employment and/or population) within which cities are encouraged to expand Commute Trip Reduction efforts to additional employers and residential groups.

PRESERVATION

In general the Baseline alternative assumes that existing facilities will sustain their capacity through year 2040 (exceptions are noted in the Draft Alternatives Report). The state and the region are in the process of planning two major replacement efforts for the Alaskan Way Viaduct and the SR 520 Bridge. The regional plan update made the following assumptions to allow regional planning to proceed while these processes reach their own detailed conclusions:

Alaskan Way Viaduct (AWV). All alternatives, including the Baseline, assume that sufficient resources have been committed to preserve the Viaduct or replace it in ways that would maintain the current Viaduct's capacity (three lanes each direction through the downtown core).

SR 520 Bridge. The Baseline assumes that sufficient resources have been committed to preserve the bridge in ways that maintain current capacity (two lanes each direction on the bridge section). Alternatives 1-5 include replacing the existing SR 520 Bridge with a six-lane structure (two general purpose and one managed lane each direction). *See below for alternative assumptions.*

CORE ELEMENTS OF ALL ACTION ALTERNATIVES

Alternatives 1 through 5 include a number of common investments in safety, security, and special needs transportation projects; these are labeled "core strategies" or "core investments." Although core strategies are included in all of the alternatives and are needed to improve the transportation system, they require additional funding above that assumed in the Baseline.

Together the Baseline plus the core strategies form the basis for comparing the other alternatives. Alternatives 1 through 5 assume that Baseline investments will be funded by "current law revenue" and that funding will be secured to complete additional core strategies. Core investments would include improved roadway crossing safety, improved signal coordination, complete freeway system ramp metering coordinated with arterial signals, and FAST grade-separation projects.



Alternative 1: Make the Most of the Existing System

What if we only receive a small amount of new funding and must make the most of the existing system? Can we move people and goods better with emphasis on programs that maximize efficiency and offer more travel choices – including the strategic expansion of regionwide transit and vanpool services?

For the most part, Alternative 1 assumes that improvements would be made using existing corridors – freeways, arterials, and waterways – that already move people and goods through the region. This alternative is based on a limited amount of new traditional financing and modest reliance on toll revenues.

SYSTEM EFFICIENCY

Demand Management. To increase the efficiency of the system, Alternative 1 places more emphasis on the use of employer demand management programs (incentive and volunteer) that promote options to driving alone. Options include expanding established programs such as Commute Trip Reduction (CTR), better use of vanpools, guaranteed ride home, and more opportunities to telecommute. Growth and Transportation Efficiency Center (GTEC) programs would extend to more locations and could include options for non-work trips. Programs such as these will accomplish several objectives: fewer vehicle trips, improved air quality, and address other quality-of-life concerns. More cities would address parking regulations and pricing for both private and public facilities.

System Management. Alternative 1 makes use of a variety of Intelligent Transportation Systems (ITS) to monitor the system and to improve freight mobility on freeways and arterials. These ITS techniques range from center-to-center communications to in-vehicle devices. Alternative 1 also expands system management techniques and programs (e.g., signal coordination, incident management) extending them across jurisdictional boundaries regionwide. Doing so would reduce travel times and delay and would improve travel reliability.

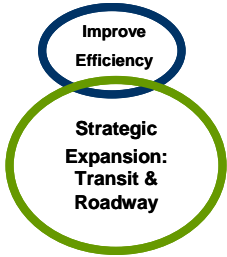
STRATEGIC EXPANSION

Roadways. Alternative 1 includes the replacement of the SR 520 Bridge and improvements to HOV lanes on I-5 and SR 16. This Alternative relies on the limited use of tolling by implementing the 1-lane HOT network on core freeways (I-5, two HOT lanes on I-405, I-90, SR 16, and SR 167) and is designed to improve roadway operations. (HOT lanes allow single occupancy vehicles to use the HOV lane for a fee). Toll rates would be set to maximize system efficiency and most revenues would be spent to operate the HOT network, with the remainder spent on investments in the tolled corridors. (The HOT network includes lanes on I-5, I-90, I-405, SR 167, SR 16, and full tolls in both directions on the SR 520 Bridge.)

Transit. Alternative 1 makes the most of low-cost transit investments to improve core service throughout the day and more community connector service during peak hours. Sound Transit 2 will extend LINK light rail service north of Lynnwood, east to Redmond/Overlake, and south to Redondo/Federal Way. Increases in transit service hours would keep pace with the region's population growth. Improvements that connect regional growth centers to transit centers, rail stations, and ferry terminals also will result in a more efficient system.

Bicycle and pedestrian Options. An extended and safer network of connecting sidewalks, trails, and paths will facilitate bicycle and pedestrian choices.

Funding. Alternative 1 would rely on limited increases in traditional funding (gas tax, etc.) plus revenue from a 1-lane HOT lane system on core freeways.



Alternative 2: Invest in Capital Improvements

What if our highest priority is expanding transportation systems – roadway, bicycle and pedestrian networks, and high capacity transit? Can we increase mobility for people and goods with greater investments in infrastructure and capital improvements?

Alternative 2 is the most similar to the current regional transportation plan, *Destination 2030*. It focuses on strategic capital investments to complete freeway and arterial expansions and makes better use of roadways to improve the HOV/HOT system. Alternative 2 would go beyond Sound Transit's Phase 2 program, extending LINK light rail service to Everett, downtown Redmond, and Tacoma. This Alternative also includes investments in the ferry system – terminals, the fleet, capacity needs, and passenger-only service – to meet anticipated demands. However, the investments in Alternative 2 exceed current law funding levels, making it necessary to supplement traditional revenue sources.

SYSTEM EFFICIENCY

Demand Management. Given its emphasis on roadway and transit expansion, Alternative 2 relies less on increased participation in employer demand management programs such as Commute Trip Reduction, vanpools, and "telework" for system efficiency. Rather than expect all cities with regional growth centers to participate in Growth and Transportation Efficiency Centers and "complete streets" programs, Alternative 2 places emphasis on the metropolitan cities (Seattle, Bellevue, Bremerton, Everett and Tacoma) as proposed locations for such programs. Pricing strategies and a reservation system would help manage auto ferry demand and improve system efficiency.

System Management. There would be only modest investments in overall system management programs and Intelligent Transportation Systems (ITS). Efforts would concentrate on coordinating signals across jurisdictional boundaries between centers and on giving transit signal priority.

STRATEGIC EXPANSION

Roadways. Alternative 2 assumes freeway and arterial expansions on I-405, SR 167, SR 18, SR 522, SR 509, and US 2. This Alternative also assumes that tolling would play dual roles – both as a source of revenue and as a tool to manage congestion. For example, tolls collected on SR 520 will fund the bridge replacement and manage traffic flow. In some locations, existing HOV lanes will be converted to HOT lanes and new HOT lanes will be added to create a 2-lane HOT network to improve travel times, reduce delay, and improve reliability for commuters.

Transit. In Alternative 2 both bus and rail services would extend farther: Sound Transit's LINK light rail service would extend to Everett, Tacoma, and to downtown Redmond. Passenger-only ferry service would augment the WSF auto ferry system, with improved transit connections to ferry terminals.

Bicycle and pedestrian. Alternative 2 includes investments to complete a continuous network of sidewalks, paths, and trails to connect bicyclists and pedestrians to transit centers, rail stations, and ferry terminals. This network would also connect to park-and-ride lots in manufacturing/industrial centers and in regional growth centers. Combining bicycle and pedestrian options with the expanded transit systems and more efficient roadways would provide significant improvements in access to housing and jobs.

Funding. Alternative 2 would rely on significantly more traditional funding (gas tax, etc.), as well as new revenues from implementing a 2-lane HOT lane network on major highways. Given the amount of new capacity investments, this Alternative would likely have the highest need for generating new revenues.



Alternative 3: Fund Core Network Expansion & Efficiency

What if we were to rely on tolls as an approach to paying for highway improvements and use traditional funding sources to enhance transit and improve efficiency? Can we find sufficient resources to do both effectively?

Alternative 3 proposes a significant shift in the way our region collects and distributes transportation funds. This shift results from the need to supplement limited traditional funding with an infusion of new sources. To achieve a balance between investing in system efficiency and strategic expansion, Alternative 3 relies on user fees and tolls to finance freeway investments and on traditional revenue sources to finance transit system and arterial roadway investments.

As a result, Alternative 3 assumes there would be more revenue to make roadway investments and less to expand transit services. System efficiency would rely more on incentive programs that offer travel choices, parking management, and intelligent transportation systems that help travelers manage their trips. Ferry service investments would be limited to routes with high growth expectations and more passenger-only ferries. The high capacity transit component of Alternative 3 consists of the ST-2 program.

SYSTEM EFFICIENCY

Demand Management. Alternative 3 relies more on greater participation in employer demand management programs such as Commute Trip Reduction, vanpools, and "telework." Growth and Transportation Efficiency Centers would locate in all cities with regional growth centers and could collect parking charges to manage private parking supply. This Alternative includes incentives for mixed use development near transit centers and rail stations. In response to a greater demand for parking, a user fee would be charged at park-and-ride lots. Regional growth centers may provide incentives to supply parking for carpools and vanpools. Pricing strategies and a reservation system would help manage auto ferry demand and improve system efficiency.

System Management. The approach to arterial management in Alternative 3 concentrates on signal coordination in major corridors that connect centers, and places a strong emphasis on Intelligent Transportation Systems and a wide range of other technology tools (from center-to-center communications to in-vehicle devices) that allow operators – including freight movers and transit drivers – to use the system more efficiently.

STRATEGIC EXPANSION

Roadways. By collecting tolls on the region's core freeways, Alternative 3 would generate sufficient revenue to complete major highway projects, including the SR 509 and SR 167 extension projects, as well as improvements to SR 9, SR 18, and US 2. It is important to note that Alternative 3 proposes to adhere to "traditional" tolling concept that restricts the use of toll revenue to the facility where it is collected. The collected toll funds would not be spent on transit or other projects, programs, or system improvements.

Transit. On some transit routes speeds would improve as a result of tolling specific freeways. However, when traffic is diverted to key arterial transit routes, it will be necessary to implement specific management measures to retain transit speed and reliability. Transit service that is freed up by providing more efficient service on freeways could be reallocated to key arterial routes. This Alternative could also focus arterial system management investments on transit-supportive strategies. Passenger-only ferry service would augment the WSF auto ferry system, and transit service to ferry terminals would be improved.

Bicycle and pedestrian. Alternative 3 would increase bicycle access to transit on arterials and proposes to complete sidewalk networks on all arterials in urban areas. Bicyclists would benefit from a completed network along the corridors that connect regional growth centers. Bike and car share programs would offer more travel choices.

Funding. Alternative 3 would rely on toll revenues to finance highway improvements, and would use limited traditional funding sources (sales taxes) to fund transit improvements. In this alternative, tolls would be placed on the core freeway system: I-5, I-405, I-90, the SR 520 Bridge, SR 167, SR 509, SR 18, and SR 16.



Alternative 4: Improve and Manage the Entire Transportation System

What if we make the most of the improved systems by relying more on tolling as a congestion management tool? Will people pay to create a system that offers more travel choices and more roadway mobility?

Alternative 4 emphasizes overall system management and coordination by combining a mix of revenue sources to accomplish several objectives: manage congestion, supplement traditional funding resources, finance system management programs and projects, invest in transit, and make arterial improvements.

To achieve these objectives, Alternative 4 requires a strategic shift in the use of tolling. The primary purpose would be to manage congestion on the freeway system while minimizing the traffic diverted onto arterial corridors. The secondary purpose would be to invest toll revenues on system management needs and on transit investments. This flexible spending approach would reduce pressure on limited traditional funding sources.

SYSTEM EFFICIENCY

Demand Management. In Alternative 4, more funds would be available to invest in employer demand management programs such as Commute Trip Reduction to support transit users and vanpools. These programs, plus other incentives that discourage driving alone, will increase opportunities to reduce freeway congestion. Pricing strategies and a reservation system would help manage auto ferry demand and improve system efficiency.

System Management. Alternative 4 makes strategic use of a variety of Intelligent Transportation Systems to manage traffic flow. Techniques range from traveler information systems to in-vehicle devices that can expedite freight traffic and assist transit operators on the freeways and arterials. Added technology will provide better traveler information.

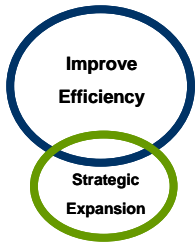
STRATEGIC EXPANSION

Roadways. Roadway expansions in Alternative 4 would be limited to those projects that relieve congestion at bottlenecks and chokepoints.

Transit. Revenues (including toll revenues) would be invested in transit service – including expanded light rail and commuter rail systems. Alternative 4 would implement ST-2, plus extend light rail to Everett, Tacoma, and downtown Redmond. These expansions, and the better use of shared rights-of-way for bus rapid transit, would combine to make the entire transit system more convenient for users and better integrated into roadway systems. Alternative 4 proposes to increase transit services on tolled corridors, including core and specialized service on routes where the use of tolling improves travel times. Passenger-only ferry service would augment the WSF auto ferry system, and transit service to ferry terminals would be improved.

Bicycle and pedestrian. Toll revenues could be spent to complete bicycle and pedestrian connections to transit centers, rail stations, and ferry terminals. Investments could provide better access to arterial transit service, completed sidewalk systems, bicycle networks along corridors that connect regional growth centers, and more safety features at crosswalks. Cities with regional growth centers would work to provide better "end-of-trip" facilities such as locker rooms, storage, and secure bike racks.

Funding. Funding for Alternative 4 would include limited traditional revenue sources and a significant increase in toll revenues derived from tolling the entire regional freeway system. Toll revenues would be used for both highway system improvements and for transit improvements system-wide.



Alternative 5: Provide Accessibility and Reduce Carbon Emissions

How would our urban transportation system look and feel if we had very different priorities? What if we decide that a top transportation priority is to help meet the state's emission reduction goals? How could our transportation system function best to improve mobility, achieve a dramatic reduction in emissions and enhance our urban spaces?

Alternative 5 envisions a system of high-quality transportation services based on establishing a hierarchy of space by use. For instance, in places with high pedestrian and bike usage, more right-of-way would be dedicated to provide access to transit services. Alternative 5 would manage demand by tolling the full roadway system including freeways and arterials--resulting in more opportunities for pedestrian, bicycle, and transit use. Toll rates would be set so that all travelers and freight movers experience improved travel time, more reliability, and fewer delays.

SYSTEM EFFICIENCY

Demand Management. Alternative 5 includes incentive programs that encourage travel options for employers in small towns and rural areas. All cities with regional growth centers will offer Growth and Transportation Efficiency Center programs. In addition, more effort will be made to engage small businesses and residential areas in carshare and vanpool programs. Pricing strategies and a reservation system would help manage auto ferry demand and improve system efficiency.

System Management. Alternative 5 relies on extensive system management and Intelligent Transportation System programs regionwide to regulate traffic flow and improve travel time.

STRATEGIC EXPANSION

Roadways. Alternative 5 would include limited investment in roadways. Improvements would primarily include completion of HOV lanes on I-5 and SR 16 and chokepoint and bottleneck improvements.

Transit. Alternative 5 promotes an interconnected transit system that reaches beyond ST2 by building out the Sound Transit Long Range Plan, such as extended express bus and rail (both light and commuter) service and with increased core, connector, and specialized transit service throughout the region. Light rail would connect Everett and Tacoma, extend to downtown Redmond, and serve Ballard and West Seattle. In addition, commuter rail would connect Renton and Snohomish via the Burlington Northern/Santa Fe (BNSF) rail corridor. Alternative 5 would invest in new passenger-only ferry service to serve demand rather than expanding the auto ferry system, and transit service to ferry terminals would be improved.

Investments in the transit system will stimulate mixed use development near transit centers and rail stations. Cities will have funds for "complete street" projects to support safe, walkable communities.

Bicycle and pedestrian. Dedicating more space in the right-of-way would provide a continuous network of bike lanes, sidewalks, paths, and trails connected to transit centers, rail stations, ferry terminals, and park-and-ride lots. Combined with parking management techniques and wide use of employer-based demand management programs, the system would offer commuters safer and more efficient travel alternatives.

Funding. Alternative 5 would replace existing traditional funding sources (gas tax, etc.) with user-based fees and place tolls on all highways and major arterials. This complete network tolling approach would generate sufficient revenues to finance roadway, transit, bicycle and pedestrian options, and other investments.

Innovations. With innovative fuel sources, technological advances, and a new pricing mechanism, Alternative 5 proposes a dramatic shift from dependence on fossil fuels and fuel-based revenues to a system that offers more travel choices, greatly reduces carbon dioxide emissions, and is funded by sustainable and dependable means.