Corridors of the Future – A Roadmap to Mobility
A Joint Application from California, Oregon, and Washington

Caltrans

Oregon Department of Transportation

Washington State Department of Transportation

Corridors of the Future

Interstate 5

A Roadmap for Mobility

Caltrans

Oregon Department of Transportation

Washington State Department of Transportation

May 23, 2007

Mr. James D. Ray
Chief Counsel
Federal Highway Administration
400 Seventh Street SW, Room 4213
Washington, DC 20590

Dear Mr. Ray:

Enclosed is the application for Interstate 5 (I-5) for the Corridors of the Future Program.

This application is a collaborative effort of the States of California, Oregon, and Washington— "A Roadmap to Mobility." The application is one unified application for the entire corridor length from Mexico to Canada. An overarching preface describes a unified vision for corridor development among the states. Due to the length of the corridor (1,381 miles), characteristics of urbanization, and some aspects unique to each state, such as current design-build and tolling authority, the application includes three state reports or chapters. These reports describe individual state corridor development priorities and approaches based on unique statewide needs. The states are committed to ongoing multi-state collaborative planning, development and improvement implementation throughout the entire length of the I-5 corridor.

As the nation's north-south corridor for people and freight movement in the west coast states, I-5 is critical for promoting the nation's economic growth. Implementing the improvements, strategies and actions described in this application will ensure a future I-5 corridor that sustains this growth.

The States of California, Oregon, and Washington look forward to your favorable response to naming I-5 a "Corridor of the Future".

Sincerely,

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Director, California Department of Transportation

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Director, Oregon Department of Transportation

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I. Introduction: Interstate 5—A Roadmap to Mobility

Interstate 5 (I-5) is a 1,381 mile corridor from Washington's northern border with Canada, through the state of Oregon, to California's southern border with Mexico. I-5 is a critical freight corridor, essential to the daily function of U.S. Commerce and a major regional and interregional commute corridor in metropolitan areas. I-5 is on the National Highway System (NHS), the National Network for Surface Transportation Assistance Act (STAA), the Strategic Highway Corridor Network (STRAHNET), and has been designated as a national High Priority Corridor.

Interstate 5: Average Speed for Trucks

Source: Federal Highway Administration, *Measuring Travel Time in Freight-Significant Corridors*

Nationally, the corridor is strategic to California, Oregon, and Washington as a "gateway" for people and freight movement; internationally, Interstate 5 is vital for the connectivity it provides to the countries subscribing to the North American Free Trade Agreement (NAFTA). It links major urbanized areas, high growth areas, smaller agricultural communities, recreational areas, major freight facilities, warehousing and distribution centers. I-5 traverses diverse topography, from flat terrain to high mountain passes. In certain portions, the corridor is paralleled by Interstate, interregional passenger rail, and freight rail. Strategically located, the corridor serves markets and communities by providing connectivity to large freight movement areas, such as manufacturing and distribution centers, seaports, air cargo facilities and railroad intermodal yards. I-5 serves most of the west coast's major population centers and is being impacted by the rapid population growth these areas continue to experience.

The West Coast Corridor Coalition detailed the following findings in an overview of the I-5 Corridor:

- Pacific State port gateways link the U.S. with its largest offshore trading partners.
- Half the container cargo in the country moves through West Coast ports – over 15 million 20-foot TEUs worth over $300 billion annually.
- In the next 20 years, the current volume of trade will double or triple.
- The West Coast Corridor links the U.S. with Canada and Mexico – two of the four top trading partners moving $1.5 billion per day in three-nation trade.
- Extraordinary costs required to maintain gateway and corridor capacity are borne by West Coast states and regions, not nationwide.

- Crucial pinch-points and chokepoints are “maxed out” today and face service quality declines without further investment.
- This is the nexus of Asia-Pacific and NAFTA trade that includes the 4 largest U.S. trading partners.
- California and Puget Sound ports lead in container volumes while Lower Columbia (Portland) ports are standouts in bulk cargo movement.
- West Coast gateways are the “Port of Chicago,” serving America’s heartland.
- West Coast regional trade is robust – California buys $15 billion a year from Washington, equaling that state’s exports to Canada, China, and Japan combined.

In California I-5 extends 800 miles and is the major north-south freeway corridor traversing sixteen counties with a total population of almost 19 million and eight urbanized areas with combined populations of almost 17 million. I-5 serves international, Interstate, and interregional travel by linking the major metropolitan areas of San Diego, Los Angeles, and (by connection to I-205/580) the San Francisco Bay Area, as well as metropolitan areas in the Central and Northern Sacramento Valley. I-5 directly serves or provides connectivity via other Interstates and major State freeways to the nation’s largest air and water ports, warehousing, and distribution centers and centers of commerce in California.

In Oregon, I-5 begins in mountains at the California border and runs through further steep areas and valleys in Southern Oregon. In Lane County, approximately the middle of the Oregon, the freeway enters the Willamette River valley and follows it north to the Washington border. I-5 in Oregon consists of 862 rural lane-miles and 488 urban lane-miles for a total of 1,350 lane-miles. There are 408 rural lane miles considered "level terrain", 446 rural lane-miles considered "rolling terrain", and 9 rural lane-miles considered "mountainous terrain". Most of Oregon’s citizens live in valleys and urban areas served directly by I-5. In 2000, about 71 percent of Oregonians lived in the Willamette Valley including the Portland metropolitan area.

Washington's segment of I-5 is slightly less than 280 miles from the midspan of the Columbia River Bridge between Washington and Oregon north to the border crossing into Canada in Blaine, Washington. The Roadside Classification of Interstate 5 ranges from natural forested and natural open to rural, semi-urban, and urban. There are no major mountain passes on I-5 in Washington, and it can be generally described as level or rolling but constrained between the Cascade Mountain Range to the east and, for much of its distance, the Puget Sound. In Washington, I-5 consists of 563 rural lane miles and 1,015 urban lane miles for a total of 1,578 lane miles. There are 58 rural lane miles considered "level terrain" and 504 rural lane miles considered "rolling terrain." In the urban areas, 96 lane miles are considered "level terrain" and 918 lane miles are considered "rolling terrain."

Overarching Vision—Interstate 5

One of several common factors along this corridor in Washington, Oregon, and California is the significant population growth in adjacent jurisdictions and projected increases in vehicular traffic, commercial truck traffic, and resulting recurrent daily vehicle hours of delay. To address these challenges Washington, Oregon and California crafted a common corridor-wide vision and principles for collaborative planning to carry it out.

The vision for the I-5 Corridor is to provide a safe, well-maintained and operated facility with reliable travel times and minimal delay to both people and freight traveling through out the corridor. To realize this vision, the "roadmap to mobility" was developed through the collaboration of the three states. This overarching multi-state "roadmap" is detailed in the accompanying Corridors of the Future (COF) I-5 reports for each state, Interstate Initiatives, and principles for collaborative planning for I-5 development as a Corridor of the Future. The roadmap includes:

1. Aggressive system management,
2. Strategic operational improvements
3. Comprehensive maintenance and rehabilitation,
4. Public-Private partnerships for safety roadside rest areas
5. Strategic investments in capacity enhancements
6. Freight improvements
7. Integration of transportation and land use that provides for a balanced, efficient, cost-effective and integrated multi-modal system.

Commitment to Collaboration and the I-5 Corridor

These collaborative planning elements will guide the multi-state planning, development, and management efforts for the I-5 Corridor of the Future.

1. Coordination of Transportation Management System (TMS) elements among states for seamless traveler information, incidence response, and traffic control corridor-wide.

2. Consultation, coordination, and potential joint applications for major federal discretionary funding programs.

3. Coordination and early communication of major planned projects in the corridor that will impact traffic into adjoining state.

4. Coordination of potential future public-private partnerships for corridor development that encompass multi-state corridor segments.

While the three states have collaborated with each other extensively on issues related to Interstate 5, no formal structure exists for coordinating on mutual concerns related to the corridor. If I-5 is designated a Corridor of the Future, Washington, Oregon, and California will form an I-5 Corridor Coordination Council that will address corridor-level and Interstate issues. This group, lead by the three states' departments of transportation, will partner with public and private stakeholders as appropriate.

The coordination council will create a forum to raise and address multi-state issues that affect Interstate 5, including, but not limited to:

- Planning for major projects;
- Interoperability of electronic tolling systems;
- ITS projects;
- Freeway operations;
- Freight mobility issues.

This coordination council will provide a means to meet the corridor-wide challenges that can only be addressed through regular Interstate collaboration.

A Roadmap to Mobility

Washington, Oregon and California are committed to improving and managing I-5 corridor performance for highest sustained mobility outcomes. As a testament to this commitment the states have formed a collaborative effort to manage, improve and address the needs of the I-5 corridor throughout its length. This document constitutes one application from three states that share a common vision and overall approach to preserve and operate the corridor. Due to the sheer length and complexity of corridor characteristics, each state additionally has specific corridor elements of individual statewide or regional significance. When viewed comprehensively, this proposal constitutes a collaborative “roadmap” to mobility. That is, a comprehensive plan to restore lost capacity, reduce congestion, improve safety, facilitate the movement of freight and provide for the future needs of the corridor through innovative partnerships. When fully implemented, this “roadmap” will not only increase personal mobility, it will also facilitate economic growth in the US, Canada, Mexico and Asia.

The following sections of the application consist of documents that detail the strategies, projects and funding mechanism the states will utilize to achieve success and improve the corridor by following our “roadmap to mobility”.

II. Interstate Initiatives

A. Columbia River Crossing Project

The primary and immediate purpose of the states of Oregon and Washington to seek Corridor of the Future status for Interstate 5 is to advance the Columbia River Crossing project. As perhaps the only multi-state, multi-modal megaproject under development in the United States, the Columbia River Crossing faces unique challenges that will require a concerted effort by all levels of government to eliminate unnecessary roadblocks and ensure that the project is delivered in a timely and cost-effective manner. The Columbia River Crossing stands to benefit immensely from many of the resources that US DOT has offered to provide under the program, including a streamlined environmental process, access to US DOT experts, and priority consideration for discretionary funding sources and innovative finance programs. If I-5 is selected for inclusion under the Corridors of the Future program, Washington State DOT and Oregon DOT would jointly seek to use the benefits of the program to advance the project.

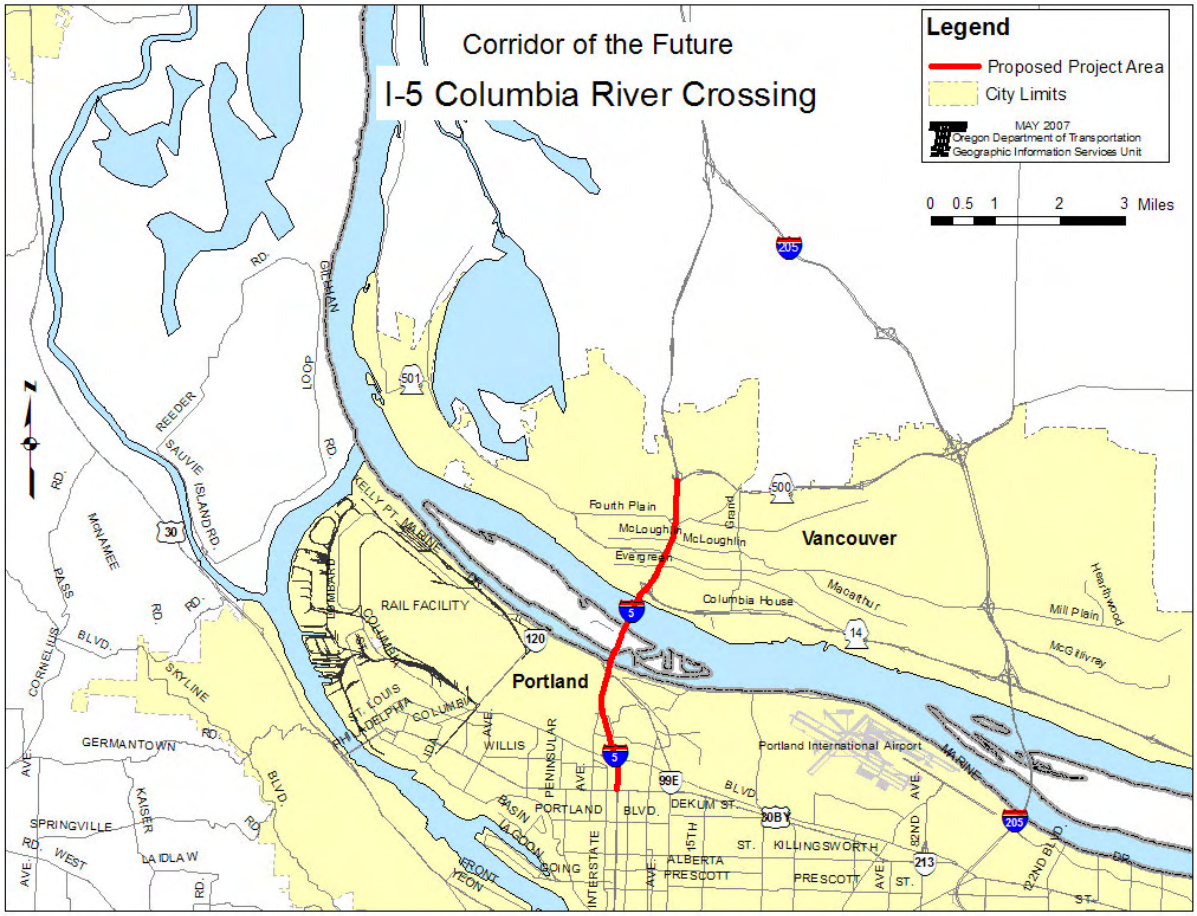
Introduction

The Columbia River Crossing Project (the "CRC Project") addresses the mounting transportation and economic problems caused by acute and growing Interstate traffic congestion on Interstate-5 within the Portland-Vancouver metropolitan region. The CRC Project will be a multi-modal, "mega-project" transportation solution for the five-mile segment of I-5 between SR-500 in Vancouver, Washington and Columbia Boulevard in Portland, Oregon. Subject to the local and federal decision-making processes, the CRC Project envisions a new I-5/Columbia River Bridge and highway, high-capacity transit, traffic safety, and transportation demand management (TDM) improvements to I-5. Tolling will likely be necessary to finance the project's construction, and the CRC Project may incorporate time-of-day variable toll pricing.

WSDOT and ODOT executed an Interstate agreement to fund project development costs. Under the direction of a joint WSDOT and ODOT team, the project has advanced to the Draft Environmental Impact Statement (DEIS) stage; with the federal Notice of Intent published September 27, 2005. The preferred project alternative is anticipated to be selected by April 2008.

Location

In the Portland-Vancouver region, I-5 is one of two major highway crossings of the Columbia River that provide Interstate connectivity. I-5 directly connects the central cities of Vancouver and Portland via the I-5 Interstate Bridge ("I-5 Bridge"). The existing I-5 Bridge consists of two low-level, side-by-side bridges with lift spans; one of the last remaining low-level, lift span bridges on the national Interstate Highway System. The eastern bridge, serving northbound traffic, was built in 1917, and the western (southbound) bridge in 1958; both were initially financed with toll proceeds. Each span provides three lanes of capacity. Analyses of the lift span portion of the bridges revealed that items such as the timber piling in the foundations and steel braces in the lift span towers do not meet today's seismic design standards and would be vulnerable in a major seismic event.



Operation of the I-5 Bridge is directly influenced by the 5-mile segment of I-5 between SR-500 (Vancouver, Washington) and Columbia Boulevard (Portland, Oregon). This highway/bridge segment is referred to as the Bridge Influence Area (or "BIA"). The BIA includes eight major interchanges, including connections with four state highways (SR 14, SR 500, and SR 501 in Washington, and OR 99E in Oregon), and several major arterials that provide access to two international ports (Port of Portland and Port of Vancouver), major industrial areas, and downtown Vancouver Washington.

The eight-lane Glenn Jackson Bridge, which carries I-205 across the Columbia River six miles up-river from the I-5 Bridge, currently provides an alternate route to the I-5 Bridge. However, growing congestion on I-205, due in part to traffic diverted from I-5, is causing congestion and delay on I-205 that will soon discourage further diversion of I-5 traffic. After the Glenn Jackson Bridge, the next closest Columbia River highway bridge is over 40 miles from I-5. As a result, the Portland-Vancouver region has fewer crossings than river cities of similar size across the United States.1 Thus it is not surprising that the Columbia River crossings represent a major choke point in the Portland-Vancouver's transportation system, and its economic system.

The Columbia River Crossing Project responds to this need by providing increased capacity to the bridge crossing on I-5, as well as to the I-5 mainline and key interchanges in the vicinity of the bridge crossing. The enclosed map illustrates the Columbia River Crossing project.

[1] Where the Portland-Vancouver region (with 1.9 million people) has only two Columbia River highway bridges, Norfolk (1.57 million) has four over Chesapeake Bay, Cincinnati (1.65 million) has seven over the Ohio River, Kansas City (1.78 million) has ten over the Missouri River, and St. Louis (2.60 million) has eight over the Mississippi River.

Traffic and Congestion

Traffic volumes crossing the Columbia River in the Portland-Vancouver region (I-5 and I-205 combined) have rapidly increased over the past two decades. From 1982, the year prior to the opening of the I-205/Glenn Jackson Bridge, through 2005, Interstate traffic increased by an average of 4.1 percent per year. On a typical day in 2005 about 278,530 vehicles crossed the Columbia River via the I-5 or I-205 bridges.

Of the total Columbia River crossings in 2005, about 132,600 trips use the I-5 Bridge on a typical day, 10,000 of which are commercial trucks. About 20,200 and 21,375 vehicles per day used the I-5 Bridge in the peak direction during the 4-hour morning and 4-hour evening commute periods respectively, exceeding the design capacity of the bridge for most of each peak period. As a result, there are typically 10 lane-miles of congested roads within the 5-mile BIA during the 2-hour morning peak-period and 11 lane-miles of congested roads during the 5-hour evening peak-period. The estimated annual amount of time lost to delay in this 5-mile stretch is almost 500,000 hours.

Due to congestion in the BIA, many prospective I-5 travelers take the longer alternative route via the I-205/Glenn Jackson Bridge, which itself is beginning to experience notable congestion and delay. Other travelers avoid I-5 congestion by traveling local streets to less direct I-5 interchanges or by using parallel arterials; thereby increasing local congestion.

While the six traffic lanes on the I-5 Bridge are in themselves inadequate for daily traffic volumes, congestion and delay are intensified by non-standard freeway and bridge design and the lift-span operations of the existing bridges.

The existing I-5 Bridges include lift spans that may be opened during off-peak periods on weekdays and anytime on weekends to accommodate ships or barges navigating the Columbia River. The average number of monthly bridge openings range between 20 and 60, depending on the month, with more lifts occurring during high water months in the winter. A bridge opening usually lasts about ten minutes, but can create traffic delays that take up to one hour to dissipate. The lift spans also create safety hazards. The likelihood of a collision in the BIA is 3 to 4 times higher when the bridge is open than when it is closed, and collisions occurring during a bridge lift are more likely to result in injury than collisions unrelated to a bridge lift.

Furthermore, non-standard geometric features are prevalent throughout the BIA. The 5-mile BIA averages an interchange every one-half mile, compared to the recommended minimum spacing of 1 mile in urban areas. The close interchange spacing does not allow for adequate merging and weaving sections, effectively reducing the capacity for through-traffic. In addition, short entrance and exit ramps force trucks to accelerate and decelerate on the freeway, further slowing traffic. The bridge's non-standard vertical alignment results in limited sight distances and slower speeds. The

bridge's shoulders are as little as 1-foot wide in areas compared to the 10- to 12-foot standard. Drivers respond to the sub-standard shoulders with slower speeds and greater separation between vehicles, which reduces vehicle throughput. The substandard shoulders also hamper incident response and disabled vehicle pull-out; further contributing to congestion and travel delay.

All of these elements contribute to the high number of reported collisions near or at the Interstate Bridge. Collision rates in the BIA are over twice the average rate on similar facilities in Oregon. When an incident in the BIA reduces the capacity of or temporarily closes I-5 in a peak travel period, the high volume of traffic in the BIA and the lack of alternate routes results in gridlock along I-5 as far back as the Marquam Bridge and over the Fremont Bridge to the southern terminus of I-405. This happens on a regular basis.

Future Growth in Traffic and Congestion

Between 2005 and 2030 the population of the Portland-Vancouver region is anticipated to increase by 44 percent, from 1.96 million to 2.92 million. As a result, aggregate daily traffic volume on I-5 and I-205 will climb 52 percent to about 425,000.

In 2030, the I-5 Bridge alone is expected to carry about 180,000 daily trips, a 34 percent increase over 2005 levels. Traffic volumes on the I-5 Bridge in the morning and evening peak periods are respectively projected to grow by 28 percent and 24 percent over current levels, vastly exceeding the capacity of the highway and causing a significant expansion of the peak period to accommodate the projected increase. By 2030, the duration of the morning peak-period in the BIA is expected to double to about 4 hours, and the evening peak-period is expected to more than double to 9-10 hours.

The expanded duration of congestion is echoed by a substantial growth in the number of lane miles of congestion. On a typical day in 2030, 16 lane-miles of congested roads are expected within the 5-mile BIA during both the morning and evening peak-periods; a 60 percent and 45 percent respective increase over 2005 levels. Travel times for trips in the corridor will spiral higher. For example, in the morning peak period, southbound auto trips in 2030 between SR 500 (WA) and Columbia Boulevard (OR) are estimated to take 78 percent longer than in 2005, and a trip between 179th Street (WA) to the Marquam Bridge (OR) is estimated to take 61 percent longer. Commercial truckers will suffer even greater travel times; their increased travel times for these two prototypical trip patterns are respectively projected to be 100 percent and 75 percent longer in 2030 than in 2005.

The annual time lost by all vehicles in the BIA to delay in 2030 will be about 1.9 million hours, a 320 percent increase over 2005 levels. The annual time lost to delay in the BIA by commercial trucks alone will climb 585 percent over current levels to about 217,000 hours. In addition, further

congestion and delay would be anticipated due to higher numbers of traffic incidents correlated to the higher congestion levels. The ability of I-5 travelers to divert their trips to the I-205/Glenn Jackson Bridge would be limited because that facility would also be over-capacity.

Impact of Congestion on Freight Mobility

I-5 is the primary freight corridor for moving goods into and out of the Portland-Vancouver region and the Pacific Northwest. Sixty-seven percent of all freight in the region currently travels by truck, and this is expected to grow to 73 percent by 2030. Also between 2005 and 2030, the volume of trade in the region is expected to almost double to over 520 million tons.

Freight traffic is disproportionately affected by the traffic congestion and delay discussed above. Congestion is rapidly spreading into the midday period, the peak-travel period for truck traffic. This will entangle truck operations, increasing trucking costs, and making pick-up-and-delivery times less reliable. In addition, trucks in the BIA must enter and leave I-5 at the closely spaced interchanges to access the ports, intermodal rail yards, and industrial areas near the Columbia and Willamette Rivers; these interchanges and ramps cannot safely or efficiently handle the large volumes of truck traffic.

Traffic congestion in the BIA increases truck travel times to and from the Ports of Portland and Vancouver, and the BNSF and Union Pacific intermodal rail terminals. Congestion also delays trucks moving among the manufacturing, warehouse, and distribution centers in the Columbia Boulevard Corridor (Portland) and along SR 14 (Vancouver). For example, between 2005 and 2030, truck travel times in the evening peak period will be about 39 percent longer between the Columbia Corridor and the Port of Vancouver, 27 percent longer between Terminal 6 and 5 Corners, and 35 percent longer between the NW Industrial District and 99th Street (Vancouver). Declining freight carrier access slows delivery times and increases shipping costs, diminishing the attractiveness of I-5 and the land uses it serves.

Congestion and delay at the I-5 Bridge cause even broader economic impacts. The economy of the Pacific Northwest region is 10 percent more dependent than the national economy on transportation-intensive industries such as agriculture, wholesale and retail trade, manufacturing, construction, and transportation equipment and utilities. Combined these industries account for 54 percent of the Oregon-Washington economy; and the Oregon-Washington economy spends about 6.7% more of its gross regional product on freight transportation than the national average.

Maintaining the efficiency of regional freight movement across the Columbia River is essential to the greater regional economy. The Oregon-Washington economy is relatively small, ranking seventh among the eight national multi-state trade blocs. As a result, Pacific Northwest businesses are highly dependent on selling and moving products to larger markets in California and the East.

The Pacific Northwest economy is also highly dependent on global trade; global trade as a percentage of the Pacific Northwest economy is twice the national average. Much of the Pacific Northwest freight traffic destined to the large national markets in California or the East, or the global markets flows through or is affected by the traffic in the BIA.

Inadequate Transit Service

Bi-state transit service in the I-5 corridor currently includes a local bus route between downtown Portland and downtown Vancouver, and commuter-oriented peak period express routes from Clark County park-and-rides and transit centers to downtown Portland. Bi-state transit service in the I-5 corridor is constrained by limited roadway capacity and is subject to the same congestion as other vehicles, which negatively affects transit operations (i.e., travel speeds) and reliability (i.e., delays caused by crashes and congestion). For example, southbound buses in the morning peak-period experience travel times that are 45 to 115 percent longer than in the off-peak periods.

Columbia River Crossing Purpose

Given the trends and problems described above, the CRC Project is expected to:

1. Reduce general traffic congestion and travel delay in the BIA by adding capacity and undertaking TDM/TSM improvements to the I-5 Bridge and related highway segments.
2. Provide improved bi-state transit service in the I-5 corridor through the addition of high-capacity transit operating on its own right of way.
3. Reduce the incidents of crashes and the resulting congestion and delay by upgrading non-standard geometrics and design elements of the I-5 Bridge, freeway, and ramps in the BIA.
4. Facilitate freight movement in and through the BIA and access to international ports, industrial areas and other land uses served by the BIA.
5. Improve the ability of ships and barges in the Columbia River to navigate safely and efficiently through the BIA.
6. Reduce the vulnerability of the I-5 Bridge to earthquakes by implementing current seismic standards for the bridge(s).
7. Improve pedestrian and bicycle access in the BIA.

Corridor Project Options and Preliminary Design Features

The project has selected four "build" multi-modal alternatives to be evaluated in a Draft Environmental Impact Statement (DEIS). These options differ primarily in the type and function of the proposed bridge and the transit mode incorporated in the alternative:

8. Replacement bridge with light rail transit;
9. Replacement bridge with bus rapid transit;
10. Supplemental bridge with light rail transit;
11. Supplemental bridge with bus rapid transit.

The components of the alternatives are discussed below.

Bridge Component

Each "build" alternative incorporates a new bridge. Two alternatives incorporate a "replacement" bridge in which a new bridge is constructed with 5-6 highway lanes in each direction, and the existing I-5 Bridge is demolished. In addition, the new bridge will incorporate a span for high capacity transit, pedestrians, and bicycles. The "replacement" bridge alternatives primarily differ from each other in the transit alternatives they incorporate.

Two alternatives incorporate a "supplemental" bridge in which the existing I-5 Bridge is retained and paired with a new bridge constructed in close proximity to the existing I-5 Bridge. Under these alternatives a total of four highway lanes in each direction are provided as follows: (a) the existing I-5 Bridges are re-striped to provide a total of four northbound lanes and adequate shoulders, and (b) a four-lane supplemental bridge is constructed for southbound traffic and high-capacity transit. The existing I-5 Bridge would be seismically retrofitted. As with the "replacement" bridge alternatives, the "supplemental" bridge alternatives primarily differ from each other in the transit alternatives they incorporate.

The DEIS is examining tolling the I-5 Bridge. Each of the bridge alternatives in the DEIS incorporates 100 percent electronic tolling on the I-5 Bridge (both the new bridge and, where applicable, the existing bridges). It is assumed no cash collections would be accommodated and that license plate recognition systems would be used to bill vehicles without transponders. The baseline toll scenarios incorporate variable pricing with higher tolls during peak-periods as part of a demand management strategy. The project will explore the possibility of charging commercial vehicles to higher tolls than passenger vehicles, in proportion to the larger size.

Highway and TDM Improvements

Each of the alternatives incorporates an array of highway mainline and ramp improvements to improve freeway service levels, safety, and access to major activity centers. These improvements

may include reconfiguring interchanges at Marine Drive, SR-14, Mill Plain Boulevard, 4th Plain Boulevard, 39th Street (Vancouver), SR-500, and Hayden Island. In addition, the alternatives include Intelligent Transportation System (ITS) features, Transportation System Management (TSM) features such as ramp meters and enhanced traveler information systems, and highway safety improvements throughout the corridor. Each of the alternatives also incorporates bicycle and pedestrian improvements across the bridge.

Transit Improvements

In addition to incorporating local bus service, the "supplemental" and "replacement" bridge options incorporate one of the following high capacity transit options:

- A Bus Rapid Transit (BRT) system that runs in dedicated lanes between Vancouver and connects to the Expo Center LRT Station in Portland.
- An extension of the existing Interstate Light Rail ("Yellow Line") from the Expo Center Station in Portland to Vancouver.

Each of the transit alternatives incorporates an extensive system of park-and-ride improvements, and a complementary express bus service from park-and-rides that are distant from the high capacity transit line.

Project Benefits

The project would reduce the hourly duration of daily congestion by about 55% to 60% compared to the No Build alternative, while accommodating 15% to 25% higher southbound traffic volumes and about 35% to 55% higher northbound traffic volumes during the four-hour a.m. and p.m. peak periods, respectively. In addition, the project would accommodate about 20% higher southbound truck volumes and about 30% to 50% higher northbound truck volumes during the four hour a.m. and p.m. peak periods, respectively. The project would reduce northbound travel times along I-5 by about 50% or more compared to the No Build alternative during the four-hour p.m. peak period, and would reduce southbound travel times by 5% to 10% during a portion of the four-hour a.m. peak period.

A new replacement of supplemental bridge, constructed to current seismic standards, would provide a more effective life-line connection across the Columbia River in the event of an earthquake. The project would provide additional capacity across the Columbia River, include full shoulder widths, and not require bridge lifts. These features would substantially improve safety in the I-5 corridor and would enhance emergency response times. The project would provide a wide two-way shared use pedestrian and bicycle pathway, improving mobility across the bridge for non-motorized users, and enabling improved connections to North Portland, Hayden Island, and downtown Vancouver.

Additional benefits would be association with a replacement bridge alternative that replaces the current lift span bridge with a fixed span bridge. A replacement bridge would also eliminate the "no bridge lift" period, remove the existing bridge piers whose location provide challenges to navigation, and provide substantial benefit to marine navigation. In addition, by eliminating the bridge lifts, vehicular collisions will be reduced significantly. The project would provide a wide two-way shared use pedestrian and bicycle pathway, improving mobility across the bridge for non-motorized users, and enabling improved connections to North Portland, Hayden Island, and downtown Vancouver.

Innovative Environmental Stewardship

The I-5 CRC corridor is rich in cultural, natural and built environment resources. One of the project's adopted goals is to achieve a high level of environmental stewardship of these resources. These resources, and the wide array of environmental and regulatory stakeholders, create uniquely complex procedural challenges for the project. We have developed and begun implementing tools and measures to address these challenges while achieving extraordinary stewardship.

The two states have created open and inclusive public processes to ensure that the project's impacts are fully understood and considered in the EIS phase. A bi-state task force consisting of 39 community members that represent a broad diversity of perspectives—including the business community, neighborhood associations, environmental groups, and government agencies— guides the project, ensuring that public input on the project's impacts will be heard and considered. Project staff has conducted a broad public outreach campaign to ensure that affected individuals have an opportunity to learn about the project and its impacts and voice their concerns and have their comments heard.

Process for More Effective Stewardship

The corridor spans two states and as many cities and counties. We are consulting with nine Indian tribes and 14 state and federal resource agencies. Because the project is multi-modal, it has eight sponsor agencies and two federal co-leads – FTA and FHWA – each with its own procedural, analytical and documentation needs and expectations.

The project has developed innovative methods of working with state and federal regulatory agencies that have jurisdiction over various aspects of the project. In order to coordinate the regulatory requirements of resource agencies in two states, and the dual state offices of the federal regulatory agencies, the project has developed a unique coordination process that all 14 agencies signed and have been following since early 2006. This process, referred to as the I-5 Interstate Collaborative Environmental Process (or InterCEP), pulls the state agencies from Washington and Oregon, and the federal agency offices from both states, as well as FTA, FHWA and both state DOTs, into one combined process for reaching agreements on environmental and cultural resource issues. The InterCEP agreement defines a philosophy of collaboration and outlines a process for

sharing information, reaching milestone agreements, and resolving disagreements. The project's environmental streamlining effort brings regulatory agencies into the project development process, ensuring that they can raise issues at an early stage of development and allow the bi-state project team to address these concerns. This committee must formally concur on project decisions affecting their areas of concern at major project milestones. In addition, the committee provides advice and consultation regarding the NEPA process to the Project Development Team at formal concurrence points. In the past 20 months, the project has completed three of the four milestones outlined in the Agreement, and is scheduled to complete the fourth and final milestone by early 2008.

To further clarify and address the unique requirements of FTA and FHWA related to environmental analysis, agency consultation and NEPA documentation, we developed Methods Reports for each environmental discipline. These describe the types of data that will be collected, the analysis methods, and the documentation approach for each environmental discipline. These were used to reach a combined approach that will satisfy the needs and stewardship missions of both lead agencies, as well as the resource agencies from both states. We also developed an agreement between the state DOTs and federal leads for completing federal resource agency and tribal consultation and coordination.

Cultural Stewardship

The project area has very significant cultural importance for numerous tribes, and is the site of important historic European exploration and settlement, as well as American settlement of the West. We have taken extraordinary measures to understand this context, and, going beyond regulatory requirements, we are striving to ensure that all project staff, management and leaders from the local and state sponsor agencies and federal lead agencies have an understanding of and appreciation for the cultural, historic and prehistoric value of the project area. The keystone of this broader effort was a full-day historic seminar with nearly 100 project-related staff and managers, listening to presentations from tribal members and historians, as experiencing traditional ceremony. We are also working closely with the tribes to develop a deeper understanding of traditional use, cultural values and potential resources, in order to ensure that the project will advance with a philosophy of understanding and collaboration. This is being done at a level unprecedented at either of the state DOTs.

Preliminary Cost Estimates

Preliminary capital costs are currently being developed for each of these alternatives through WSDOT's Cost Estimate Validation Process/Cost Risk Assessment (CEVP/CRA) process. Under CEVP/CRA, project cost and schedule are expressed as a distribution (range) rather than as a single number. CEVP/CRA takes a conventional project estimate and isolates the base estimate from risk elements. The risk elements are then described in terms of their possible consequences

and likelihood of occurrence to generate a cost range for the alternative. The initial phase of the project may cost in the $3 - $4 billion range in inflated (year-of-expenditure) dollars; however, the final cost will be highly dependent on the type and design of the bridge selected for construction through the environmental impact process, and the number and level of interchange improvements incorporated in the project.

Potential Funding Sources and Financing Mechanisms

Preliminary funding concepts to be evaluated in the DEIS include:

- Tolling: While tolling issues will be resolved through the EIS process, the alternatives incorporate tolling for the I-5 Bridge. The preliminary toll options include time-of-day variable pricing and 100 percent use of electronic toll collection (ETC). Collections from non-transponder vehicles would be accomplished through license plate recognition, which would carry with it a higher toll rate to offset the higher collection costs. Net toll revenues after facility operations and maintenance costs and toll operations costs would be bonded to provide capital funds for the project. Early conceptual estimates of the senior debt supportable by the tolls averaged about $1.4 billion. Additional capital funds may be available by issuing junior debt, perhaps through TIFIA, backed by the coverage amounts retained on the senior debt.

- FTA New Start/Small Start Funds: Federal Transit Administration “New Start” funds (Section 5309 funds) may be requested for the high-capacity transit component of CRC Project. Project development will proceed in compliance with FTA New Start rules and guidance in order to retain the CRC Project’s eligibility for such discretionary funds.

- Toll Credits: The finance plan may use “toll credits” to meet local match requirements for the transit funds.

- Federal Transportation Apportionment Funds: Federal formula funds apportioned to Washington and Oregon may be used to pay a portion of the project capital cost. These funds may be used on a cash basis, or advanced through such mechanisms as GARVEE bonds.

- Federal Highway Discretionary Funds: WSDOT and ODOT may pursue discretionary transportation funds and special purpose transportation funds to fund a portion of construction costs.

- TIFIA: In particular if tolling is employed in the finance plan, the use of a TIFIA credit enhancement or loan will be considered to address the lack of toll revenues during construction and ramp-up, and perhaps to enhance junior debt backed by coverage revenues on the senior debt.

- State Funds: A portion of the funding plan may come from the Oregon and/or Washington Highway Trust Fund. This may take the form of an on-going cash contribution, or proceeds from bonds.

- Local Funds: There are a variety of funding sources authorized for the Cities of Portland and Vancouver, TriMet (the transit district in Oregon), C-TRAN (the transit district in Washington), and Metro (the regional government in Oregon) that may be used to fund a portion of construction costs, including such sources as voter-approved general obligation bonds, payroll tax revenues, business, excise and sales taxes, system development charges, and others.

- Private Funds: The finance plan may consider using tax increment (urban renewal funds) and local improvement district assessments.

Project Delivery Schedule

The preliminary schedule for project delivery is shown below.

Activity	Date
Completion of Scoping and Selection of Alternatives for DEIS	March 2007
Publish DEIS	February 2008
Select Locally Preferred Alternative	April 2008
Completion of FEIS and Issuance of Record of Decision	Summer 2009
Construction Starts	Early 2010
Construction Complete	2015

Private Sector Participation

In order to deliver a project of this size, complexity, and cost, ODOT and WSDOT will explore innovative financing and procurement opportunities that may involve the private sector. Use of a public-private partnership is under consideration, and the states may also take advantage of opportunities for design-build contracting in order to hasten delivery of the project.

Environmental Stewardship

Both WSDOT and ODOT are committed to stewardship of the natural and human environment in order to avoid, minimize, and mitigate potential harm to ecosystems, animal and plant habitat, cultural resources, and neighborhoods. The two states have created open and inclusive public processes to ensure that the project's impacts are fully understood and considered in the EIS phase. A bi-state task force consisting of 39 community members that represent a broad diversity of perspectives—including the business community, neighborhood associations, environmental groups, and government agencies— guides the project, ensuring that public input on the project's impacts will be heard and considered. Project staff has conducted a broad public outreach campaign to ensure that affected individuals have an opportunity to learn about the project and its impacts and voice their concerns and have their comments heard.

The project has also developed innovative methods of dealing with state and federal regulatory agencies that have jurisdiction over various aspects of the project. The Columbia River Crossing faces a wide array of regulatory and environmental issues, including issues related to salmon listed as threatened under the Endangered Species Act, navigability of the Columbia River, and protection of historic and cultural resources. In order to move this project forward quickly, the project developed an innovative environmental streamlining effort designed to speed up the review and permitting process without lowering the bar on environmental protection. The project's environmental streamlining effort brings regulatory agencies into the project development process, ensuring that they can raise issues at an early stage of development and allow the bi-state project team to address these concerns.

Under this effort, the Interstate Collaborative Environmental Process (InterCEP) was established to coordinate and streamline the regulatory reviews and permitting functions of the numerous participating agencies. Members include representatives from key federal and state agencies responsible for protecting the region's air, water, wildlife and cultural resources. This committee must formally concur on project decisions affecting their areas of concern at major project milestones. In addition, the committee provides advice and consultation regarding the NEPA process to the Project Development Team at formal concurrence points. They will use a "streamlining" approach patterned after Washington's Signatory Agency Committee processes and Oregon's Collaborative Environmental and Transportation Agreement on Streamlining.

Status of Agreement among States to Advance Proposed Corridor Project

WSDOT and ODOT first initiated the I-5 Partnership in 1998. That effort produced the I-5 Partnership Strategic Plan, adopted by both DOTs, which established a shared 20-year, phased vision for the I-5 corridor between its intersection with I-205 in Washington and I-84 in Oregon. In January 2006, WSDOT and ODOT executed the Interstate Funding Agreement for the Columbia River Crossing Project. This Interstate Agreement established a specific funding plan and

commitments for about $64 million to pay project development costs. The Interstate Agreement also established a general goal that the total cost of the project will be split evenly between the DOTs and a co-state project development team.

Conclusion

The CRC Project fully meets the objectives of the Corridors of the Future program: (a) it is a multi-state project, (b) the participating states have enacted identical strategic plans for the Corridor, a funding agreement, and a bi-state project team, (c) the project proposal incorporates an innovative regional approach to a major congestion and travel delay problem, (d) the project targets a major freight bottleneck and addresses major regional economic issues, and (e) is considering several innovative finance and project delivery approaches. The project is also at a stage and on a pace that will provide DOT with a timely case example. Given the magnitude and complexity of the CRC Project, the potential DOT resources and commitments to assist with expedited project delivery that come with being designated a Corridor of the Future would be a substantial benefit to the CRC Project.

B. Alternative Fuels Corridor through Development of Safety Rest Areas

Alternative fuels provide a stable and sustainable regionally-based fuel source, removing dependence on unstable foreign supplies of fossil fuel and reducing greenhouse gas emissions. However, one of the greatest hindrances to moving into a sustainable alternative fuels future is the lack of a distribution network. Oregon, along with California and Washington Departments of Transportation are proposing to address this through the development of an alternative fuels distribution network along I-5, utilizing state-owned rights-of-way, potentially including existing safety rest areas (SRAs). The Washington State legislature recently earmarked $250,000 to analyze this concept and if proven feasible, seek private partners for the development of this Alternative Fuels Corridor. This network would create a backbone for alternative fuels retail sales with the ultimate goal of a West Coast supply system along I-5 through a three-state coordinated approach with Washington and California. The “Baja to BC” corridor would facilitate the availability of biodiesel, ethanol, hydrogen, CNG (compressed natural gas), electricity, and other fuels as they develop, thereby eliminating a significant barrier to widespread use of alternative fuel vehicles and increasing the demand for biofuels.

If SRAs are included, a secondary benefit of meeting SRA maintenance and operational needs as well as making critical capacity improvements through partnership with the private sector could be achieved. Potentially, a private sector enterprise or developer would be allowed to operate at the SRAs by providing travelers goods and services in order to make sale of alternative fuels financially viable. Any negotiated agreement would require the developer to operate, maintain, and improve the SRAs to specific service standards and provide for distribution of designated alternative fuels once a given fuel has reached critical mass in production capacity. Revenue from sales would be used, in part, for the operation and maintenance of the SRAs and would provide a return on investment to the Developer. The participating states would receive payment for the use of the property. Any excess revenue generated would be shared by the public sector and the Developer.

The SRAs would continue to be open to travelers who were not making any purchases. Such a venture could also provide additional truck parking spaces along with electrification services, enabling trucks to power their cabs without needing to idle the main engine, thereby saving fuel and reducing emissions. The need for additional truck parking capacity has been clearly identified: in June 2002, the Federal Highway Administration (FHWA) Study of Adequacy of Commercial Truck Parking found a shortage of commercial truck parking at SRAs throughout the nation, including this I-5 corridor. A funded alternative fuels distribution network would provide the “chicken” to address the alternative fuels “chicken and egg” dilemma. Fully one-third of Oregon’s greenhouse gas emissions are from transportation. The project fits Oregon’s transportation goals for reducing greenhouse gas emissions while providing sustainable fuel choices for the consumer. An additional

benefit is improved safety and security for motorists at the SRAs. The increased activity at the sites will reduce vandalism which has been a critical concern and resource drain. If after further developing this concept, the policy approvals necessary to move this concept forward are secured, the participating states, with Oregon as lead would seek federal authorization to allow a pilot project to allow for retail sale and distribution of alternative fuels, along with other goods and services to increase commercial viability, at SRAs along I-5.

C. Passenger Rail Development between Oregon and Washington

Federal law requires freight railroads to share the use of their lines with intercity passenger rail providers and give passenger trains priority over freight trains. The states of Washington and Oregon have taken advantage of this opportunity to initiate passenger rail service on the northwest's federally-designated high speed rail corridor from Eugene, Oregon through Portland and Seattle-Tacoma to Vancouver, British Columbia. This 466-mile corridor runs through the Northwest's largest cities. Nearly 70 percent of the population of Washington lives within the nine counties directly served by the Northwest high speed rail corridor and Interstate 5, and much of the growth in the Northwest is occurring along this corridor. In Oregon, the 13 counties most directly served by the I-5 corridor have a population representing approximately 80 percent of Oregon's statewide population.

While Oregon and Washington pay for the *Cascades* service, it is operated by Amtrak. This arrangement has proven to be a successful partnership between two states, Amtrak, freight railroads, and local communities, and it is often held up by USDOT and others as a national model for passenger rail development. Oregon pays Amtrak to operate two round trips daily between the state's two largest urban areas, Eugene and Portland (and through its third largest urban area, Salem), while Washington pays for three daily trains between Portland and Seattle and two round trips between Seattle and Bellingham, with one extension to Vancouver, B.C. Amtrak pays for one daily roundtrip train between Portland and Seattle.

Ridership on the Oregon segment between Portland and Eugene has nearly quadrupled since it was initiated in 1994, rising to over 130,000 passengers in 2006. Total ridership on the Cascades trains reached 629,996 passengers in 2006, making the Amtrak Cascades the seventh most heavily traveled intercity passenger rail corridor in the country. By the year 2023, the Seattle and Portland stations are projected to have over one million passengers annually, while Vancouver, BC would have over 700,000 annually and intermediate stations would reach 100,000-400,000 boardings each per year.

The Amtrak *Cascades* service runs along a rail line that parallels Interstate 5, and thus provides an additional travel option and expands overall passenger capacity on the I-5 corridor. The two states sponsor passenger rail service because it is an integral part of the regional transportation system and plays an important role in meeting some of the demand for intercity travel on the Interstate 5 corridor. Further investments can increase the role passenger rail plays in this corridor and contribute to the two state's efforts to accommodate regional growth. As fast as ridership on the Northwest corridor has grown with existing services, there is potential for much greater growth if the investments needed to improve and expand service are made.

There are two major issues that need to be addressed if passenger rail is to reach its full potential in the Northwest: on-time performance, and frequency of service. Present Amtrak *Cascades* service frequencies are limited and on-time performance is not reliable. These issues must be addressed to make the service more convenient which will allow substantial growth to occur in the future.

Amtrak *Cascades* Route

The current Amtrak *Cascades* service offers just two daily round trips between Eugene and Portland, four daily round trips between Portland and Seattle, one daily round trip between Seattle and Vancouver, B.C. and one daily round trip between Seattle and Bellingham. Washington and Oregon would like to address the problem of infrequent service by significantly increasing the number of trains operating on the corridor. The two states have established 20-year plans for the Cascades service that will accommodate the growth expected in the region. Oregon's plans call for six roundtrips between Eugene and Portland. Washington State's plans call for 13 roundtrips between Portland and Seattle, and four roundtrips between Seattle and Vancouver, B.C. This would offer travelers enough options that they would be much more likely to find a train that fits their travel schedule.

In addition to frequency of service, reliability and on-time performance needs to be improved. Cascades ridership and revenues have been increasing, but on-time performance has been decreasing as freight traffic increases and the freight railroads give priority to freight trains. For the first three months of Fiscal Year 2007, the Cascades on time performance was just 51.7 percent, compared to a target of 80 percent. Washington State continues to work with BNSF to improve on-time performance in its portion of the corridor. BNSF has modified some system operating practices that are showing positive results.

Addressing these issues of frequency of service and on-time performance will require a partnership with the freight railroads and additional investment in the rail corridor's capacity. Passenger rail

service frequency and on-time performance is constrained by the capacity of the freight rail lines on which the trains run. The track on which Amtrak operates is owned by Union Pacific Railroad and BNSF, and it is highly congested. When the Cascades program was initiated, the freight railroads were willing to sell slots to the state in return for physical improvements to the rail lines that would benefit both passenger and freight movement.

The two states have together invested more than $170 million to date to upgrade the freight rail infrastructure to accommodate the existing trains and improve on-time performance. Before the freight railroads will allow either state to run more trains, they will require significant investments in expanded capacity to ensure that passenger trains do not cause delays for its freight trains. Significant investments may also be necessary to improve on-time performance of existing trains.

Considerable additional investment is needed to achieve the Cascades program's longer-term goals of more frequent service and higher ridership. The contractual agreement between Washington and BNSF provides a methodology to reach these goals consistent with long range plan development. However, constrained funding has limited opportunities to make investments as proposed. If rail system congestion continues to build and improvements are not made in a timely manner, on-time performance may deteriorate further, undermining ridership growth and reducing the cost effectiveness of the program.

WSDOT's latest long-range plan for Amtrak Cascades service includes service goals, ridership and revenue forecasts, equipment requirements, updated operating and capital construction plans, and cost estimates for each service increment that could be added in the years ahead if funding and market demand exist. The total cost for all the construction and equipment necessary to achieve WSDOT's service goals for intercity passenger rail service between Portland, Seattle, and Vancouver, BC is estimated to exceed $6.5 billion dollars in 2006 dollars.

Congress is considering legislation that would establish a dedicated federal funding source for high-speed rail construction across the nation. This program would require state governments and other participants to contribute a portion of the cost of high-speed rail construction projects, with the federal government paying for the remainder. As a federally-designated corridor, the Northwest's corridor would be eligible for this proposed federal funding. The states of Washington and Oregon intend to take full advantage of any federal funding that becomes available in order to accelerate the development of the Amtrak Cascades program in the Pacific Northwest.

D. Interstate 5—Intelligent Transportation Systems (ITS)

California-Oregon Advanced Transportation Systems (COATS)

In Northern California and Southern Oregon, Caltrans, ODOT, FHWA, California Highway Patrol (CHP) and the Oregon State Police, have formed a unique partnership called COATS, California-Oregon Advanced Transportation Systems. The COATS partnership has been in place since 1998 and has also engaged local governments as partners. The purpose of COATS is to encourage regional, public, and private sector cooperation between California and Oregon to better facilitate the planning and implementation of intelligent transportation systems in a primarily rural bi-state area extending between Eugene, Oregon and Redding, California. COATS has evaluated ITS projects and systems to improve safety, reduce the impact of weather on driving conditions, facilitate hazardous cargo identification, improve traveler information, improve communications between state and local agencies, and improve regional economic activity. Key accomplishments have been the development of a regional ITS Architecture and deployment plan, evaluation of various rural ITS deployments, development of a bi-state operations plan for Siskiyou Pass on I-5, and improved communications among ODOT's Transportation Operations Center in Medford, the Caltrans District 2 operations center in Redding and the Caltrans District 1 operations center in Eureka.

Projects that ranked high in this evaluation (and are currently under further development) include the Bi-State Traveler Safety and Incident Management System (I-5 from Yreka, California to Medford, Oregon) and the Regional Traveler Information System (Loop from Crescent City, CA to Medford, OR to Eureka, CA back to Crescent City). The next step for the COATS partnership will be applying integrated corridor management concepts to manage the 244 mile parallel rural corridors of I-5 and Hwy 58/US 97 between Weed, California and Eugene, Oregon.

Portland/Vancouver Metropolitan Area

The other area of Interstate collaboration on ITS issues is in the Portland/Vancouver area. ITS deployment in this bi-state region is coordinated through the TransPort technical advisory committee. TransPort has been meeting for over a decade, and members of the committee represent both Oregon and Washington and come from the two state DOTs, local transportation and transit agencies, Portland State University, the Port of Portland, and the MPOs. Some examples of the regional collaboration that have occurred through the work of the TransPort committee include a shared regional fiber network that provides the communications backbone for regional ITS deployment and the regional TripCheck Traveler Information Portal system that aggregates the data from multiple agencies in one location for use by the TransPort agencies as well as for sharing with the private sector.

A regional transportation data archive system has been implemented at Portland State University to archive ITS data for planning and research use. ODOT has worked with the City of Portland to develop plans and implement technology to coordinate the use of key arterials such as Barbur Boulevard in response to incidents on I-5. Washington DOT is sharing use of ODOT's Advanced Traffic Management System software to coordinate traffic and incident management activities on both sides of the Columbia River. Both DOTs are collaborating to develop an improved version of this software.

While the Portland/Vancouver region has made significant progress on bi-state coordination of ITS initiatives, additional work needs to be done on coordinating traveler information systems across state lines so that the region's travelers can access an integrated regional system. In addition, further development of regional incident management systems could occur.

III. Individual State Report

A. Washington

Physical Description

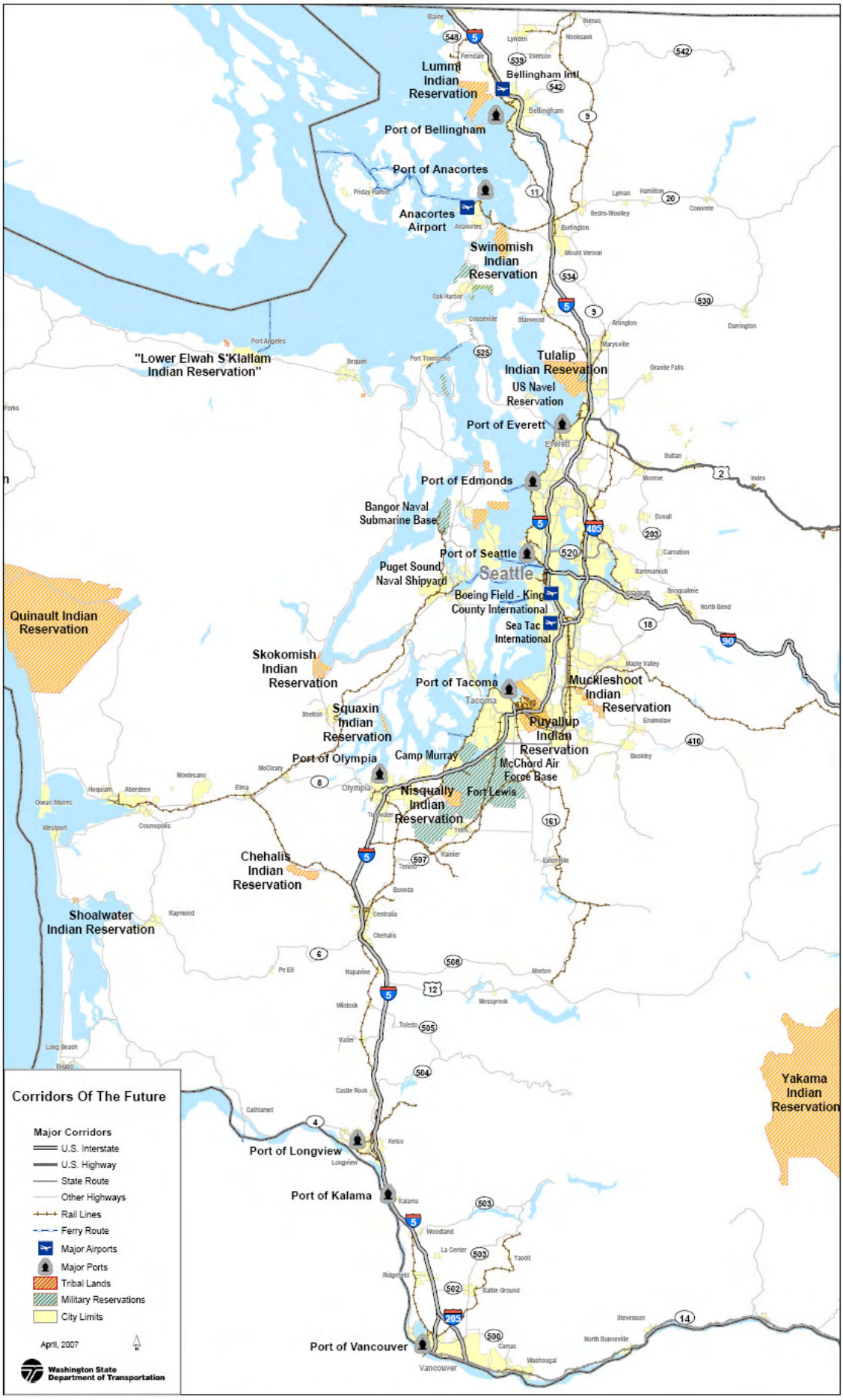
Washington's segment of Interstate 5 (I-5) is slightly less than 280 miles from the midspan of the Columbia River Bridge between Washington and Oregon north to the border crossing into Canada in Blaine, Washington.

I-5 traverses nine of the state's 39 counties which have a combined population of 4,382,300. This is equal to nearly 69 percent of Washington State's population of 6,375,600, indicative of both the degree of demand on the transportation system in the corridor, as well as the significance of the corridor to the state's economy and citizens' quality of life.

The Roadside Classification of Interstate 5 ranges from natural forested and natural open to rural, semi-urban, and urban. There are no major mountain passes on I-5 in Washington, and it can be generally described as level or rolling but constrained between the Cascade Mountain Range to the east and, for much of its distance, the Puget Sound.

I-5 in Washington consists of 563.39 rural lane miles and 1,015.18 urban lane miles for a total of 1,578.57 lane miles. There are 58.61 rural lane miles considered "level terrain" and 504.78 rural lane miles considered "rolling terrain." In the urban areas, 96.56 lane miles are considered "level terrain" and 918.62 lane miles are considered "rolling terrain." Source: WSDOT TDO.

Interstate 5 Corridor in Washington: Highways, Ports, Airports, Military Bases, Tribal Lands



Connections to Transportation Infrastructure

Along the I-5 corridor in Washington, numerous transportation facilities intersect and parallel Interstate 5. The Interstate highways include: I-405, I-90, I-205 and I 705 in addition to US routes 2, 12, and 101 also intersect. Also, more than 50 State Routes intersect I-5; those with the greatest impact and relevance to I-5 are those with the greatest average traffic volumes. These include: State Routes: 9, 14, 16, 18, 20, 99, 167, 432, 509, 512, 520, 539, 542, 543, and 548.

Corridor Traffic Levels

Average daily traffic volume at milepost 0.00 (Oregon State Line) in 2006 was 126,101 vehicles (preliminary figure). The average daily traffic volume in 2006 at milepost 155.38 in Seattle on I-5 was 244,757. Near the Canadian Border crossing milepost 276.43, the 2006 average daily traffic was 8,202. Remaining cross border traffic is distributed among three other crossings in the vicinity of the I-5 crossing.

Ports

In Washington, I-5 serves as the major connecting Interstate for 9 deep water ports. From north to south these are Bellingham, Anacortes, Everett, Seattle, Tacoma, Olympia, Longview, Kalama, and Vancouver Ports. The I-5 rail corridor also provides access to the deep water port at Grays Harbor. Washington's two largest seaports, the Port of Seattle and Port of Tacoma, are located on the Interstate 5 corridor. The two ports combined handled over $70 billion in international trade in 2005. These major container ports serve as gateways for containerized imports from Asia that serve the national economy. About 70 to 80 percent of imported containers are destined for consumers in the Midwest and East Coast.

In 2005, the Port of Seattle and the Port of Tacoma ranked as the third largest container port complex in the United States (behind Los Angeles/Long Beach and New York/New Jersey). The two ports combined handled almost 3.3 million international containers in 2005 (twenty-foot equivalent units).

Container trade has increased 241 percent since 1982. Globalization, in particular the emergence of China and Asia as an important part of the factory floor for the United States, will triple the volume of imported container freight by 2025.

Global security needs and our national defense depends on the United States' ability to rapidly project force when needed. Fort Lewis is the only Power Projection Platform on the West Coast. In the event of a major conflict, essential equipment and supplies will rush to Fort Lewis from all over the United States by rail and road, then ship through the Ports of Tacoma, Olympia and Seattle to support the troops. The military traffic will attempt to surge through two freight systems that have

already reached their capacity limits: east-west rail road lines, and on Interstate 5 in Central Puget Sound.

The two busiest airports in the state, the Seattle-Tacoma International Airport and Boeing Field/King County International Airport, are located on the Interstate 5 corridor in Central Puget Sound. The Seattle-Tacoma International Airport handled 14.2 million passenger enplanements in 2005, approximately 87 percent of all passenger enplanements in the state. The two airports combined handled approximately 500,000 tons in 2005 – approximately 83 percent of all air cargo tonnage in Washington State. They are both reliant on the Interstate 5 corridor for passenger and air cargo access.

Washington's exporter and importer distribution facilities are concentrated in the South Sound region. They have no practical alternative to the I-5 corridor. Delay costs everyone. Consumer goods cost more. Shippers turn fewer shipments to the ports. Manufacturers have shorter windows to ship air cargo. Worst of all, it takes more trucks to ship the same volume, as each truck gets fewer trips per day.

Other seaports in Southwest Washington, including Longview, Kalama and Vancouver, are major export ports for Midwest and Washington State agricultural commodities, including grain and lumber. Export companies depend on access via the Interstate 5 corridor to reach these ports and foreign markets.

The majority of Washington State air cargo moves through Seattle-Tacoma International and King County Airports, therefore congestion on Interstate 5 in Central Puget Sound, and eastbound on Highway 518 from Sea-Tac to Interstate 5, directly impacts reliability and on-time performance of the state's air cargo system. Trucking companies may try to schedule around congestion patterns, but must meet customer demands for on-time service in preferred time windows.

Border Crossings

The Cascade Gateway includes the third busiest passenger vehicle crossing along the U.S. - Canada border, and the fourth busiest commercial crossing. Over 22,000 cars and over 3,000 trucks cross through the Cascade Gateway every day, carrying over $31 million (USD) in daily trade. The Cascade Gateway is a prominent, international trade and travel connection.

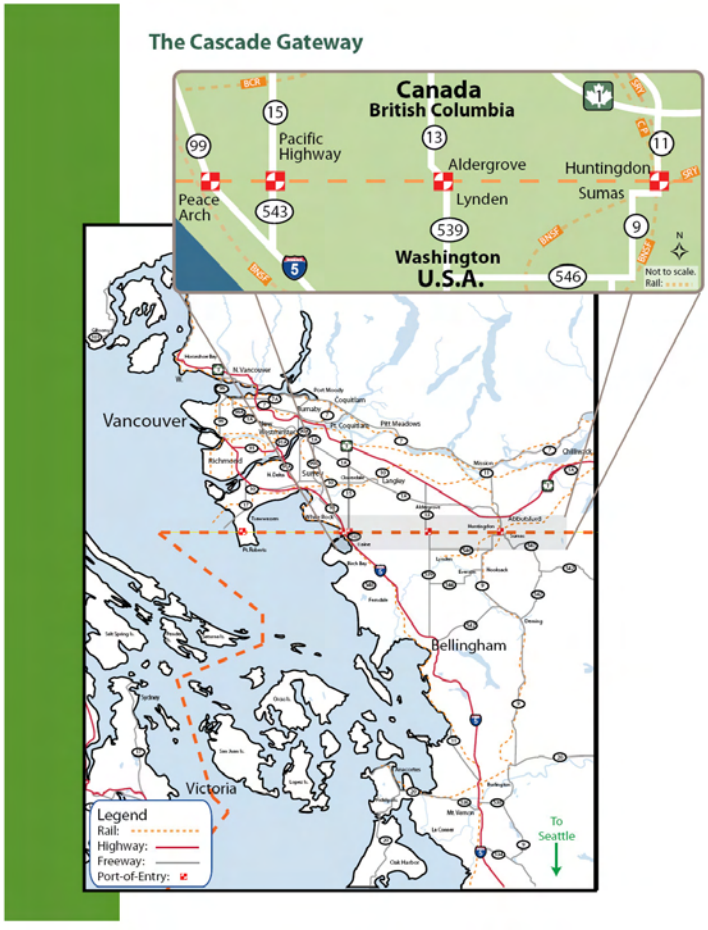
Cascade Gateway Ports-of-Entry:

1. Peace Arch - Blaine, WA/Surrey, BC (I-5/B.C. Hwy 99)
2. Pacific Highway - Blaine, WA/Surrey, BC (SR 543/B.C. Hwy 15)
3. Lynden/Aldergrove - Lynden, WA/Aldergrove, BC (SR 539/B.C. Hwy 13)
4. Sumas/Huntingdon - Sumas, WA/Abbotsford, BC (SR 9/B.C. Hwy 11)

The Cascade Gateway border crossings are dependent on the Interstate 5 corridor and serve as a major corridor for NAFTA trade. The three border crossings near the I-5 corridor, Blaine, Sumas and Lynden, handle more than 85 percent of the state's truck border traffic.

The Blaine/Surrey crossings between Washington and British Columbia see the 3rd highest volume of passenger traffic and the 4th highest volume of commercial trucks along the entire U.S. - Canada border.

In 2005, almost $13 billion (USD) in goods crossed the Cascade Gateway border crossings by truck alone. An additional $3 billion of trade crossed the Cascade Gateway by rail. Approximately 40 percent of trucks crossing this gateway have a trip-end outside of the border region, illustrating the importance of these facilities to both regional and national economies.



Source: International Mobility and Trade Corridor Project 2006

Rail Lines

As explained in the Washington State Transportation Commission (WSTC) Washington State Rail Capacity & System Needs Study, the I-5 Corridor serves 9 intermodal rail yards, where BNSF and Union Pacific railroads connect with freight trucks and ports. In the I-5 corridor a rail line runs the length of the state from the Canadian border through Bellingham, Everett, Seattle, and Tacoma to Vancouver and Portland. It is the backbone of the Washington State rail system, controlling access to the east-west lines. Most of the line is owned by the BNSF, but the BNSF shares operating rights over the line with the Union Pacific Rail Road (UPRR), Amtrak's intercity rail services, and Sounder commuter-rail operations.

The study also found that rail absorbs some of the traffic growth from congested highways. The I-5 corridor and many of the state's urban highways are congested. Expanded freight and passenger rail services may be part of the solution to highway congestion but most rail shipments are going long distances. Investment in new rail capacity may not moderate growth in truck traffic—most of which is associated with short- and medium-distance trips—on the state's congested urban highways.

Rail Lines in the I-5 Corridor

Source: Washington State Transportation Commission. Washington State Rail Capacity and System Needs Study.

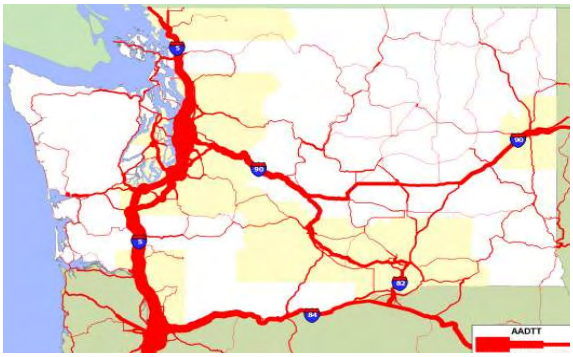
Current and Future Congestion

Interstate 5 (I-5) is the backbone of the Washington State transportation system and the West Coast freight system, crossing three states and linking three nations. As the most heavily used highway in the state, it is critical to the regional, state, and national economy. Congestion in the corridor has a major impact on Washington shippers and impedes trade with national markets. There is no practical alternative route to I-5 for importers and exporters, manufacturing and agribusiness, and companies delivering goods on the local distribution system.

The most important freight system problem in Washington State is the lack of capacity on the state's key freight highway corridors, including Interstate 5 between Everett and Olympia. These highway corridors support a very high share of the state's economic output, as measured in gross state product and jobs. The state's freight-dependent industries (manufacturing, agribusiness and construction) and ability to support our metro centers with daily food and fuel supplies depend on access, throughput and reliability on these high-volume corridors. Due to our geography and missing links in the highway system (Highway 167 and Highway 509 aren't connected to I-5, for example) there are no alternative routes for these corridors in Washington State. Congestion and unreliability is increasing, due to increased population and industries' drive to reduce inventory.

Estimated Average Annual Daily Truck Traffic 1998

Estimated Average Annual Daily Truck Traffic 2020

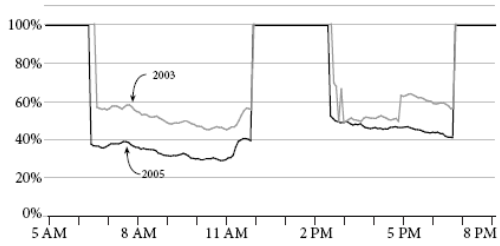


The current congestion on the I-5 Corridor appears most prominently in urban areas. Along I-5 in Washington these urban areas are the Seattle Metropolitan Area, and Vancouver, which is part of the bi-state Portland-Vancouver metropolitan area. The charts below illustrate the lost capacity at various points on or near the I-5 Corridor.

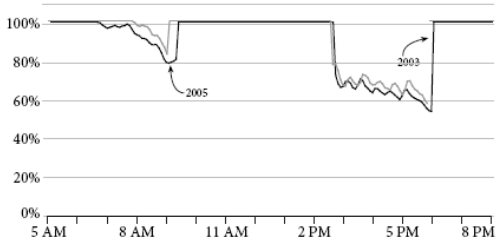
Measuring Delay and Congestion: Annual Update

Productivity Graphs (Lost Throughput)

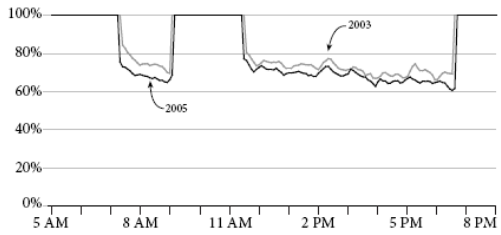
I-5 at I-90



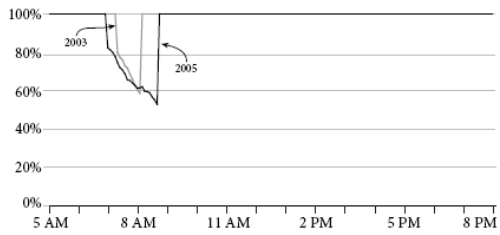
I-5 at S. 188th St. near Sea-Tac



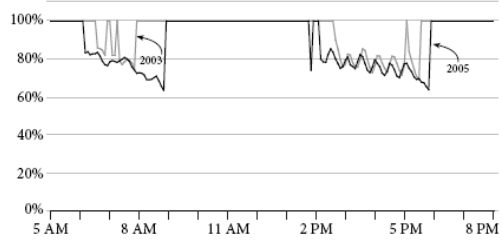
I-5 at NE 103rd St. near Northgate



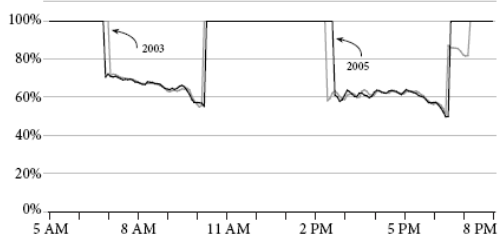
I-90 at SR 900 in Issaquah



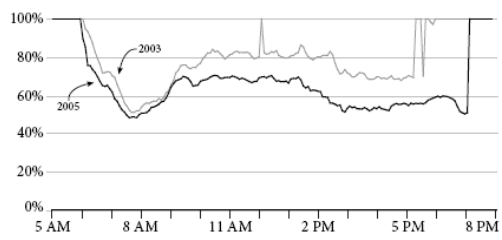
SR 167 at 84th Avenue SE



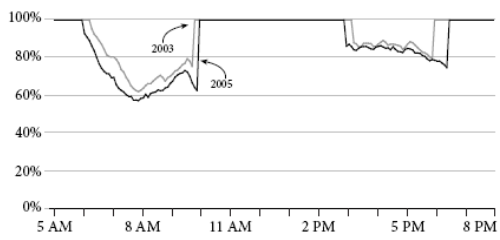
SR 520 Floating Bridge



I-405 at SR 169 in Renton



I-405 at NE 160th St in Kirkland

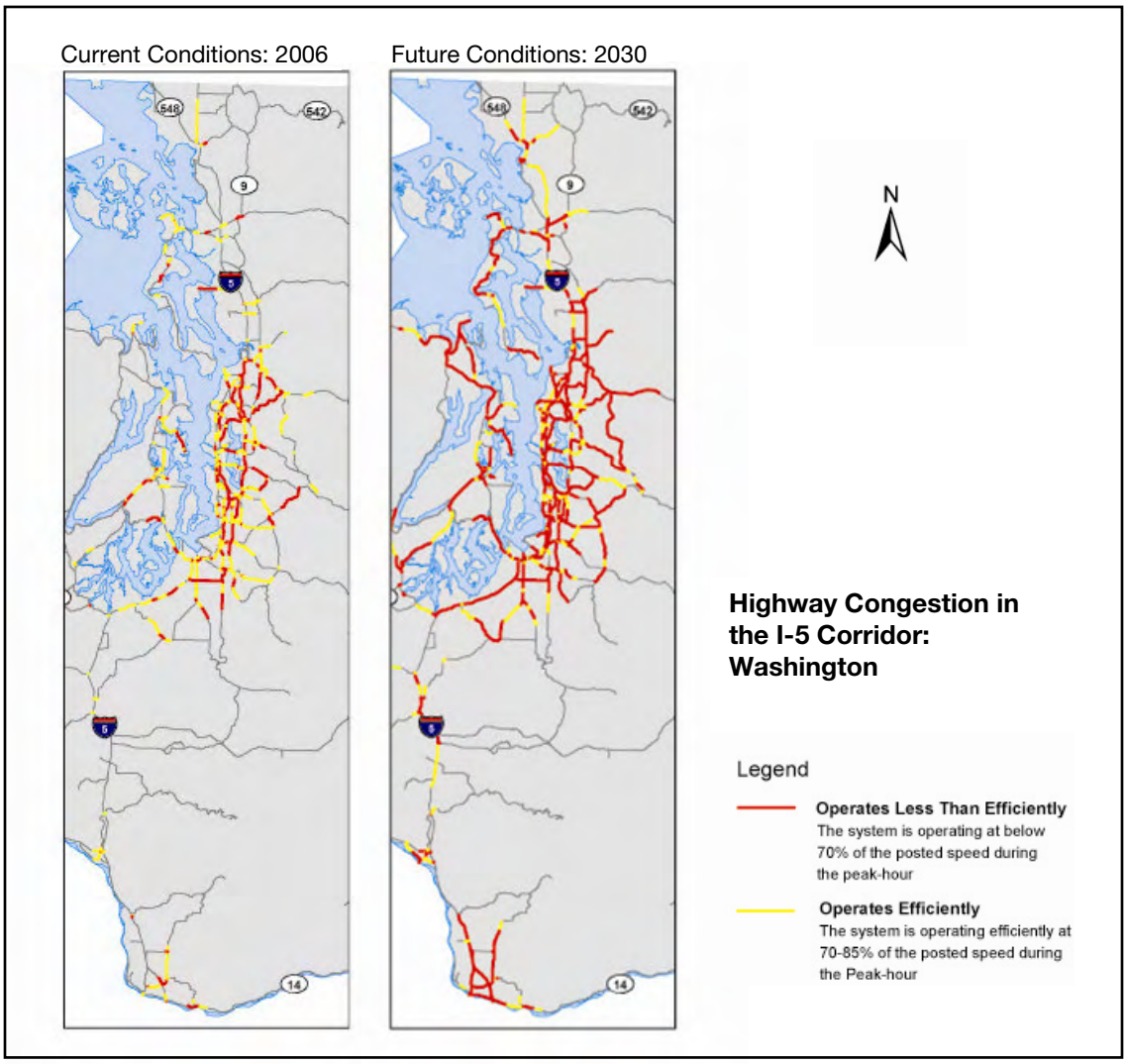


The Washington State Department of Transportation (WSDOT) utilizes a quantified threshold to prioritize and define congestion. In the Highway System Plan, recurring congestion is determined by identifying locations which are inefficiently operating at below 70% of the posted speed during the peak-hour. The current congestion in the I-5 Corridor map illustrates congestion as defined by this threshold, shown in red, as well as a secondary level, shown in yellow, where the system is operating efficiently at 70-85% of the posted speed.

Future Highway Congestion

The WSDOT Congestion Relief Analysis estimates the statewide total daily vehicle hours of delay in 1998 to have been 285,500 and projects that in 2025 the statewide total daily vehicle hours of delay will be 1,118,400, a 292% increase. The majority of this delay will continue to occur on the I-5 corridor, particularly in the Puget Sound region.

Up to 22,000 trucks drive the I-5 corridor between Central Puget Sound and Oregon, daily. Truck trips increased by 94 percent on the I-5 corridor between 1993 and 2003. Freight volumes are expected to increase another 80 percent - to 35,000 trucks per day - by 2020.



Addressing Highway Congestion in the I-5 Corridor in Washington

1. The Columbia River Crossing Project

The Columbia River Crossing Project (the "CRC Project") addresses the mounting transportation and economic difficulties caused by acute and growing Interstate traffic congestion on Interstate-5 within the Portland-Vancouver metropolitan region. The CRC Project will be a multi-modal, "mega-project" transportation solution for the five-mile segment of I-5 between SR-500 in Vancouver, Washington and Columbia Boulevard in Portland, Oregon. Subject to the local and federal decision-making processes, the CRC Project may include a new I-5/Columbia River Bridge and highway, high-capacity transit, traffic safety, and transportation demand management (TDM) improvements to I-5. The CRC Project is anticipated to incorporate time-of-day variable toll pricing.

WSDOT and ODOT executed an Interstate agreement to fund project development costs. Under the direction of a joint WSDOT and ODOT team, the project has advanced to the Draft Environmental Impact Statement (DEIS) stage; with the federal Notice of Intent published September 27, 2005. The preferred project alternative is anticipated to be selected by April 2008.

Economic Benefits and Support of Commerce:

- Reduced delay
- Increased efficiency of commercial truck and freight movement critical to Washington's and Oregon's regional economies
- Reduced congestion between the Ports of Portland and Vancouver, and the BNSF and Union Pacific intermodal rail terminals, as well as distribution centers along the corridor

Value to users of the Corridor:

- Increased travel time reliability
- Reduction in air quality impacts due to vehicle idling

Columbia River Crossing Project Schedule

Activity	Date
Completion of Scoping and Selection of Alternatives for DEIS	March 2007
Publish DEIS	February 2008
Select Locally Preferred Alternative	April 2008
Completion of FEIS and Issuance of Record of Decision	Summer 2009
Construction Starts	Early 2010
Construction Complete	2015

2. Complete Missing Links on the North-South Freight Corridor

Work to address these constraints has already begun; however, the Washington Transportation Plan (WTP) identifies a high priority need of $3.46 billion to complete the missing links on the major north-south freight corridor system. Additionally the Alaskan Way Viaduct on SR 99, and the SR 520 Floating Bridge, which connects I-5 with the parallel route I-405 are vulnerable and failing structures critical to freight movement on the north-south corridor and have an estimated need of $4.8 billion for replacement. The draft Highway System Plan 2007-2026 identifies addressing the freight constraints on the I-5 corridor from Everett to Olympia as a critical strategy to support Washington's role as a global gateway, the regional economy, and the state's retail and wholesale distribution systems.

Manufacturers, agricultural growers and processors, construction firms, and distributors have no practical alternative to the I-5 corridor. This corridor serves the national economy and national defense, freight dependent industries across the entire state, and every resident through the delivery of goods to consumers every day.

There are missing links and failing structures on the I-5 north-south freight corridor and companies have no practical alternative to this corridor.

- Highway 405 – Highway 167: Congestion and missing link between Highway 167 and I-5.
- Highway 99 - Alaskan Way Viaduct – Highway 509: Congestion, failing structure and missing link. Completing Highway 509 would link I-5 and the Viaduct and create a third major truck route into the Seattle metro region.

Economic Benefits and Support of Commerce:

- Ensures market access and connectivity by relieving congestion and creating better access for freight.
- Reduce travel delay, safety hazards and congestion for commercial vehicles
- Prevent increased congestion on alternative corridors and support growth of regional and national trade.

Value to the Users of the Corridor:

- Reduced delay, and prevents increased congestion on alternative corridors
- Reduced congestion minimizes air quality impacts from vehicle idling
- Reduces cost of moving freight

3. Canadian Border Crossings

The I-5 corridor serves four bi-national border crossings from Washington State into Canada. Also known as the Cascadia corridor, I-5 and State Routes 9, 539, 543, and 546 serve both commercial and citizen border crossings. In 2005, almost $13 billion (USD) in goods crossed the Cascade Gateway border crossings by truck alone. An additional $3 billion crossed the Cascade Gateway by rail.

SR 539 - -I-5, Improved Access: Project Location Map

Source: WSDOT
http://www.wsdot.wa.gov/Projects/SR539/I5_Access/ImprovedAccess/ProjectLocation.htm/default.htm

In 2003 the Washington State Legislature provided funding for the SR 539 Guide Meridian Widening Project from Bellingham to Lynden. The SR 539 corridor begins at the I-5/Guide Meridian interchange in Bellingham, Washington and continues north through Whatcom County into Lynden, ending at the Washington/Canadian border crossing. This highway is designated as a Highway of Statewide Significance and provides a major north-south connection through Whatcom County serving freight, commercial and residential users. Truckers use SR 539 to move freight from I-5 from the south, and Canada from the north, to various locations within Whatcom County.

As part of the funding authorization, the City of Bellingham and the Washington State Department of Transportation (WSDOT) recognized the potential for attracting additional traffic to the SR 539 corridor and that this traffic would funnel into the already congested section of SR 539 between I-5 and Horton Road.

The purpose of this traffic analysis is to identify existing and future safety and congestion problems on the Guide Meridian (SR 539); to determine why these problems occur; and, if diverting traffic to one or more new east-west connectors in northern Whatcom County in the vicinity of the SR 539 corridor would reduce traffic volume on SR 539 in congested segments of the corridor.

The new east-west connection alternatives analyzed are as follows:

- A new interchange at Smith Road/I-5.
- The extension of Slater Road from Northwest Drive to SR 539 connecting with Kelly Road.
- The extension of Horton Road from Northwest Drive to Hannegan Road connecting to Van Wyck.

4. Mobility Improvements

Washington State Department of Transportation's approach in addressing congestion is targeted at maximizing and increasing throughput within the existing transportation system through a three-tiered approach of target investments. Tier 1 will focus on using System Operations and advancing technologies, including continual performance measurement and monitoring to determine when throughput from operational improvements are maximized. Operational improvements are generally characterized as lower cost, with minimal environmental impact and quick to design and construct.

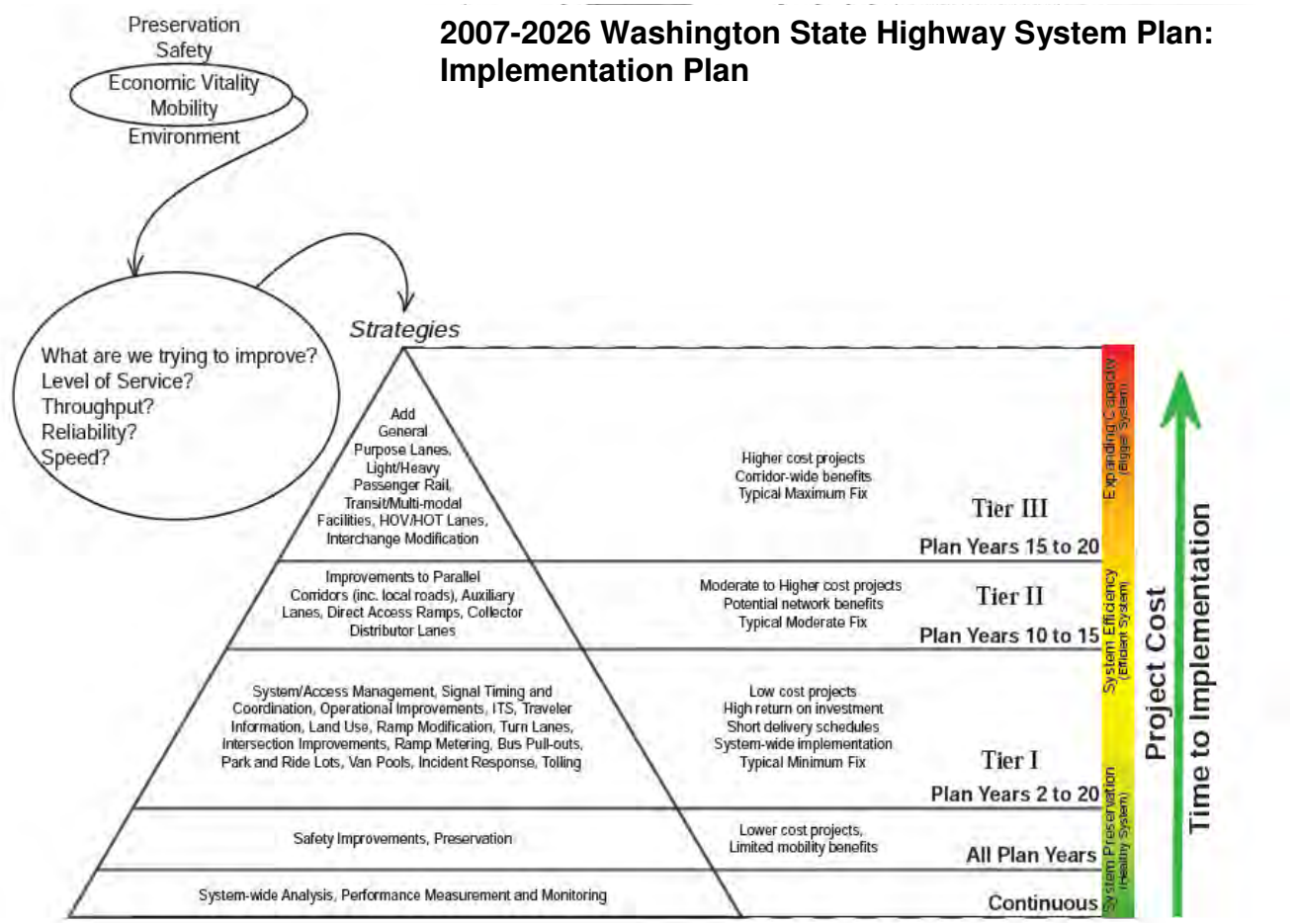
Tier 2 improvements relieve bottlenecks and chokepoints on the system and are moderate in cost with more environmental impact and take more time to design and build. They may include elements such as direct access ramps, collector distributor lanes and improvements to parallel roadways (local roads).

Tier 3 investments will be pursued when all Tier 1 and Tier 2 strategies have been exhausted and a need for general capacity increase exists. These types of investments are generally high cost with significant environmental impacts and take a long time to design and build. They also can have significant traffic impacts during construction.

In addition to this three tiered approach, the department has made connectivity between the highway and the ferry mode a key mobility objective to ensure that transportation users can make a smooth transition. The department will use the same strategic investment approach to ensure that maximum throughput can be achieved for the funding that is available.

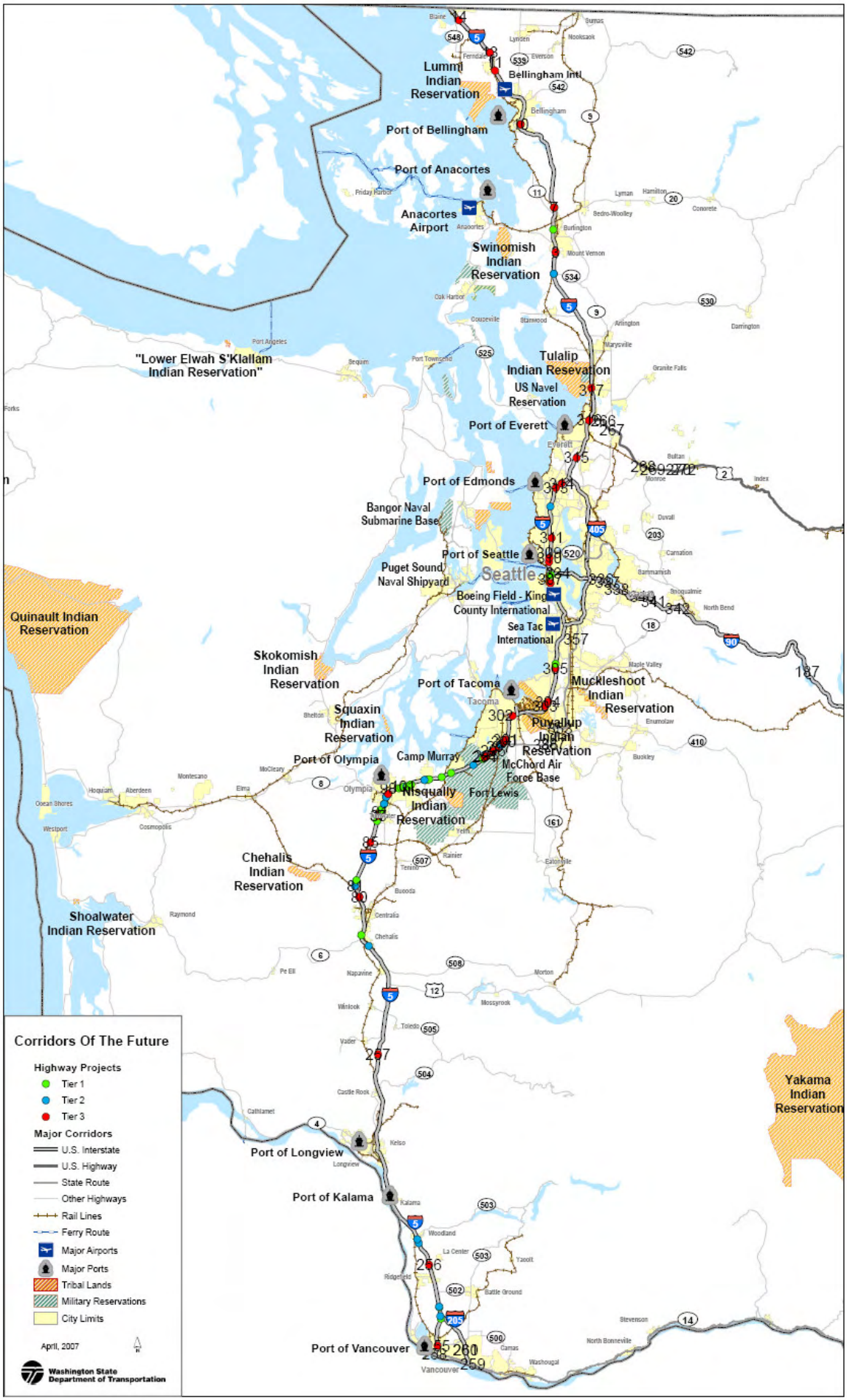
WSDOT developed the Mobility portion of its' Highway System Plan based on these approaches to ensure that the maximum amount of transportation throughput can be achieved for every dollar invested by the Legislature.

2007-2026 Washington State Highway System Plan: Implementation Plan



Source: WSDOT Draft Highway System Plan 2007-2026

The map below illustrates the Highway System Plan Tier I, II, and III projects for the I-5 corridor.



Puget Sound Area Investments in Mobility Improvements

The greater Puget Sound region of western Washington experiences the greatest delay and congestion in the state and along the I-5 corridor, as illustrated in the map of Highway Congestion in the I-5 Corridor on page 37. As previously discussed, the Washington State Department of Transportation targets transportation investment so as to provide the greatest benefit and make the most efficient use of tax dollars. Due to the significant congestion and delay the Puget Sound Region has been experiencing, many innovative investments have been built, programmed, and planned for in this area.

Puget Sound Regional Transportation Investment District (RTID)

"The Regional Transportation Investment District (RTID) Planning Committee was created by the Washington State Legislature and charged with developing a transportation package to be submitted to voters in the fall of 2007 for improving significant highways and bridges in Snohomish, King or Pierce Counties, also known as the greater Puget Sound Region. The RTID Planning Committee is coordinating its work with Sound Transit, which will submit a companion proposal to voters." Source: www.rtid.org/aboutrtid.html

The agencies' combined Roads & Transit package will be the first-ever plan presented to voters that is a unified program of investments in highways, light- and commuter-rail, HOV lanes,
Park-and-Ride lots, and express and local bus service. RTID and Sound Transit leaders are making sure the proposed investments work together for everyone—whether they drive a car or truck or take transit. The Roads & Transit package will go before voters in the three-county region in November 2007.

RTID's Guiding Principles

- Improve safety and reduce congestion chokepoints;
- Add to existing investments in key highway corridors;
- Integrate with Sound Transit mass transit investments to improve mobility for citizens with both roads and transit;
- Make investments throughout the three-county region, so that every area benefits;
- Maximize financial resources by prioritizing investments in critical corridors;
- Keep the Roads & Transit package affordable.

Funding

In 2006 dollars (the year costs and revenues were estimated) RTID investments total $6.7 billion. Investments would be funded by two sources: a .1 percent local sales-and-use tax, which is 1¢ on every $10 purchase; and an excise tax of $80 on every $10,000 of value of a vehicle. In 2006 dollars, the RTID package would cost the average household $25 in additional sales tax per year and $68 for an average vehicle value of $8,500, for a total cost of $93. These funds would be generated within the RTID district only. Every dollar generated in a county would stay in that county.

Next Steps

- February-March 30: Public outreach
- April: RTID adopts final Blueprint for Progress
- May: RTID Planning Committee adopts plan
- June-July: County Councils adopt Blueprint for Progress, ballot title
- August: Ballot title(s) filed with county elections offices
- November 6: Roads & Transit package on ballot

Source: http://www.rtid.org/blueprint.html

5. Addressing Congestion on Railroads in the I-5 Corridor

As a condition of the deregulation of the railroad industry in 1980, federal law requires that freight railroads share the use of their lines with intercity passenger rail providers and give passenger trains priority over freight trains.

When the Amtrak *Cascades* program was initiated, the freight railroads were willing to sell slots to the state, especially in return for physical improvements to the rail lines that would benefit both the passenger and freight movement.

WSDOT's latest long-range plan for Amtrak Cascades service includes service goals, ridership and revenue forecasts, equipment requirements, updated operating and capital construction plans, and cost estimates for each service increment that could be added in the years ahead if funding and market demand exist. The total cost for all the construction and equipment necessary to achieve WSDOT's service goals for intercity passenger rail service between Portland, Seattle, and Vancouver, BC is estimated to exceed $6.5 billion dollars in 2006 dollars.

Amtrak Cascades ridership and revenues have been increasing, but on-time performance has been decreasing as freight traffic increases and the freight railroads give priority to freight trains. Considerable additional investment is needed to achieve the Cascades program's longer-term goals of more frequent service and higher ridership The contractual agreement between Washington and BNSF provides a methodology to reach these goals consistent with long range plan development. However, constrained funding has limited opportunities to make investments as proposed. If rail system congestion continues to build and improvements are not made in a timely manner, on-time performance may deteriorate further, undermining ridership growth and reducing the cost effectiveness of the program. Limited funding, in the absence of a federal funding partnership for capital development, may cause the need to reexamine the future of the rail passenger program.

Washington state law, RCW 47.79, relates to high-speed ground transportation, establishing a program to promote a high-quality, high-speed, and intercity rail system. The statute was enacted based on legislative recognition that major intercity transportation corridors in Washington are becoming increasingly congested; that high-speed ground transportation offers a safer, more efficient, and environmentally responsible alternative to increasing highway capacity; and that high-speed ground transportation can complement existing air transportation systems, as well as regional growth management plans.

Some of the goals of this statute include the following:

- Reduce travel time between downtown Portland and downtown Seattle to a maximum of two hours by 2010;
- Implement high-speed ground transportation service offering top speeds over 150 mph between Everett and Portland, Oregon by 2020;
- Implement high-speed ground transportation service offering top speeds over 150 mph between Everett and Vancouver, BC by 2025; and
- Implement high-speed ground transportation service offering top speeds over 150 mph between Seattle and Spokane by 2030.

In addition, this statute recognizes the Legislature's intent to develop public support and awareness of the benefits of a high-speed ground transportation system through the incremental upgrading of existing service.

As would be expected, the Seattle, Portland, OR and Vancouver, BC stations are projected to have the highest number of passengers. Both Seattle and Portland, OR are projected to have over one million annual passengers at their stations by year 2023. Vancouver, BC is projected to have just over 700,000 annual passengers. The intermediate stations along the corridor are all projected to have between 100,000 and 400,000 annual passengers by year 2023.

For the past several years, the United States Congress has been working toward establishing a dedicated federal funding source for high-speed rail construction across the nation. It is anticipated that this new federal program will require state governments and other participating entities to contribute some amount of matching funds for high-speed rail construction projects within their jurisdictions. As a federally-designated corridor, the Pacific Northwest Rail Corridor (PNWRC) will be eligible for this proposed federal funding. The states of Washington and Oregon intend to take full advantage of any federal funding that becomes available in order to accelerate the development of the Amtrak *Cascades* program in the Pacific Northwest.

Exceptional Environmental Stewardship

Washington State has a wide diversity of habitats that support more than 650 native fish and wildlife species. As the population increases, and our human footprint expands, added pressure is placed on natural systems that are already heavily stressed in many cases. Habitat fragmentation, road kill, and wetlands loss are some of the impacts that transportation systems can cause.

Roads can fragment habitat for fish and wildlife, restrict the movement of wildlife across landscapes, and lead to vehicle collisions with wildlife (on average, 1,200 reported crashes, 134 injuries, and one fatality each year – in 2004, five people were killed in vehicle-wildlife collisions).

Investing in our transportation system can help address citizens' goals for a healthy environment. Environmental elements are considered part of every project's design, construction, operation and maintenance. Highway construction projects are designed to:

- Treat stormwater by removing sediments and metals
- Protect the quality of groundwater
- Control erosion of banks and reduce surface run-off
- Provide fish passage and enhance habitat connections
- Build barriers to reduce noise on neighborhoods
- Replace and improve wetland functions
- Protect cultural and historic resources
- Minimize air pollution
- Allow habitat connectivity for animals
- Provide Bicycle/Pedestrian Facilities as needed

WSDOT plans to continue investing in stand-alone environmental retrofit projects to fix problems along the existing highway system. These projects are funded to:

- Remove culverts that keep fish from reaching upstream habitat
- Reduce highway noise in areas not addressed by past construction projects
- Treat stormwater
- Fix stretches of highway that suffer repeated flooding or stream bank erosion
- Provide pedestrian crossings near schools, senior centers, and parks
- Provide bicycle connections near schools and in urban areas

WSDOT works with Department of Fish and Wildlife (WDFW) to inventory, identify, and prioritize fish passage barriers that should be removed along the state highway system. The agencies have found 1,500 fish passage barriers among more than six thousand stream crossings on the state-owned highways. To date, WSDOT has removed 180 of these barriers and gained over 411 miles of stream habitat for fish use. The effort to fix barriers continues and is a high priority in the HSP.

Finance Plan and Potential Private Sector Participation

The 2005 Legislature gave the Transportation Commission the task of conducting a statewide tolling study to consider how tolling could be used in the future, both to manage traffic on the highway system and to understand revenue-generating potential. The results of the study include:

- Potential tolling opportunities in the near-, mid-, and long-term
- Traffic analysis—how tolls will affect roadway use
- Fiscal analysis—assessing fiscal opportunities and strategies
- Technology analysis—technologies for facilities, vehicles, and financial systems
- Assessment of social and environmental impacts
- Legal and regulatory constraints
- Public attitudes—including current experiences elsewhere in the country
- Administrative arrangements—implementing and managing tolled facilities
- Project evaluation and selection—a screening process for how and where to apply tolls

WSDOT's Transportation Innovative Partnerships Program, currently being developed with Transportation Commission oversight, may result in new ways to make needed investments in the transportation system with both government and private partners. Regional funding of projects and programs may also be more of an option in the future. The Regional Transportation Investment District (RTID) is a joint effort of King, Pierce, and Snohomish counties to identify specific road, transit, and light rail improvement projects of regional significance in the three counties. RTID also has the authority to propose ways to fund transportation projects in the region through local taxes and fees (as approved by voters). Recent (2006) legislation on transportation governance in the region will affect how RTID and Sound Transit together can pursue needed transportation improvements together. Other revenue sources that the legislature and others should consider include:

- Implementing user fees based on a vehicle's miles of travel on the highway (sometimes referred to as an odometer fee)
- Connecting some existing taxes (such as the gas tax) to an inflation rate
- Advertising, such as transit agencies use in and on buses, bus shelters, transit stations, and other transfer points.
- Special sales tax on vehicle parts, accessories, and services
- Sales tax on fuels
- Tolls and pricing strategies
- General sales tax increase
- Regional funding options
- Special assessments or taxes as part of a community facilities district
- Development impact fees
- Tax increment revenues
- Private sector contributions

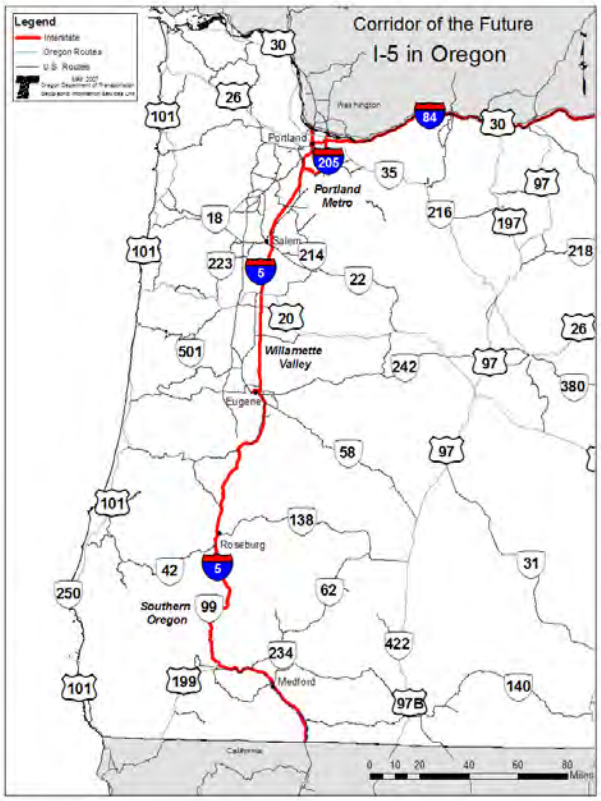
III. Individual State Report

B. Oregon

Overview

Interstate 5 runs through western Oregon from border to border, linking the state with Washington and Canada to the north and California and Mexico to the south. Oregon's stretch of I-5 consists of three different regions: Southern Oregon, the Willamette Valley, and the Portland metropolitan region. In Oregon, I-5 begins in the mountains at the California border and winds its way through steep areas and valleys in Southern Oregon. At the city of Eugene, approximately the middle of the state, the freeway enters the Willamette River valley and follows it north to the Portland metropolitan area and then on to the Washington border. Each of the three sections of I-5 in Oregon faces different congestion challenges.

In general, I-5 is a total of four lanes wide from the California border to the city of Eugene. Through Eugene the freeway widens to six lanes. From Eugene to the capitol city of Salem, it is four lanes only. From Salem to the Washington border, the freeway is typically six lanes wide. There are short segments in the Portland metropolitan area where the freeway widens to eight lanes or narrows to four or five. I-5 in Oregon consists of 862 rural lane-miles and 488 urban lane-miles for a total of 1,350 lane-miles. There are 408 rural lane-miles considered "level terrain", 446 rural lane-miles considered "rolling terrain", and nine rural lane-miles considered "mountainous terrain". The map below shows the path I-5 takes through Oregon.



Most of Oregon's citizens live in the valleys and urban areas served directly by I-5. In 2000, about 71 percent of Oregonians lived in the Willamette Valley including the Portland metropolitan area. Oregon is anticipating changes that will increase pressure on the I-5 corridor.

By 2030 it is expected that:

- Oregon's statewide population is projected to grow by 41 percent. The populations of the 13 counties on the I-5 corridor are anticipated to grow at a slightly faster rate and absorb more than 1 million additional residents. These counties will account for nearly 84 percent of the state's population growth over this 23 year period.
- Freight volume is expected to increase by 80 percent, with 75 percent being carried by truck.

Oregon's growing population and economic activities are increasing congestion in the I-5 corridor. The most congested state highway corridors, primarily those in the Portland metropolitan area and Interstate 5 in the Willamette Valley, face slower travel speeds and longer travel times. On average, in 2002 urban freeways carried almost double the amount of traffic they carried in 1982.

Accidents, stalled vehicles, weather, work zones and other incidents cause about 50 percent of the travel delay. Including the effects of traffic accidents and other incidents, Portland area commute-period (peak-period) trips take 44 percent more time per mile traveled than off-peak trips.

As congestion increases, travel speeds become variable, and traffic crashes and other incidents can easily disrupt the traffic flow. Additionally, travel time becomes more unreliable, and the amount of delay increases as congestion levels rise. This delay and unreliability deters travel, increases travel costs for people, services and goods, and decreases businesses' competitive advantage. Businesses incur costs for additional drivers and trucks due to longer travel times, loss of productivity due to missed deliveries, reduced market areas, and increased inventories[2].

Maps attached at the back of the Oregon section of this application show traffic levels and congestion levels on I-5 in Oregon. For the illustrations, the state is divided into two sections: Portland and the Willamette Valley (A) and Southern Oregon (B). For each section there are four maps:

1. The average annual daily traffic (AADT) for 2005 for all vehicles;
2. The average annual daily traffic for trucks for 2005;
3. The congestion levels for 2005;
4. The congestion levels predicted for 2025, assuming only already programmed improvements to the corridor.

The congestion maps depict the ratio of AADT to capacity, a standard performance measure that looks at how intensely a highway is being used. An AADT: capacity ratio of less than 8.25 is shown as green (low congestion), between 8.25 and 9.75 is yellow (moderate congestion), and 9.75 and greater is shown as red (congested).

[2] Economic Development Research Group, "The Cost of Congestion to the Economy of the Portland Region," December 5, 2005, p. ES-3.

Corridor Description

Portland Metropolitan Area

This area, shown in Maps A1-A4, includes only 26 centerline miles of I-5, but this segment has the greatest number of travel lanes, the highest concentration of interchanges, and the largest traffic volumes of any other stretch of I-5 between Sacramento and Seattle. I-5 passes through Clackamas, Multnomah, and Washington counties in this area. Over 40 percent of Oregon's population lives in these three counties, and they alone are predicted to increase by more than 450,000 new residents by 2025.

The Portland metro area includes both the City of Portland (Oregon's largest city) and its suburbs and the City of Vancouver (the fourth largest city in Washington) and its suburbs. There are only two bridges across the Columbia River in this area, and the I-5 crossing directly connects central Vancouver to the North Portland industrial and port areas and downtown Portland. Consequently, I-5 is the primary connection for both freight and commuters.

I-205 offers a parallel route east of the central cities. In Oregon, it is about 26 miles in length. It begins south of Portland and runs east and north, connecting the city to its southern suburbs and destinations including Portland International Airport. It then continues into Washington, crossing the Columbia River via the second bridge in the area and connecting to eastern Vancouver and its northern suburban areas. I-205 then rejoins I-5 north of Vancouver. I-205 and I-5 are also linked via I-84, running east-west though Portland. These three freeways operate as a system in the area and congestion or improvements on any one of them affect the function of the others as well.

In this area, I-5 intersects the Columbia River and connects the Interstate highway system with deep-water shipping, up-river barging, and two water-level transcontinental rail lines. The convergence of transportation and port facilities in the Portland/Vancouver I-5 Trade Corridor makes it a crossroad for both north-south and east-west trade, and an international gateway.

The Portland/Vancouver segment of I-5 is home to the region's largest industrial areas, including the Ports of Portland and Vancouver, which together export the second largest volume of goods among West Coast ports. Over 40 percent of U.S. wheat exports move through the Columbia River system for transshipment to international markets through the marine terminals in the area. Portland/Vancouver is the number one origin and the number two destination for tonnage moved by commercial vehicles within the 17 western states. The I-5 corridor is the primary route for much of this freight movement.

The attached Maps A1 and A2 show the 2005 levels of average daily traffic (AADT) and daily truck traffic in the area. These show the high levels of vehicle traffic on I-5 through the Portland metro

area. This is Oregon's largest city, with many freight connections, and transportation and distribution are significant aspects of the local economy. In the southern portion of the Portland area, ODOT measured current AADT at over 153,000 vehicles with 9.8 percent of those being trucks.

Maps A3 and A4 show the 2005 level of congestion and the expected 2025 level of congestion in the area. The congestion maps show that as of 2005, I-5 is already congested through the Portland area. In 2025, the congested area extends all the way south to Albany, and congestion increases from the Albany area to south of Eugene. This illustration includes all vehicles and reflects an anticipated higher level of both freight and commuter traffic. Currently, the Portland area supplies workers to the state offices in Salem and the Salem area also provides workers to Portland. Salem also draws workers from as far south as the Eugene area.

I-5 Willamette Valley

This region includes about 115 centerline miles of I-5 through Lane, Linn, and Marion Counties and the freeway in this area also serves neighboring valley counties of Benton, Polk, and Yamhill. This section is generally level and straight, and only a few sections currently experience mainline congestion. However, by 2025 several segments are expected to experience very congested conditions, including the Eugene area, the section between Albany and Salem, and the section between Keizer and Wilsonville. Most of this congestion will result from overall traffic volumes exceeding roadway capacity. The six valley counties in this section are projected to add more than 275,000 new residents by 2025. Currently, average annual daily traffic measured at a point between Salem and Eugene is over 60,000 vehicles with 26 percent of that being trucks. Just south of Eugene, the AADT is over 59,000 vehicles with 21 percent of that being trucks. The appended Maps A1 and A2 illustrate total AADT and truck AADT levels for the valley area in 2005. Oregon Maps A2 and A3 show 2005 and anticipated 2025 congestion levels for the area.

Southern Oregon

Over one-half of the Oregon I-5 corridor is in this area; it includes over 168 miles of the freeway in Jackson, Josephine, and Douglas Counties. This is the most mountainous section of the freeway in Oregon with many steep grades that challenge freight traffic. In fact, five of the nation's top 25 steep-grade freight bottlenecks on freeways are located in these three counties.[3] Currently, travelers on the mainline in this area do not experience significant congestion. However, by 2025, several segments are expected to operate under congested conditions. Most of these segments have a steep grade and a high percentage of truck traffic. Also by 2025 these three counties are expected to grow in population by about 27 percent. At a point between Roseburg and Medford average annual daily traffic has been measured at over 45,000 vehicles with over 16 percent of that

[3] Cambridge Systematics, "An Initial Assessment of Freight Bottlenecks on Highways," p. B-2.

being trucks. Oregon maps B1 and B2 show total AADT and truck AADT in this area. Maps B3 and B4 show 2005 congestion levels and anticipated 2025 congestion levels for this area.

ITS Deployment on the I-5 Corridor

ODOT has made significant investments in ITS technology along the I-5 corridor with the goals of improving mobility and safety, improving traveler information, and making more efficient use of operations resources.

ITS deployment on the I-5 segment through Portland is focused on traffic and incident management. A multi-agency ITS coordination group, called TransPort, coordinates operations efforts within the Portland area. Membership includes ODOT, Washington State DOT, and local transportation and transit agencies in the bi-state Portland/Vancouver area. A regional ITS architecture and concept of operations has been developed, and most agencies have developed an ITS deployment plan.

As a result of the planning efforts, variable message signs (VMS), ramp meters that automatically adjust their timing in response to current conditions, and cameras have been installed on I-5 through Portland. Arterial VMS are currently being planned to assist with managing traffic headed toward I-5. ODOT has implemented an incident response program on I-5 through Portland. ODOT and the City of Portland have developed and implemented an alternate route plan for I-5 closures. A regional fiber optic network is managed as a shared network for regional agencies and is a valuable asset for ITS deployment.

ITS deployment in the Willamette Valley portion of I-5 is focused on incident management and congestion information related to growing traffic in the Eugene and Salem areas. Multi-agency ITS Operations and Deployment plans and regional ITS architectures have been developed for the Eugene-Springfield and the Salem-Keizer areas. As a result of these plans, variable message signed, Road Weather Information Systems, Highway Advisory Radio (HAR) transmitters and signs, and cameras have been deployed.

Much of the ITS deployment along the southern Oregon segment of I-5 is focused on winter operations related to Siskiyou Pass near the California border and the four passes between Grants Pass and Roseburg (Sexton Mountain, Smith Hill, Stage Road, and Canyon Creek). A multi-agency regional ITS operations and deployment plan including a regional ITS architecture has been developed for the Rogue Valley (Medford area). A broader ITS deployment plan covering all of Southern Oregon and Northern California was developed as part of the California – Oregon Advanced Transportation Systems (COATS) project. The COATS project has provided an ongoing forum for collaboration on rural ITS applications and for coordinating I-5 operations. For example, an additional product of the COATS project was a Siskiyou Pass operations plan.

These planning efforts have resulted in the deployment of Variable Message Signs, Road Weather Information Systems, mayday call boxes on the Medford Viaduct, a Highway Advisory Radio (HAR) transmitter and signs, and cameras. One unique application in this segment is the Dynamic Speed Warning system near Myrtle Creek. This is a safety application designed to slow motorists down in order to reduce incidents in this 45 MPH curve. In addition, ODOT has a Transportation Operations Center (TOC) for southwest Oregon in the Medford area.

A number of statewide systems support the I-5 corridor. ODOT's TripCheck traveler information system provides traveler information to the public via a website, 511 phone system and cable television. ODOT provides data about incidents, construction, maintenance activities, commercial vehicle restrictions, road conditions, weather conditions, and chain/traction tire requirements via the TripCheck system for all state highways. Travel services information (e.g. food, lodging, gas and attractions) is also provided on the TripCheck web site through a partnership with the Oregon Travel Information Council. The TripCheck web site also provides comprehensive information about public transportation options via a partnership with transit agencies across the state.

Public Transportation and Passenger Rail

Oregon is seeking alternative means of moving people that take vehicles off our Interstate system. Even when we expand system capacity, we want to ensure that it is used in the most efficient way possible. Given the high travel levels between urban areas, (especially on I-5 between Eugene and Salem and Portland) public transportation may be able to serve a much greater portion of travel on the corridor than it currently does, particularly as I-5 becomes more congested.

While many regions along the I-5 corridor have strong intra-urban public transportation systems, intercity public transportation along the corridor is not well-developed. Private bus companies offer service on the corridor, and there are limited public intercity bus services available. For example, the Portland and Salem metro regions—the largest and third largest urban areas in the state—are connected by a commuter bus service that offers just a few trips in each direction daily.

Oregon has invested significant resources in passenger rail on the I-5 corridor, which is designated a federal high-speed rail corridor. The *Cascades* Amtrak service is operated by Amtrak, but funded by Washington and Oregon. It runs 466 miles along the federally-designated high speed rail corridor from Eugene, Oregon through Portland and Seattle-Tacoma to Vancouver, British Columbia. In addition to paying operating costs for the trains, Oregon also has invested significant resources in improving track on the corridor to benefit both passenger and freight rail service. Ridership on the Oregon segment between Portland and Eugene has nearly quadrupled since it was initiated in 1994, rising to over 130,000 passengers in 2006, making it an important part of the regional transportation system. However, the train makes just two roundtrips between Eugene and

Portland each day, a level of frequency that does not make passenger rail a convenient travel option in most situations. In addition, on-time performance and reliability is poor, primarily because of conflicts with freight trains on this highly-congested route, which further reduces the train's convenience. The primary cause of congestion in the rail system is inadequate capacity within the overall Portland - Vancouver terminal and junction triangle. When measured in terms of delay per train, rail congestion in the Portland – Vancouver area is about twice that of Chicago, the nation's largest rail hub.

Further investments that increase frequency and improve on-time performance and service reliability could increase the role passenger rail plays in this corridor. Oregon and Washington would like to address the problem of infrequent service by significantly increasing the number of trains operating on the corridor. The two states have established 20-year plans for the Cascades service that will accommodate the growth expected in the region. Oregon's plans call for six roundtrips between Eugene and Portland.

In the Portland area, governments have come together to provide a suburb to suburb commuter rail line that is scheduled to open in fall of 2008. It will run in existing rail corridors from Beaverton to Wilsonville and relieve some pressure on I-5 and state highways by providing an alternative and connecting to the local light rail system and bus transit. In addition to the new pattern of suburb to suburb commuting that this rail system is designed to serve, the Portland area supplies many workers to Salem in the Willamette Valley section of I-5 and Salem and neighbor cities supply workers to Portland. Currently, the Wilsonville area transit district (at the south end of the Portland area) offers bus service that transports workers into Portland and to Salem. The new commuter rail line will connect directly to this service, and the Oregon Legislature is considering legislation that would study the feasibility of extending this commuter rail service to Salem to further relieve demand on I-5.

The Portland metropolitan region is currently expanding its MAX light rail transit system to provide additional capacity along Interstate 5. The Interstate MAX line parallels I-5 from downtown to north Portland, providing significant additional commuting capacity during peak hours, and the region is considering extending the MAX line or some other form of high-capacity public transportation across the Columbia River into Clark County, Washington, as part of the Columbia River Crossing project. Similarly, the Airport MAX light rail line provides additional capacity along I-205 north of the intersection with I-84. The new I-205 MAX line, currently under construction, will provide additional capacity along I-205. All of these high-capacity public transportation options allow some commuters to shift their trips from personal vehicles to public transportation, providing additional overall capacity in the corridor and leaving more room on the highways for freight movement.

Economic Benefits and Support of Commerce

Oregon's transportation facilities and business mix reflect the state's advantageous location for overseas trade and its strategic location along major north-south and east-west transcontinental trade routes.[4] It is a center of activity for trucking, railroads, warehousing and distribution of products.

The transportation network allows industries in all parts of the state to benefit from highway network connectivity and access to supplier and customer markets.[5] Oregonians develop technology, manufacture transportation equipment and other traded goods, process forest and wood products, grow and process a wide variety of agricultural products, and support tourist services as well as other industries.

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.[6] Portland and Oregon's geographic positions and transportation infrastructure are pivotal for supporting national and international trade:

- In 2002, Oregon shipped 72 million tons of goods worth more than $71 billion to out-of-state and foreign buyers. In the same year, over 95 million tons of goods valued at over $70 billion were shipped to the state. Intrastate commerce moved nearly 166 million tons of goods worth approximately $64 billion.[7]
- Washington and California are Oregon's top national trade partners. In 2002, goods exchanged between Oregon and Washington states were valued at nearly $35 billion; and goods traded between Oregon and California at over $33 billion.[8]
- Between 2001 and 2006, the value of Oregon's foreign exports grew over 11 percent per year, significantly faster than the national rate of 7 percent.[9]
- In 2006, Oregon ranked seventh nationally and third among 13 western states in export value per capita.
- The state's preeminent international marine gateway, the Port of Portland, is recognized among the major US ports as offering the shortest marine route from the US to Asian markets. Oregon ships a significant share of the U.S. Pacific Regional trade to Malaysia and Philippines, 27 percent and 33 percent respectively.[10]
- In 2006, over $2.7 billion in commodities were exported to Canada alone, primarily along the I-5 corridor. The value of Oregon's exports to Canada has doubled in the last five years.
- As a result, Oregon's economy is heavily trade-dependent. More than one in five jobs in Oregon (over 400,000) is either directly transportation-related or strongly transportation-reliant

[4] *The Cost of Highway Limitations and Traffic Delay to Oregon's Economy*, Economic Research Development Group, March 2007.
[5] Ibid.
[6] *The Cost of Congestion to the Economy of the Portland Region*, Economic Research Development Group, December 2005.
[7] Freight Analysis Framework (FAF2), FHWA, Office of Freight Management Operations.
[8] Ibid.
[9] U.S. Department of Commerce, International Trade Administration.
[10] Ibid.

(traded industries). Many other product assembly, retail and service jobs in Oregon are also indirectly dependent on the economic well-being of these transportation-related and -reliant industries (through supplier, delivery, and income re-spending impacts).[11]

Industries have been attracted to Oregon because of its advantageous trading position. But increased congestion in the Portland area, and increasingly in other parts of Oregon's I-5 corridor, slows the transportation of goods to market from all parts of the state. Rail yards and rail operations have bottlenecks. Deteriorating roadways, bridges, and rail short lines threaten the reliability of the transportation system. Because of longer travel times, businesses have to make adjustments that reduce their competitiveness. For example:

Anderson Hay and Grain, Inc. is a straw export business located in Aurora, about 40 minutes south of Portland on Interstate 5. Approximately 15-20 percent of shipments from the Aurora facility result in missed delivery windows. A major point of congestion delay is Marine Drive near the Port of Portland. Anderson Hay has adjusted its operations (beginning production and shipping operations two hours earlier – to 4am) to avoid congestion related delay.

Harry and David is a gourmet food company specializing in Royal Riviera Pears. A large portion of the firm's business is done through catalogue and internet sales. Until recently, trucking firms required five hours of travel time from Medford to make air freight flights leaving the Portland airport. Due to the uncertainty of congestion in the Portland region, the trucking firms now require 6 ½ hours of on-road travel time to ensure they can reach the airport in time to load air freight. In response, Harry and David changed production and distribution schedules to accommodate an earlier shipping time. [12]

The efficient movements of goods and services depend on maintaining the transportation infrastructure. This includes facilitating transfers among trucks, railcars, pipelines, airplanes and ships; addressing bottlenecks; and strategically investing in capacity enhancements for airports, pipelines, ports, railroads and roadways. Provision of safe and efficient transportation infrastructure are necessary to support local, regional, and national economies.

[11] *The Cost of Highway Limitations and Traffic Delay to Oregon's Economy*, Economic Research Development Group, March 2007.
[12] Ibid.

Recent Investments in the I-5 Corridor

Oregon has continuously made investments and improvements in the I-5 corridor to respond to changing conditions. ODOT has sought and won state-level funding packages for transportation improvements, many of which have focused on the I-5 corridor. In 2003, the Oregon Transportation Investment Act III was passed to repair and improve bridge structures throughout the state. In 2005, *Connect* Oregon I was passed, making available $100 million for multimodal projects in the corridor and elsewhere in the state. ODOT has also invested in rail transport in the corridor to help relieve some of the demand for I-5 capacity.

The Oregon Transportation Investment Act (OTIA) III

The Oregon Transportation Investment Act (OTIA) III State Bridge Program was created in response to the Economic and Bridge Options Report, which was developed in collaboration with the trucking industry and other stakeholders in 2003. The report described the problem of aging concrete bridges and the effect that these failing structures would have on Oregon's economy and future productivity if the state did not make a substantial investment in their rehabilitation and reconstruction. The report found that bridges built during the interstate-construction era of the late 1950s using a reinforced concrete deck girder design were nearing or past their life expectancy, and many of the weakened bridges required limits on truck loads exceeding 80,000 pounds.

Because nearly one third of all freight that moves by truck in Oregon is shipped in loads ranging from 80,000 to 105,000 pounds, this would be a particularly dire problem. Load limits would significantly impede the flow of goods, people and services throughout the state. Heavy trucks would be forced to detour around load-limited bridges on major state highways, including Interstate 5, adding time and cost to their journeys, and forcing large trucks to be routed through communities. The Economic and Bridge Options Report concluded that Oregon's deteriorating bridges, if left unaddressed, had the potential to cost the state more than 88,000 jobs and $123 billion in lost productivity over a 20 year period, and the effects on other states that rely on Interstate 5 and Interstate 84 to move freight through the state would be significant as well.

In response, the Governor and Legislature passed the Oregon Transportation Investment Act (OTIA) III with strong bipartisan majorities. OTIA III provided nearly $2.5 billion in highway funding. Of that total, $1.3 billion was for repair and replacement of bridges on state highways and the remainder was invested in local bridge repair, pavement preservation, and modernization projects that increase capacity on the state's highways. On Interstate 5, OTIA III will fund the repair of 45 bridges and the replacement of 69 bridges at an approximate cost of $656 million. In order to reach this level of funding, the Legislature increased a number of driver and motor vehicle fees and bonded the money, turning a relatively modest revenue increase into immediate cash that has allowed projects to proceed quickly.

Building on the state's commitment to addressing bridges on state highways, Congressman Peter DeFazio secured an earmark in SAFETEA-LU's Projects of National and Regional Significance Program that provided an additional $160 million for I-5 bridges and associated improvements. This earmark has allowed ODOT to address additional needs and stretch the OTIA III bridge program further. In particular, approximately one-third of this earmark will be used to widen Interstate 5 bridges to accommodate future needs for expanding capacity between Eugene and Salem. A portion of the earmark will also be used to address vertical clearance problems that currently force tall loads—particularly trucks carrying manufactured housing, a major industry in Oregon— to detour off Interstate 5 and onto other roads, which increases costs for motor carriers and causes congestion on detour routes. Funding under the earmark will be used to raise thirteen I-5 overcrossings between Salem and Portland to allow tall loads to pass beneath. The remainder of the funds will be used to meet additional needs on Interstate 5, including rehabilitation and reconstruction of bridges that were not included in the OTIA III package and reconstruction of interchanges.

Mainline Capacity

While the OTIA III State Bridge Program has invested resources in preserving I-5, ODOT has also undertaken a number of important projects to expand capacity on the freeway at strategic locations.

- I-5 Delta Park: A crucial chokepoint on Interstate 5 in north Portland is Delta Park, where southbound I-5 narrows to just two lanes just south of the Interstate Bridge over the Columbia River. The I-5 Trade Partnership study conducted by Oregon and Washington earlier this decade recommended adding a lane to this section of I-5, and ODOT will break ground on this project in 2008.
- I-205: I-5 to Stafford Road: I-205 is just four lanes from I-5 to OR 99E in Oregon City, but growth in the southern Portland metro region is causing increased congestion. ODOT has launched the first phase of widening this stretch of freeway by adding permanent auxiliary lanes from I-5 three miles to Stafford Road.
- I-5 South Salem widening: I-5 has six lanes for almost its entire length from the Washington border to central Salem but narrows to just four lanes at OR 22 in south Salem. With several bridges on this stretch in need of reconstruction under OTIA III, ODOT seized the opportunity to widen I-5 to six lanes for about two miles. Upon completion, I-5 will be six lanes to near the southern end of the Salem metropolitan area.

Interchanges

In addition to widening the mainline, ODOT is working on a number of major regional interchange projects that will help alleviate congestion on I-5:

- *Wilsonville Road:* Traffic on the Wilsonville Road interchange at the southern end of the Portland metropolitan region exceeds capacity, leading to backups onto the Interstate. ODOT and the City of Wilsonville have programmed funding to rebuild this interchange to increase capacity and reduce congestion.
- *Woodburn:* The Woodburn interchange cannot accommodate the growth in traffic that has accompanied development in Woodburn and north Marion County. Consequently, the interchange frequently causes traffic to back up onto I-5, particularly during major local events, causing safety problems and congestion. ODOT has identified funding for project development and right of way acquisition but has not programmed funding for construction.
- *Beltline:* The I-5/Beltline Highway interchange is one of the major regional interchanges in the Eugene/Springfield metropolitan area. ODOT's investment of over $70 million in this project will expand capacity on the interchange and improve access to I-5.
- *Southern Oregon:* With rapid population growth occurring in southern Oregon's Rogue Valley, significant interchange improvements are necessary to handle higher traffic volumes. ODOT has dedicated funding to a number of major regional interchange construction and reconstruction projects, including two interchanges in Ashland, the Fern Valley interchange in Phoenix, the South Medford interchange, and the North Medford interchange. When completed, these interchanges will improve local traffic and access to I-5 and reduce mainline congestion caused by backups at off-ramps.

***Connect* Oregon**

Connect Oregon is a $100 million lottery-bond-based initiative that was approved by the 2005 Oregon Legislative Assembly to invest in air, rail, marine and transit infrastructure to ensure Oregon's transportation system is strong, diverse, and efficient. This program leveraged an additional $130 million in investments from project proponents. It is focused on improving the connections between the highway system and the other modes of transportation to improve the flow of commerce and remove delays. A variety of projects representing the four modes were funded through the program, often with some funds being provided by the applicant.

For example, at the Port of Portland, rail yard improvements at Rivergate Industrial District were funded to design and construct track connecting the north and south areas of Rivergate and construct 6-yard tracks in Ramsey Yard. The project will help reduce delays (currently costing between $1.4 million and $ 2.8 million annually) and allow at least one additional loaded unit train to enter Terminal 5 each day. As a result of this and other rail investments in the vicinity, Canpotex and Columbia Grain expect to export an additional 1.3 million metric tons of potash and wheat each

year, conveyed by approximately 12,000 rail cars, and generate up to 40 additional ship calls at Marine Terminal 5. With these improvements, the Ramsey Yard will serve as a strategic interchange between the Burlington Northern-Santa Fe and Union Pacific Railroads. All yards that currently interchange rail cars are under capacity.

Freight Rail

ODOT has made other strategic investments in freight rail infrastructure that has helped the private sector transfer freight from trucks on I-5 to rail. For example, ODOT awarded Teevin Bros. Land and Timber a $320,000 Industrial Rail Spur grant that paid for rail infrastructure upgrades to service a log yard in Rainier. This project, which leveraged additional private sector investment by Teevin Bros., has moved about 30,000 truckloads of logs annually off I-5 and onto the Portland & Western railroad shortline that parallels I-5.

Development of the Teevin Bros. facility and other rail initiatives in the I-5 corridor was facilitated by a public-private partnership under which the State of Oregon agreed in 1997-98 to accept donation of right of way beneath two rail lines, including the Oregon Electric line in the Willamette Valley. The Portland & Western Railroad's purchase of the track on this line from BNSF was made possible by the state's agreement to accept the associated right of way, which P&W could not afford to buy. The state's partnership with the railroads facilitated the growth and expansion of the Portland & Western/Willamette & Pacific into a strong regional rail carrier that is interested in competing with trucks for short-haul traffic along the I-5 corridor. This state action has leveraged private investment by Portland & Western and other private sector firms that have helped transfer freight from trucks on I-5 to rail. For example, Portland & Western worked with Morse Bros., a major aggregate and construction firm, to extend rail service to the company's aggregate production facility near I-5 in the Willamette Valley. Providing rail service to this site has been a cost-effective transportation option for Morse Bros. and transferred tens of thousands of truckloads annually off I-5 and onto the rail system.

Innovations in Finance

ODOT has created an Office of Innovative Partnerships and Alternative Funding (OIPAF) in order to identify, investigate and develop innovative ways to fund large, needed, and unfunded transportation projects. ODOT is learning from these efforts and intends to continue to improve upon them.

The Oregon Innovative Partnerships Program (OIPP)

The Oregon Innovative Partnerships Program (OIPP) is a bold and progressive initiative to expedite the study, funding, design and construction of new transportation infrastructure necessary for Oregon's economic future. The OIPP is the result of the forward-thinking leadership of the Oregon Legislature, which passed legislation in 2003 breaking down many of the barriers standing between the State's transportation infrastructure needs and the critical but unfunded transportation projects identified to meet those needs. The Oregon Innovative Partnerships Program paves the way for ODOT to fast track important transportation infrastructure projects by bringing new, innovative funding mechanisms, expertise and technology together to maximize the public's investment in transportation. The OIPP:

- Supports the creation of public-private partnerships between ODOT, other government agencies and the private sector to encourage early-stage innovation in highway project study, design, funding and construction.
- Allows ODOT to issue requests for proposals and accept unsolicited proposals for transportation projects from private-sector firms, other government agencies or public-private partnerships.
- Authorizes flexible financing options for public-private highway, rail, public transit, airport and seaport projects, including private sector funding, lease-back tolling operations, special improvement districts, and federal and state bonds.
- Allows the fast-track study, design, funding and construction of State highway projects independent of the normal State procurement process, but under the authority of ODOT and the Oregon Transportation Commission.

OIPP includes exploring new financing options for projects, for instance, using private partners and tolling to deliver major projects. The Oregon Legislature has given ODOT authority to enter into agreements with private entities to develop and operate toll roads. As a result, ODOT has entered into an agreement with a private-sector partner, to create the Oregon Transportation Improvement Group, and begun development work on a project on I-205 that will investigate tolling as the major source of funding. OTIG's development work will examine whether tolling combined with a concession to a private sector firm or some other financial model would be feasible for each of the projects, each of which faces a funding gap of several hundred million dollars. If the I-205 project proves feasible to operate as a public-private partnership, ODOT can negotiate a contract with a

private sector partner under which the project would be designed, built, financed, operated, and maintained by the private sector in exchange for tolls under a concession agreement. Prior to entering into such a concession agreement with OTIG, ODOT will:

1. Determine whether the state of Oregon is better advantaged by entering a concession arrangement with OTIG or, as an alternative, terminating the pre-development arrangement with OTIG for purposes of developing the I-205 project in preparation for soliciting "hard bid" proposals under either a concession arrangement or more traditional public-private arrangement,
2. Prepare a public sector comparator to ensure any public-private partnership provides "value for money,"
3. Complete a cost reasonableness analysis that is satisfactory to FHWA in order to ensure the cost of the project is within reasonable parameters and
4. Obtain any required federal exceptions to tolling Interstate I-205.

Tolling

In addition to public-private partnerships, ODOT is exploring other forms of tolling as a means to finance significant projects. In 1999 the Oregon Legislature directed ODOT to examine tolling as a way to help finance new capacity on highways, and Oregon is doing this on projects such as the Columbia River Crossing. The Oregon Transportation Commission is putting a tolling policy framework in place. For example, the Commission has adopted a policy calling for all-electronic tolling in order to minimize disruptions to traffic. The Commission has also directed that Oregon's electronic tolling system be compatible with Washington State's to make it easier to deploy transponders in vehicles, and an effort will be made to achieve interoperability with California's system to allow use on the entire I-5 corridor.

Road User Fee Pilot Project

Office of Innovative Partnerships and Alternative Funding recently concluded its mileage fee pilot project in the Portland area in March 2007. This year long experiment began with the recruitment of volunteers and installation of on-board equipment in 270 vehicles. The mileage fee pilot project tested several key aspects of charging a per mile fee at the pump in lieu of paying the state gas tax. The pilot included congestion pricing. Volunteers for the one-year pilot were charged for in-state travel while purchasing gasoline at select service stations in northeast and southeast Portland. They were charged higher fees for driving in congested areas during rush hour. The pilot program successfully demonstrated the feasibility of collecting mileage fees at the pump. A final report will be available September 2007.

Innovations in Project Delivery

ODOT has been aggressively implementing innovative construction project delivery methods including design-build construction contracting. This is reflected in its current bridge construction program, specific modernization projects, and its approach to implementing recently authorized public-private partnership legislation. In addition, ODOT has adopted new procedures to ensure mobility is maintained during construction activity.

Design-Build and Innovative Contracting

Since 2002, ODOT has awarded six design-build projects, valued at $212 million on the Interstate 5 corridor. One of these design-build projects is now fully complete, two are nearly complete, and three are in various stages of construction. ODOT has found that the design-build delivery method is extremely useful for accelerating the award of construction contracts and reducing the actual construction time that impacts the traveling public. In addition, ODOT is investigating using another innovative contracting method known as Construction Manager-General Contractor (CMGC) to construct the future I-5 Willamette River Bridge (Eugene) project. This project is estimated to cost approximately $180 million, and construction is expected to begin in 2009.

Bridge Program Delivery

Delivering the OTIA III State Bridge Program has required ODOT to develop new techniques for efficiency and effectiveness with regard to environmental stewardship and project delivery. To keep pace with the massive increase in workload without additional staff, ODOT has developed new ways of managing the program and delivering projects. In passing OTIA III, the Oregon Legislature directed the Department and the private sector to develop a strategy to complete the bridge repair and replacement program in a way that accomplished three goals: ease of traffic movement, expedient project delivery, and involvement of Oregon construction firms and employees. While meeting these goals has required climbing a very fast learning curve, ODOT has made significant changes to the ways the agency does business.

ODOT turned to the private sector to meet this challenge and engaged Oregon Bridge Delivery Partners (OBDP), a private sector management firm, to develop and implement a strategy to deliver the program. OBDP functions as an extension of ODOT, with oversight from the agency's Major Projects Branch. Although ODOT has outsourced work on projects before, this is the first time the agency has turned a program of this magnitude over to the private sector to manage. ODOT is also making use of private sector firms to design repairs and replacements for the OTIA III bridges, and the department is using tools such as design-build contracting to engage the private sector in delivering these projects. OTIA III also uses project "bundles" that package a number of bridges together into a single contract in order to create efficiencies in project development and construction cost.

Maintaining Mobility

In addition, ODOT has developed new procedures to maintain mobility during project delivery. ODOT was directed by the Legislature to keep traffic—particularly truck freight— moving despite an unprecedented amount of construction. To keep traffic moving throughout the state, work on the OTIA III State Bridge Program has been divided into stages. ODOT first addressed needs on important non-Interstate routes that parallel the Interstate system in order to provide alternate routes for trucks when construction turned to Interstate 5 and Interstate 84, the most important freight routes in the state. As a result, trucks will always have a north-south and east-west route available.

Innovative mobility planning and coordination have also helped reduce the impact of construction on the movement of people and goods. ODOT's mobility planning has focused on communicating and coordinating between various parts of the agency and with stakeholders in the private sector, particularly the trucking industry, which helps identify mobility issues and resolve them as they arise.

In order to reduce the amount of delay caused by construction, ODOT has created delay thresholds that set standards for how much additional time may be required to travel from one point to another as a result of work zone activities. Staging of all projects on a section of highway must be carried out so that the overall delay does not exceed that delay threshold. If a project would cause a threshold to be exceeded, ODOT works to employ strategies to reduce delays, such as rescheduling projects to avoid overlap with other projects, revising construction staging, or using innovative construction strategies such as incentives to reduce the duration of delays.

Exceptional Environmental Stewardship

ODOT has developed proactive programs to ensure exceptional environmental stewardship during delivery of the agency's construction projects.

Context Sensitive and Sustainable Solutions

An innovative and distinguishing feature of the state bridge program is a philosophy known as Context Sensitive and Sustainable Solutions, or CS^3. The CS^3 approach recognizes that the OTIA program is an opportunity to provide a comprehensive transportation solution that reflects Oregon's values and responds to issues that are important to Oregonians. To achieve this, a number of interrelated program objectives are merged under the CS^3 umbrella, including mobility and environmental stewardship. The approaches ODOT has used in each of these areas have helped to maximize the benefits the public will see from the projects and minimize the disruption the program will cause, particularly to those traveling the state's highways.

With foresight and considerable effort, ODOT collaborated with numerous regulatory agencies to streamline the permitting process. Environmental performance standards have been set for the bridge program as a whole, instead of permitting each bridge individually. This early collaboration saved approximately 30 percent on initial design costs and shaved one to two years off of the construction schedule. In addition, many of the replacement bridges enhance environmental conditions and wildlife habitat.

Collaborative Environmental and Transportation Agreement for Streamlining (CETAS)

Even prior to the OTIA III bridge program, Oregon was employing innovative means for interagency collaboration for environmental stewardship. In February 2001, Oregon's state and federal transportation and environmental agencies signed a Charter Agreement establishing the Collaborative Environmental and Transportation Agreement for Streamlining, or CETAS.

The CETAS group was formed out of a desire for a more harmonious and streamlined process for meeting agencies' missions. The goal of this group is to identify and implement collaborative opportunities to help each participating agency realize its mission through sound environmental stewardship, while providing for a safe and efficient transportation system.

The CETAS group meets monthly to review transportation projects. By seeking input from regulatory agencies early in the project development process, ODOT is able to identify and address concerns, prevent delays, and expedite permitting. CETAS review has become an established and expected process for many of ODOT's major projects. In addition to reviewing projects, CETAS also helps address programmatic and statewide regulatory issues.

ODOT is now expanding the innovations and lessons from the OTIA III bridge program to other programs in the agency, including furthering the CS^3 program. ODOT is continuously learning from these efforts to improve project delivery and better meet environmental responsibilities at the same time. ODOT intends to carry all these innovations forward for future projects and to improve upon them in order to better meet environmental stewardship and project delivery needs. For example, ODOT and the Washington State DOT have created a group known as InterCEP based on the CETAS model to coordinate regulatory review of the Columbia River Crossing multimodal megaproject.

Oregon's Vision for I-5

Oregon's vision for the future of I-5 is a strong multimodal corridor that continues to move goods and people safely and efficiently. To achieve this goal, Oregon will need to invest in freight and passenger rail and public transportation in order to remove trips from I-5 that can be accomplished by other modes; further deploy Intelligent Transportation Systems (ITS) to keep traffic moving efficiently; and strategically expand highway capacity by tackling key bottlenecks.

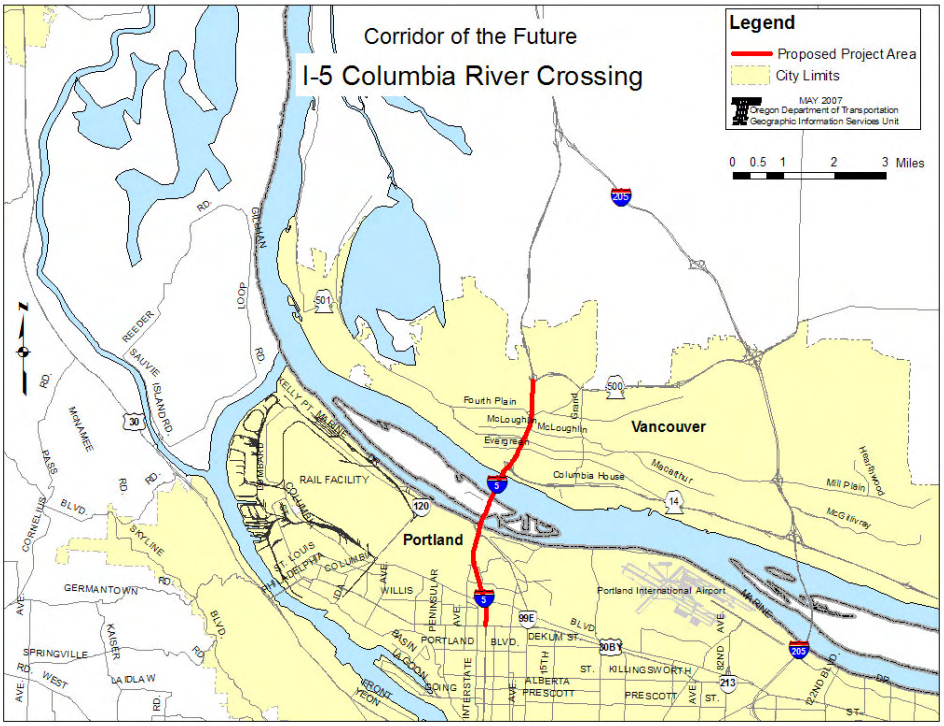
While Oregon has invested significant resources in preserving the existing system in order to protect mobility and also added capacity at strategic locations on this key route, a number of additional projects will need to be constructed in upcoming decades to respond to congestion in this corridor. While most stretches of I-5 outside the Portland metropolitan region currently experience severe congestion only intermittently, the pressures of population growth, economic development, and increases in freight volume are eating up surplus capacity, particularly in the Willamette Valley. ODOT expects that several sections of I-5 in the Willamette Valley will need additional capacity in upcoming years. In southern Oregon, strategic additions of truck climbing lanes can address freight mobility problems that will increase as freight volumes grow rapidly. In the Portland metropolitan region, which already experiences significant congestion, a built-out environment makes it prohibitively costly to add capacity at all locations that face severe congestion. Consequently, ODOT will focus on addressing the freeway system's worst problems by fixing bridges, improving major interchanges, and adding capacity where it is necessary and feasible. In addition, ODOT will continue to engage local partners to encourage land use patterns that minimize traffic impacts and support investment in high-capacity transit and freight rail projects that lessen the burden on the freeway.

The following are key strategic investments that ODOT will pursue when funding is available.

Columbia River Crossing

The Columbia River Crossing Project (the "CRC Project") addresses the mounting transportation and economic problems caused by acute and growing interstate traffic congestion on Interstate-5 within the Portland-Vancouver metropolitan region. It also addresses increasing difficulties resulting from the age of the existing I-5 bridge including substandard features and physical restrictions for freight movement. The CRC Project will be a bi-state, multi-modal, "mega-project" transportation solution for the five-mile segment of I-5 between SR-500 in Vancouver, Washington and Columbia Boulevard in Portland, Oregon. (See the section of this application on inter-state projects for more detailed information about this project.) The CRC Project envisions a new I-5 Columbia River Bridge and highway, high-capacity transit, traffic safety, and transportation demand management (TDM) improvements to I-5. Tolling will likely be necessary to finance the project's construction, and the CRC Project may incorporate time-of-day variable toll pricing.

Continued economic success in both Portland and Vancouver is likely to be affected by increasing congestion. A significant portion of the labor market for Oregon jobs is located in Vancouver. Every day almost 40,000 Washington residents commute to Portland for jobs. Retaining access for commuters is important to support employment growth in Oregon. Also, congestion at the Interstate Bridge threatens development in downtown Vancouver. Such development is critical to increasing employment in Clark County and therefore reducing demand for commuting trips to Oregon. The map below illustrates the proposed project area.

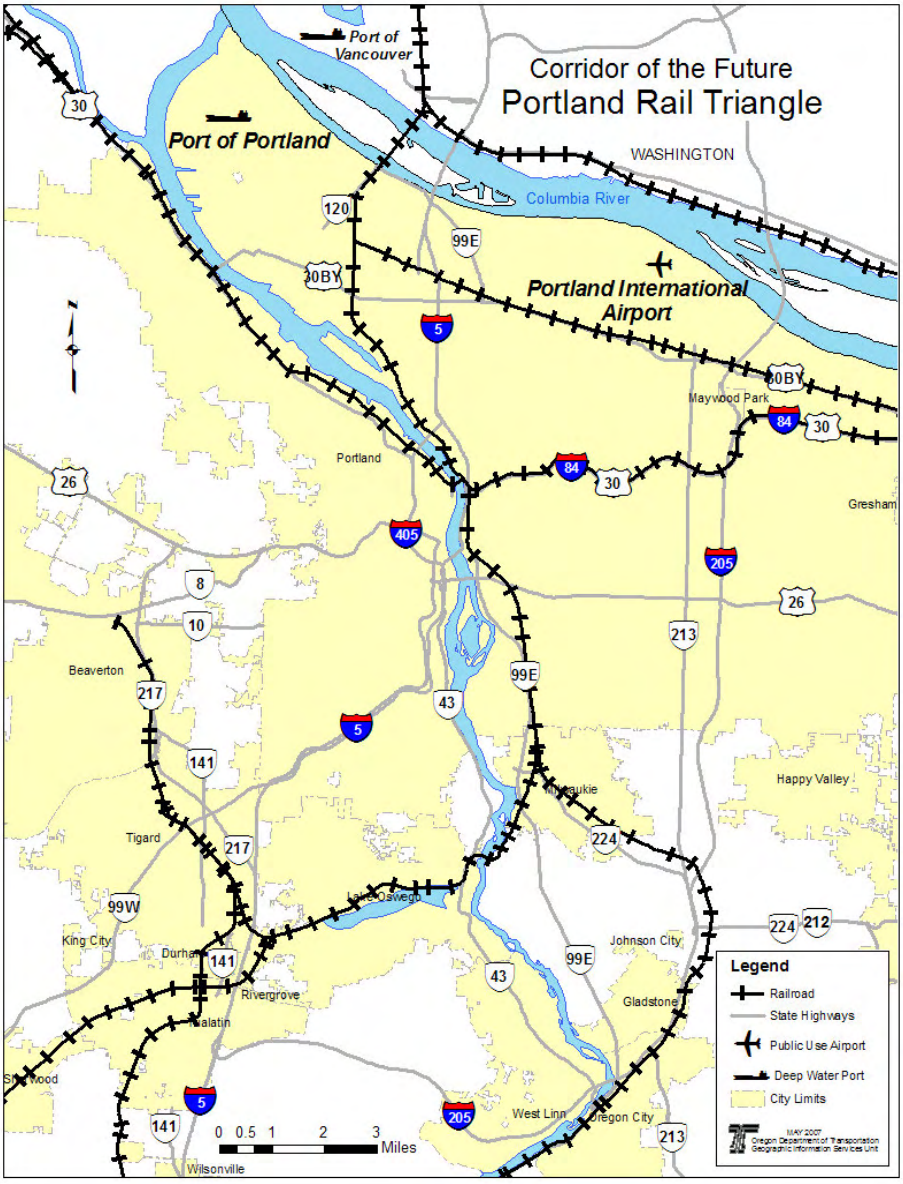


The CRC Project is expected to:

- Reduce general traffic congestion and travel delay by adding capacity and undertaking transportation demand and system management improvements to the I-5 Bridge and related highway segments.
- Provide improved bi-state transit service in the I-5 corridor through the addition of high-capacity transit operating on its own right of way.
- Reduce the incidents of accidents and the concomitant congestion and delay by upgrading non-standard geometrics and design elements of the I-5 Bridge, freeway, and ramps.
- Facilitate freight movement in and through the area and access to international ports, industrial areas and other land uses in the bridge area.
- Improve the ability of ships and barges in the Columbia River to navigate safely and efficiently through the bridge area.
- Reduce the vulnerability of the I-5 Bridge to earthquakes by implementing current seismic standards for the bridge(s).
- Improve pedestrian and bicycle access in the bridge area.

Portland Rail Triangle

The Portland/Vancouver area is a key freight transportation hub. Its deep draft ports at the confluence of the Columbia and Willamette rivers meet the 600-mile Columbia-Snake river system. It hosts two transcontinental railroads with water-level routes to the east, and north-south connections with Washington State and California. Rail is an important component of the Portland/Vancouver transportation hub. The region's freight rail network includes five major rail yards, numerous lesser rail yards, and port terminals. The system serves the state's largest collection of industrial customers and provides access to the ports of Portland and Vancouver. Unfortunately, the Portland "rail triangle" that lies at the heart of the Portland/Vancouver metro region's freight movement system is also one of the key impediments to freight mobility on the I-5 corridor. The map below shows the confluence of rail, highways, and ports in the area.



Nearly 150 freight trains and 12 passenger trains per day are dispatched through this rail network. Sixty-three freight trains and 12 Amtrak trains per day cross the BNSF Columbia River railroad bridge. Freight train crossings of Burlington Northern-Santa Fe's Columbia River rail bridge, which is also used by Union Pacific, are projected to reach 90 per day in 20 years, while long-range passenger service plans anticipate 26 trains per day. The flow of these trains is interrupted several times per day by openings of the BNSF Columbia River railroad bridge for marine traffic.

The I-5 Rail Capacity Study, completed in 2003, estimated the existing and future capacity of the Portland/Vancouver rail network and determined the improvements that could improve capacity of both freight and passenger services. The study also found that capacity is not sufficient to accommodate present and future rail freight needs. The system is saturated, and train delay ratios in this corridor already approach levels experienced in much larger, denser corridors such as those within the Chicago area. Moreover, there is not sufficient capacity to support future development of the ports of Portland and Vancouver. Trains are significantly delayed getting into and out of Port of Portland terminals and there is very little capacity to add the additional trains that would be needed if the terminals expanded or if a new terminal was added. Among the fastest growing train types are intermodal (container) and auto trains, which are time-sensitive, and unit trains which need large areas to enter, exit, and turn at terminals. Additional capacity will also have to be found if additional passenger trains are to operate in the system. While some relatively low-to-medium-cost solutions can significantly improve existing capacity, in the long term, major improvements will be needed to accommodate growth of both passenger and freight rail. The report identified a number of projects needed to expand the system's capacity to meet expected growth:

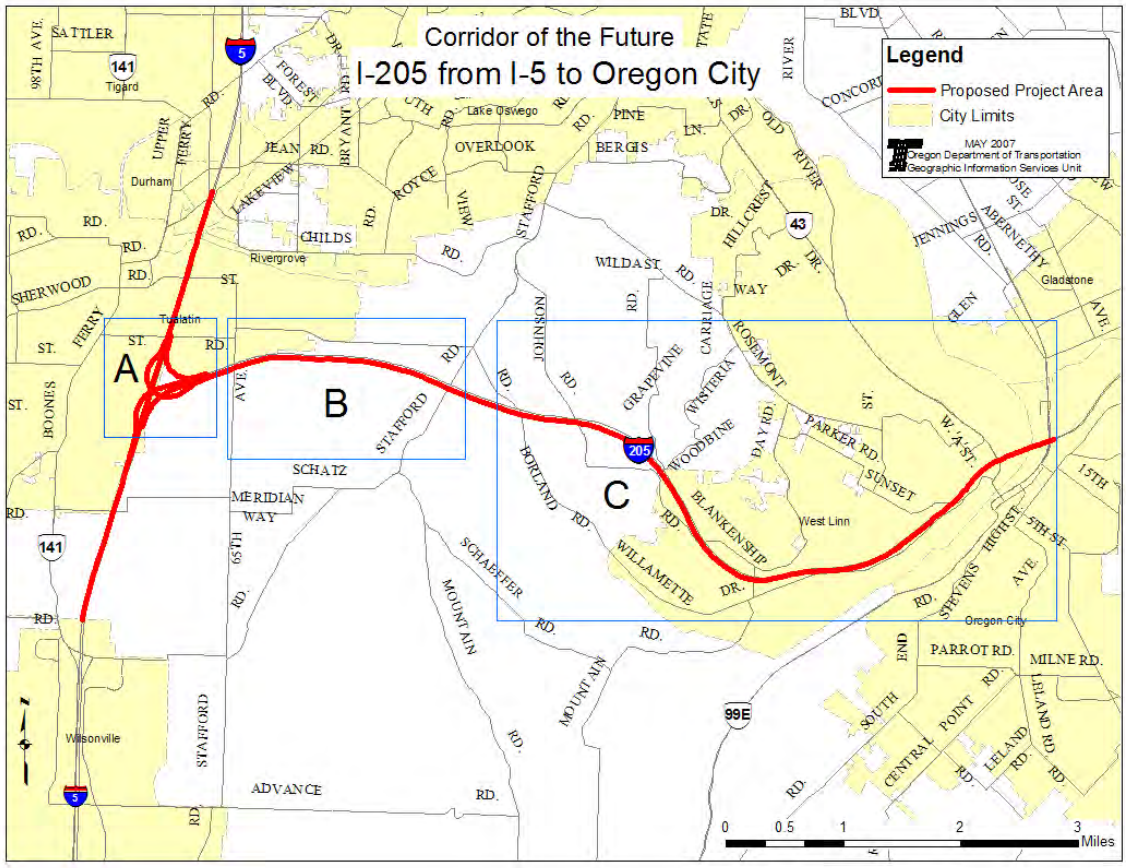
1. A two-main track bypass around BNSF's Vancouver Yard, from approximately N. Vancouver to a connection with the Fallbridge subdivision east of the passenger station.
2. Increased track speeds across the movable river spans.
3. Revised crossovers and higher turnout speeds at North Portland.
4. Expanded capacity and longer tracks at Ramsey and Barnes yards.
5. A second main track and increased track speeds between North Portland, Peninsula Junction, and Fir, on UP's Kenton Line.
6. A connection in the southeast quadrant at East Portland between UP's Brooklyn and Graham lines.
7. Increased track speeds between UP Willsburg Junction and UP Albina Yard.
8. Extension of two main tracks from Willsburg Junction to Clackamas.
9. An upgraded "Runner" or River Lead through Albina Yard.
10. An added controlled siding (4 alternatives) on the UP Graham Line at Rockwood, west of Troutdale.

These improvements would improve service considerably for the next 5 to 10 years by significantly reducing train interference. A preliminary estimate places the cost range for these improvements at $170 million. In the longer term, as the number of trains in the corridor continues to increase, it will also be necessary to provide an additional improvement to alleviate the need for UP and BNSF trains to cross in front of each other when entering and exiting the mainline in the area of the BNSF Columbia River railroad bridge between Vancouver Junction and North Portland Junction.

Three of the projects identified in the report are being carried out: #9 is complete, #4 has been funded through the *Connect* Oregon program, and #1 has been authorized by the Washington state legislature and is scheduled to begin later this year. However, little or no progress has been made to date on the majority of the projects. The report proposed establishing a public-private forum to implement these recommendations, and ODOT and private sector railroads are interested in exploring a public-private partnership that would seek innovative solutions to financing the improvements needed to expand capacity in the rail triangle. ODOT could help lead this effort through its Innovative Partnerships Program, which is currently exploring public-private partnerships on Oregon's highway system. Corridors of the Future status could help bring the expertise, resources, and innovative financing mechanisms necessary to make this effort successful.

I-205 from I-5 to Oregon City

I-205 and I-5 function as two integrated parts of the I-5 corridor through the Portland metropolitan region, particularly for through traffic which can choose either route to travel through Portland. I-205 has just two lanes in each direction from OR99E to I-5, making it the only two-lane section of freeway in an urban area in Oregon that is not scheduled for expansion. North of this segment there are three lanes in each direction. Substantial growth has occurred in the south I-205 area since the highway was constructed, contributing to significant congestion in this area, and it is likely that future regional land use decisions will continue to focus the Portland region's population growth on the south I-205 corridor. The map below shows this section of I-205 and its connection to I-5 and the three phases of the project, A, B, and C.



ODOT believes additional capacity and operational improvements are necessary along this important part of the corridor in order to address current congestion and meet future traffic demand. ODOT has begun one phase of this project and two additional phases of this project are under consideration. Research is underway to determine the feasibility of establishing a public-private partnership for funding future phases.

A. I-205/I-5 southbound connection: Considerable localized congestion on I-205 southbound occurs at the merge point of the I-205 southbound to I-5 southbound ramp. This ramp includes two lanes that narrow to one lane just before connecting to the freeway, and the merge section is extremely short. This short merge section causes further congestion on I-5 as large volumes of traffic are forced onto the mainline immediately. ODOT has proposed widening the ramp from I-205 to I-5 southbound from one lane to a two lane parallel entrance ramp and extending the merge lane of I-5 southbound for approximately ¾ miles to the Norwood Road overcrossing (MP 290-286).

B. ODOT has begun the first phase of expanding capacity on I-205 by adding a permanent auxiliary lane on I-205 from I-5 to the Stafford Interchange (MP 0.00 to MP 3.16). The project is fully funded and under construction. However, further major improvements on this section of freeway have not been funded.

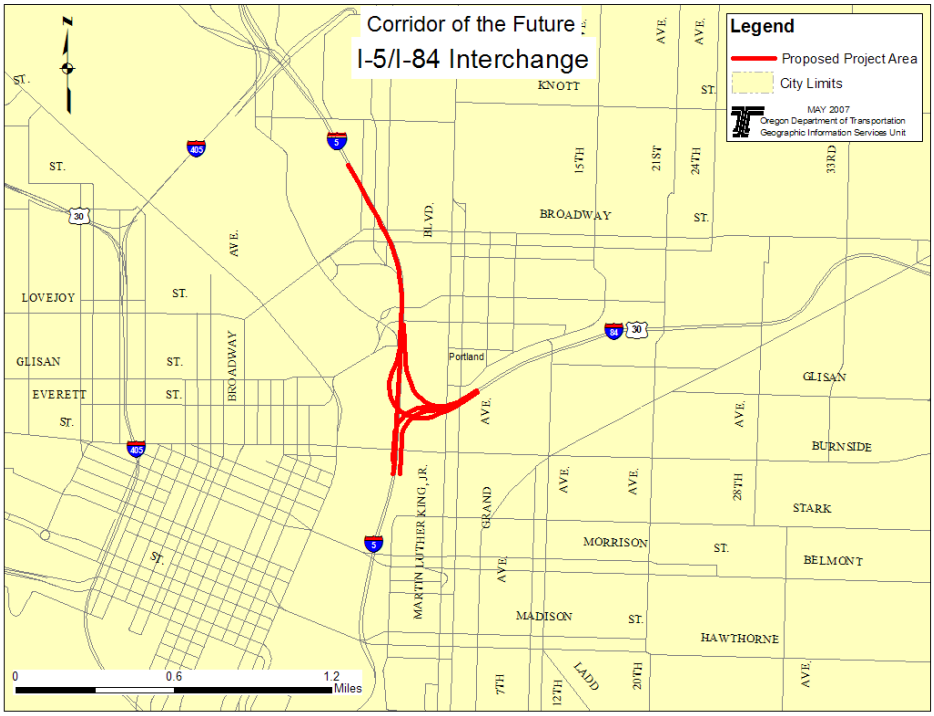
C. I-205 widening: Further widening of I-205 from Stafford Road to OR99E is necessary. In order to add an additional lane to the OR99E to I-5 segment, the Abernethy Bridge across the Willamette River will need to be widened at considerable expense. In addition, the Oswego Highway (OR43) interchange would need to be reconfigured. Metro and ODOT will jointly manage a corridor study on I-205 within the next 5 years to determine appropriate solutions within the corridor. ODOT, though its Office of Innovative Partnerships and Alternative Funding, has engaged the Oregon Transportation Improvement Group, a private-sector consortium led by Macquarie, to study the feasibility of using a public-private partnership to add capacity to this section of I-205.

Benefits of these proposed projects will include:

- Reduction in current congestion and addressing future demand by increasing capacity;
- Increased travel speeds; and
- Reduced travel time (as a result of increased capacity and reduced congestion).

I-5/I-84 Interchange Project

The I-5/I-84 interchange is the junction of Oregon's two Interstate freeways and also is one of the most congested points on the state's transportation system, primarily due to lack of capacity at this interchange. This congestion causes concerns for freight mobility because freight is particularly dependent on use of the two interstate routes and strong connections between them. I-84 is Oregon's only other long stretch of interstate freeway, running from the I-5 connection to the eastern border of the state and beyond. It connects the agricultural and resource areas of eastern Oregon and beyond to the city of Portland and its ports and freight connections. I-5 is two lanes in much of this section with an additional lane of ramp connections, which does not provide sufficient capacity for the traffic demand. I-84 approaches I-5 as three lanes, and there is insufficient capacity for traffic destined north and south on I-5. In addition, the several interchange ramps in this section are too closely spaced, resulting in poor weaving and merging operations. The map below shows the area of the I-5 and I-84 interchange in Portland.



ODOT is currently exploring improvements to both freeways and the interchange that would reduce congestion in this area. Planned improvements include adding a through lane in each direction on I-5 and braiding the interchange ramps to and from I-84 with the ramps to the local street system. ODOT is also exploring the possibility of widening I-84 westbound by one additional lane to provide a four lane approach to I-5, with two lanes each heading north and south.

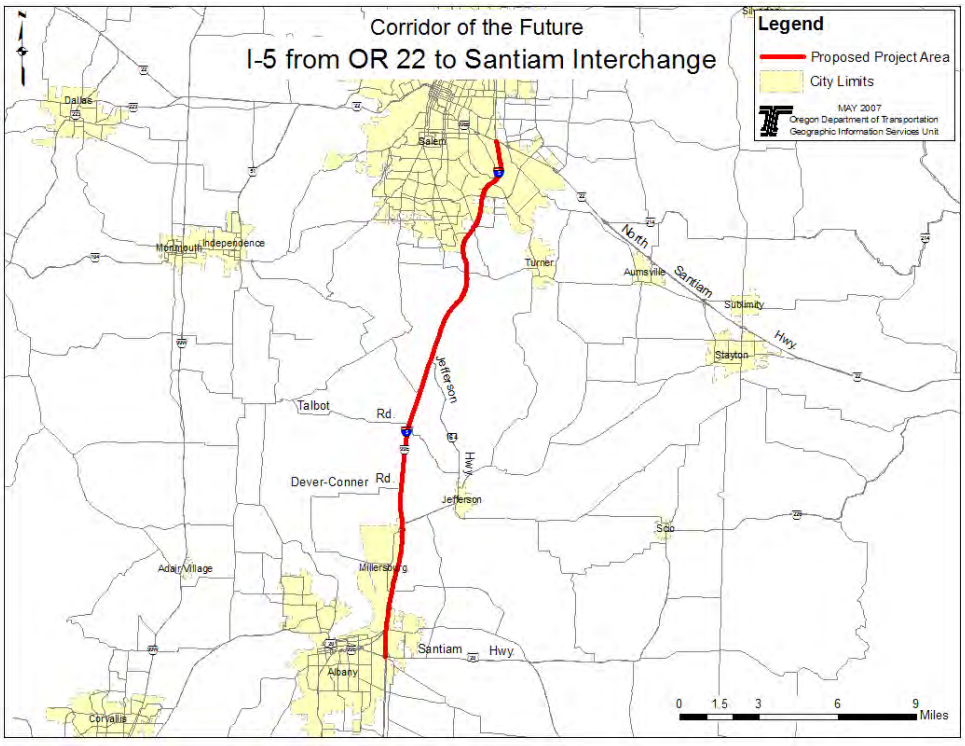
Benefits to the users of the proposed project include:

- Reduction in current congestion by increasing capacity;
- Increased travel speeds and reduced travel time (as a result of increased capacity and reduced congestion); and
- Increased safety resulting from interchange ramp improvements.

I-5 Widening South Salem to Albany: From Kuebler to Santiam Interchange

I-5 narrows to just two lanes in each direction south of the OR22 interchange in Salem. While widening of I-5 to three lanes in each direction from the OR22 interchange south to the Kuebler Road interchange is underway, further widening south of Kuebler Road to the Albany urban area will be necessary to meet projected future traffic. This section of the freeway passes through the South Salem Hills, farmlands near the Santiam River, and hills in the Albany area. It has a volume of trucks and general traffic that impede travel at the posted speed. Travel lanes in both directions are inadequate for general traffic and large vehicle needs, and this section was recognized as having one of the nation's top 25 steep-grade truck freeway bottlenecks. In addition, existing interchanges contain unconventional designs and substandard ramp geometry. Ramps are too short to accommodate vehicle acceleration/deceleration and needed vehicle storage.

City of Salem, Marion County, and Salem-Keizer metropolitan planning organization plans call for widening I-5 to at least three travel lanes in each direction in this segment. Linn County and City of Albany transportation system plans recommend adding travel lanes to I-5, and several interchanges in Linn County will need to be constructed, rebuilt, or removed. ODOT plans to prepare an environmental impact statement (EIS) for the segment between OR-34 and the Santiam River (MP 228 to MP 240) to address the improvements needed through the Albany urban area. Future phases of the project would widen I-5 from Salem south to Linn County. Funding for construction of the improvements in Linn County and future phases of the project has not been identified. The following map illustrates the proposed project area



Benefits to the users of the freeway in this section from the proposed project include:

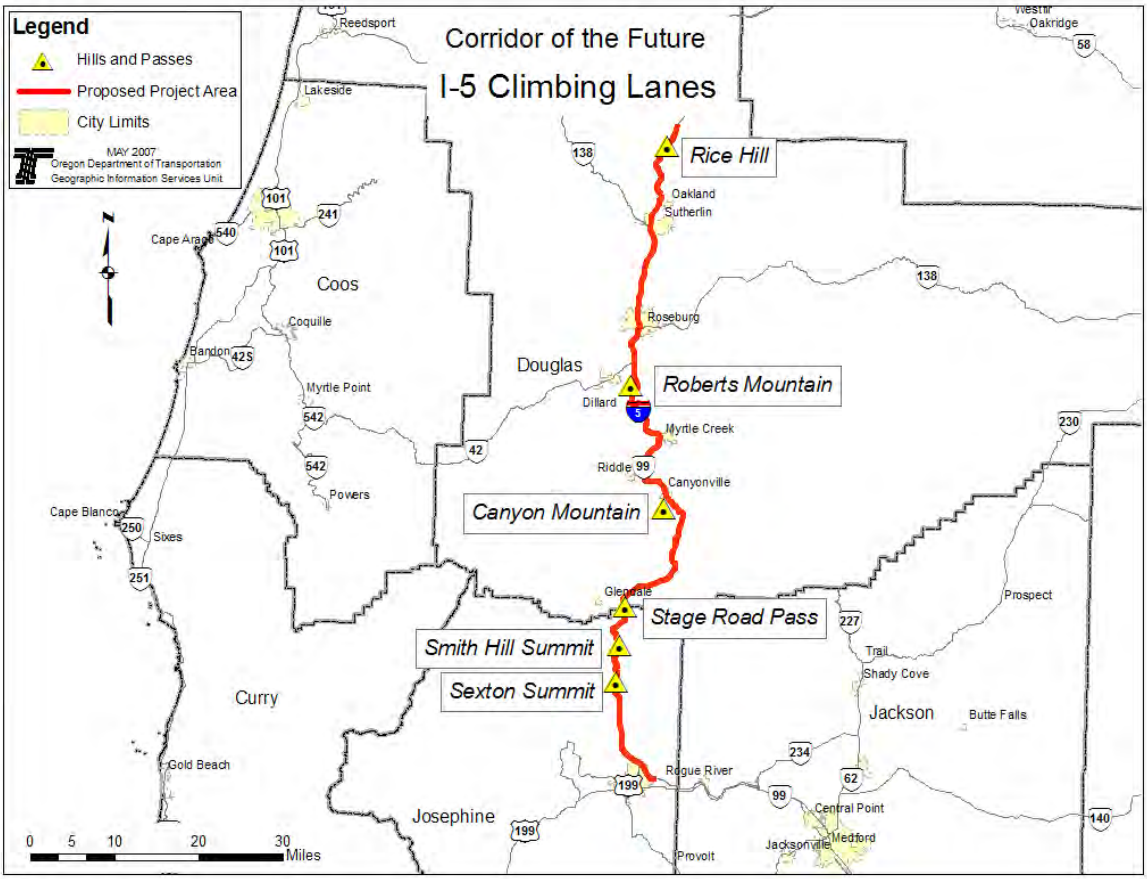
- Reduction in current congestion and addressing future demand by increasing capacity;
- Increased travel speeds and improved travel time reliability (as a result of increased capacity and reduced congestion);
- Addressing a significant truck freeway bottleneck.

I-5 Southern Oregon Freight Improvements

I-5 through Douglas and Josephine counties faces some of the most difficult terrain traversed by any Interstate route in the country. Steep grades and tight curves combined with just two lanes in each direction cause significant traffic slowdowns, congestion, and numerous safety problems. In particular, mountainous terrain over numerous hills and passes, including Rice Hill, Roberts Mountain, Sexton Summit, Canyon Mountain, Smith Hill Summit, and Stage Road Pass, cause heavy trucks to slow down considerably when climbing. For example, Canyon Mountain has the longest steep grade, about 8 consecutive miles of freeway have 5 percent or greater slope. Sexton Summit has over 2 miles of 5 percent or greater slope and Smith Hill and Roberts Mountain each have about 1.5 miles of such slopes.

Truck traffic represents a considerable portion of the vehicles using this section of freeway and slows down all traffic moving on the corridor because there are only two lanes in each direction and no truck climbing lanes. (See attached Map 2B for truck flow numbers in this area. Map 2D shows spots of increased congestion throughout this section of I-5 that are predicted for 2025 without these improvements.) ODOT is exploring construction of truck climbing lanes in several locations that would allow slow-moving truck traffic to be separated from faster vehicles. However, neither project development nor construction on these truck climbing lanes has yet been funded.

The following map illustrates the general proposed project area for freight improvements in this section of I-5 and shows the primary hills and passes to be addressed.



Benefits to the users of this freeway section from these projects include:

- Reduction in current congestion by increasing capacity;
- Increased travel speeds and reduced travel time (as a result of increased capacity and reduced congestion);
- Increased safety;
- Truck-only lanes.

ITS Deployment

ODOT has developed several concepts for additional ITS deployment along the I-5 corridor to continue implementation of various ITS plans. Development of corridor-wide communication capabilities by fiber optic cable or wireless systems to support ITS device deployment and data gathering will be necessary. This capability would also support future Vehicle-Infrastructure Integration (VII) applications.

Expansion of freeway-arterial coordination and additional technology to speed implementation of alternate route plans is needed at multiple locations along the I-5 corridor. Ramp metering is needed on freeways in the Eugene area, including I-5, to help manage congestion. Additional cameras are needed in trouble spots along the corridor to assist with incident detection and verification. Additional locations have been identified for variable messages signs to deliver information to travelers on I-5 and to deliver information to travelers on key routes approaching I-5.

In Portland, additional traffic sensors on the freeway are needed for improved traffic monitoring and travel time estimation. A multi-agency traffic management center would further improve agency coordination in responding to incidents and effectively managing traffic in the Portland area, and variable speed limits would help smooth traffic flow and reduce incidents associated with stop and go traffic in times of increasing congestion.

These ITS investments would help make traffic flow more efficiently and reduce delays caused by freeway incidents. These projects likely offer the highest return on investment of any projects on I-5, and one of the key initiatives in the recently-completed Oregon Transportation Plan directs ODOT to focus on improving the operation of the highway system through advanced technologies.

Finance Plans

The key strategic projects that would provide additional capacity on Interstate 5 are currently unfunded, except for preliminary development work on some projects. ODOT recognizes that the state's current funding streams are not adequate to complete all of these projects in the near future. ODOT's focus in recent years has been on preserving the existing system. The vast majority of resources, from state and federal funds as well as supplementary funding packages provided by the Oregon Legislature, have been focused on this goal leaving very few resources available for expanding the system. In fact, the department's discretionary modernization program, which is distributed to ODOT regional highway offices to invest in projects that improve the highway system, provides only $48 million a year. Consequently, this program offers only minimal support to major projects, and ODOT must turn to other funding and financing strategies to complete significant projects that expand capacity on the state's highways. A number of funding strategies will help ODOT make progress on delivering these critical projects.

- Additional state funding: ODOT has made effective use of the OTIA I, II, and III funding packages provided by the Oregon Legislature. These three packages have provided significant infusions of funding that have allowed the state to undertake capacity expansion projects that would not otherwise be feasible. Future funding packages from the Legislature will be necessary to complete the major projects necessary to meet the challenges of growth on Interstate 5.

- Phasing: ODOT has made slow but steady progress on widening Interstate 5 to six lanes to the Salem area and will likely continue this incremental expansion approach as it continues widening to the south. In order to complete widening of the Salem to Albany stretch of I-5, a phased approach will almost certainly be necessary. A similar phased approach is being used for I-205. Phasing major projects such as these over a number of STIP cycles allows the state to complete portions as funding becomes available.

- Tolling: ODOT is currently exploring both a public-private partnership project and traditional public sector tolling on the I-5 corridor. The Columbia River Crossing will likely be constructed using tolling, and ODOT may explore tolling on most other major capacity expansion projects. However, tolling may not be feasible to finance needed improvements at many locations on the corridor and may not be acceptable to the public.

Project Timelines

Due to the complexity of the projects proposed and the level of funding necessary to complete them, no specific timeline is yet identified for these projects. ODOT often will undertake preliminary studies or begin environmental evaluation for major projects as resources to do so are available, but project completion often requires identifying special funding that is difficult to specify in advance. For example, ODOT and Washington DOT are working on environmental evaluation for the Columbia River Crossing project now, although funds for construction are not identified at this time.

Congestion Reduction

All of the major projects described in this application are focused on relieving unacceptable levels of congestion and reducing hours of delay for trucks and other vehicles. Designation of I-5 in Oregon as part of a Corridor of the Future will enable ODOT to focus resources on the projects described as well as smaller-scale congestion relief projects. These will reduce the anticipated levels of congestion (shown on the attached Maps 1D and 2D) by making targeted improvements on key segments with increasing congestion. For example, the Columbia River Crossing is expected to lead to nearly free-flowing traffic on northbound I-5 in the evening peak.

Mobility Improvement

Mobility for all users will be improved by enabling ODOT to fund and deliver the projects described. Further Intelligent Transportation Systems investments will help ensure drivers are informed and the system operates efficiently. Further rail and transit investments will provide real options for commuters along the corridor and thereby remove some of the traffic from the freeway. Freight rail investments provide options for shippers and allow some to avoid using the Interstate; freight rail investments in the Portland Rail Triangle will help ensure that freight traffic can maneuver efficiently through the area and meet intermodal connections reliably.

Value to Users

The Cost of Highway Limitations and Traffic Delay to Oregon's Economy assessed the total user cost savings that would accrue to those with origins and/or destinations in Oregon, as well as pass-through trips moving between California and Washington from improved funding for transportation investments. The study compared a "Future Base Case" that included only improvements that could be funded over the next twenty years using existing revenue, to an "Improved System Scenario" that requires additional transportation investment. The Improved System Scenario was projected to save 157,000 hours of travel time per day—or over *53 million* vehicle-hours of time per year—by 2025 over the Future Base Case. Congestion and mobility impairments were significantly reduced under the Improved System Scenario, reliability was improved, and average speeds for both cars and trucks were notably increased.

The total value of benefits from these investments reached over $1.7 billion annually by 2025. Under the higher investment scenario, businesses would be able to convert travel time savings into additional sales and reduce costs, resulting in $896 million per year of benefit and producing 16,000 full-time permanent jobs. The benefits to businesses would be complemented by significant time savings and higher quality of life for residents that would be valued at $813 million per year. While I-5 improvement benefits were not called out specifically in this economic study, the congestion study analysis concluded that "the majority of the traveler benefit of the Improved System Scenario occurs along the I-5 corridor and connecting highways[13]."

The proposed projects will add value to users of the corridor by increasing safety and reliability, reducing travel time, and reducing excess vehicle miles of travel. As a result, businesses benefit from lower operation and accident costs, lower wage payments for drivers (due to reduced travel time), and improved scheduling (through greater travel time reliability). Households similarly benefit from congestion reduction through personal travel time savings, lower vehicle operating costs, including fuel and maintenance, and lower accident costs. Some of the household benefits result directly in additional disposable income.

[13] *The Cost of Highway Limitations and Traffic Delay to Oregon's Economy*, Economic Research Development Group, March 2007.

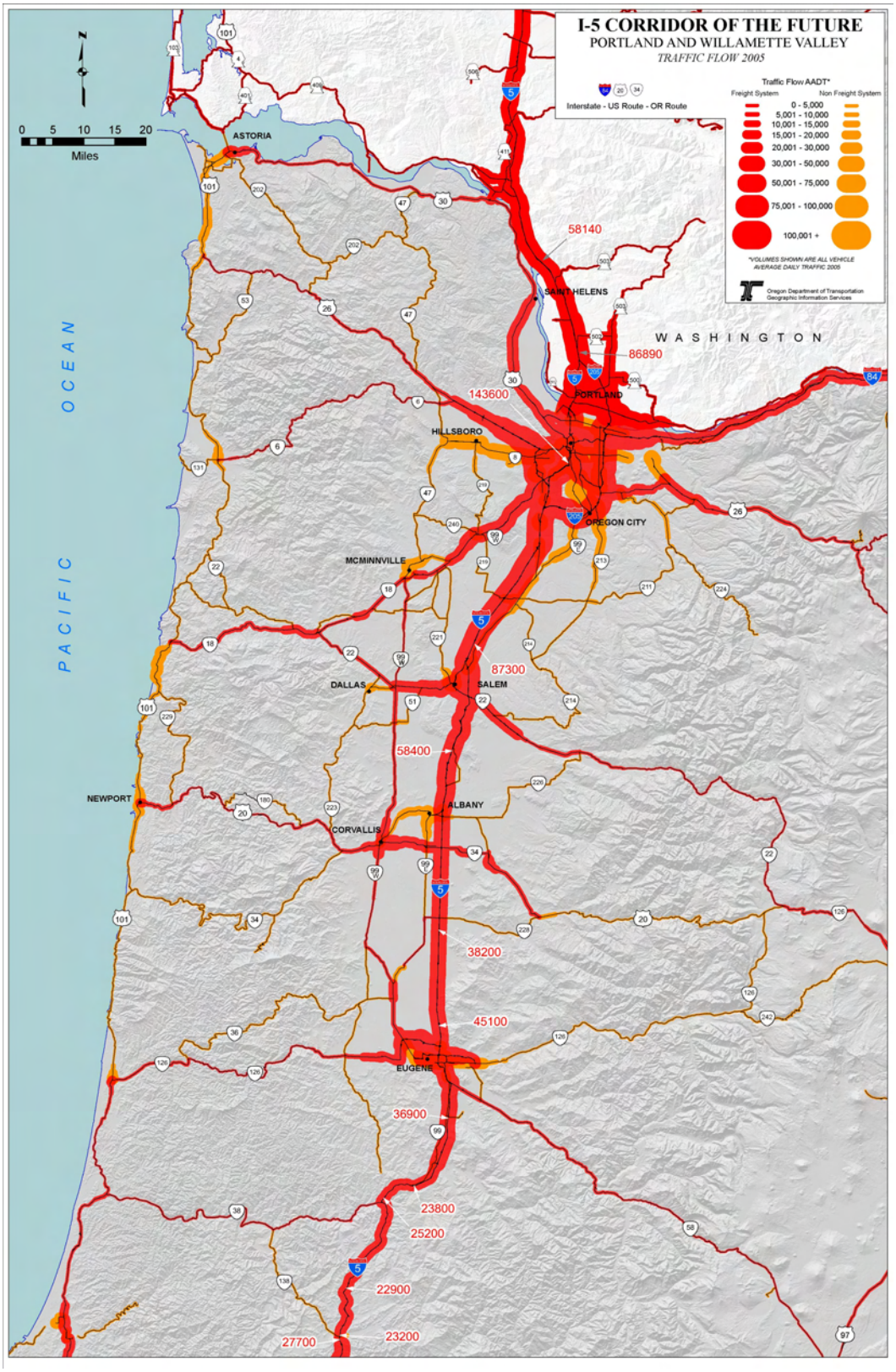
Conclusion

The designation of I-5 in Oregon as a part of a Corridor of the Future meets the program's objectives by supporting ODOT's pioneering congestion mitigation techniques, ITS investments, potential use of public-private partnerships and innovative finance, and provision of alternative modes for passengers and freight on key corridor segments. Participation in the Corridors of the Future program will allow ODOT to further address major investment needs in the corridor to improve mobility for all vehicles and increase reliability of the transport system depending on I-5. This designation will help the department bring innovative project delivery, finance, and environmental stewardship initiatives to bear on making congestion-relieving investments on I-5.

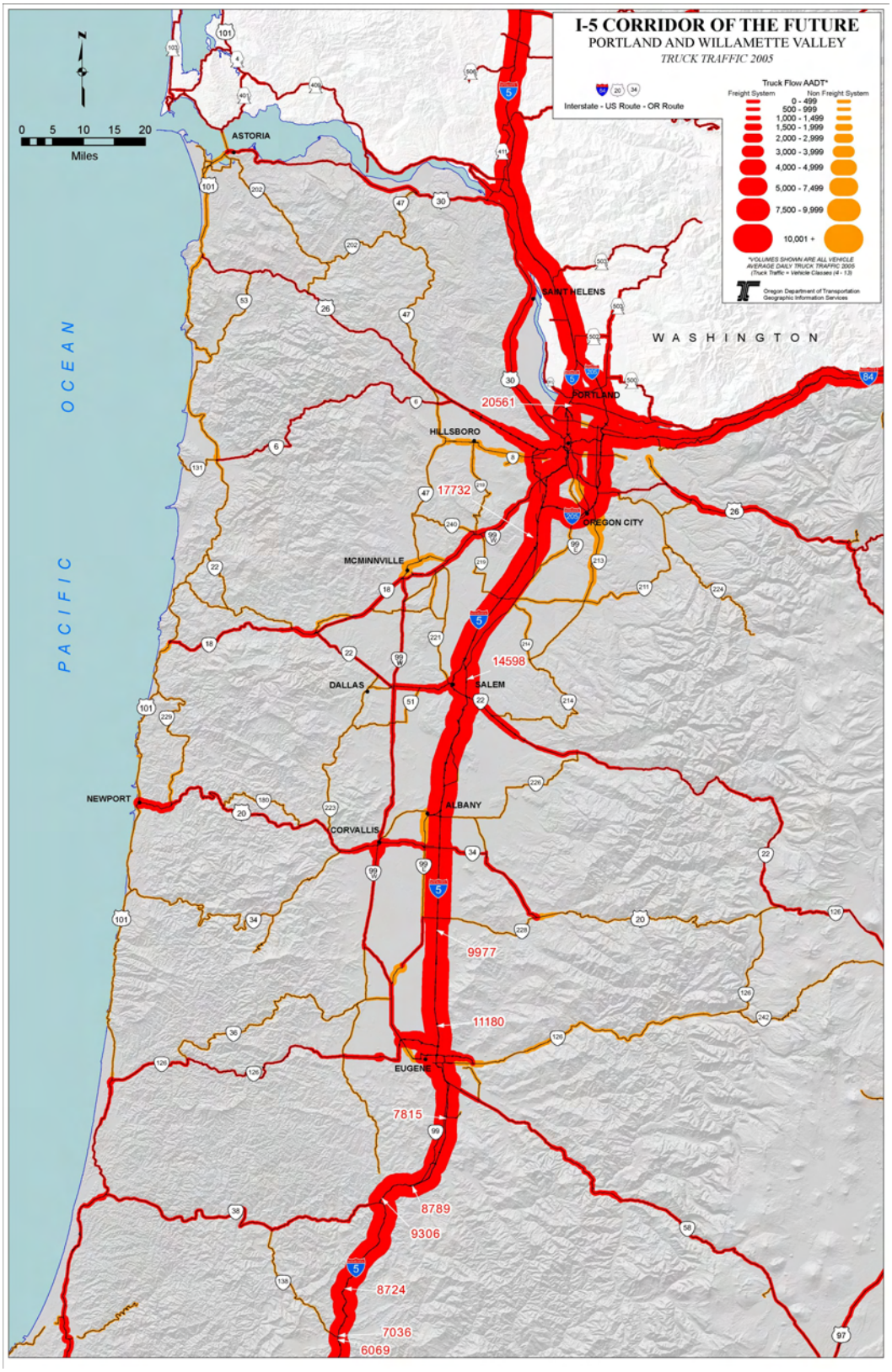
ODOT is currently making small strategic capacity improvements and investing heavily in preservation of existing capacity through the OTIA III bridge program and other efforts described above. The department is exploring innovative financing through its Office of Innovative Partnerships and Alternative Funding, has developed and is using new contracting techniques for project delivery and innovative programs for improving environmental stewardship and streamlining environmental review (such as the CS^3 and CETAS programs). However, additional resources are needed to make major improvements to address freight bottlenecks in Oregon's portion of the corridor in order to preserve I-5's function as the primary freight route along the western US and to enable ports along the corridor to continue to effectively distribute their freight up and down the coast and to the nation.

ODOT does not have sufficient resources to address "mega" projects through its usual authorizations and funds available. In order to quickly address the needs identified by the Economic and Bridge Options report, most of the funds authorized in OTIA III were bonded. In the near future, ODOT will commit some of its resources to pay down that debt, further reducing its ability to fund major projects. A Corridor of the Future designation may help by bringing more resources or expertise to identify and deliver solutions. Improvements such as those identified in this application will benefit the region and the nation by improving safety, improving reliability of freight transport, relieving congestion bottlenecks, and improving mobility for all users throughout the I-5 corridor.

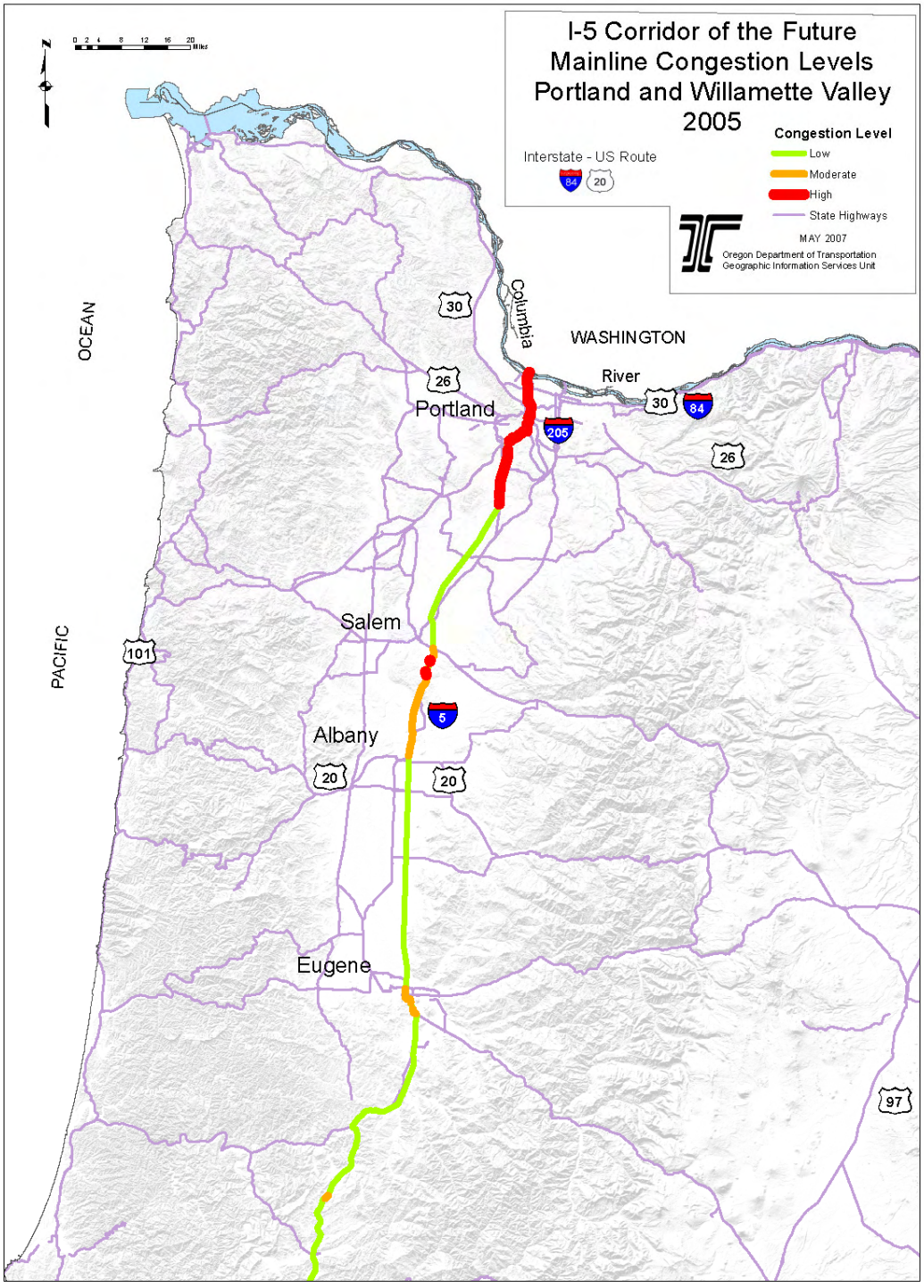
Oregon Map 1A: Portland and Willamette Valley AADT 2005



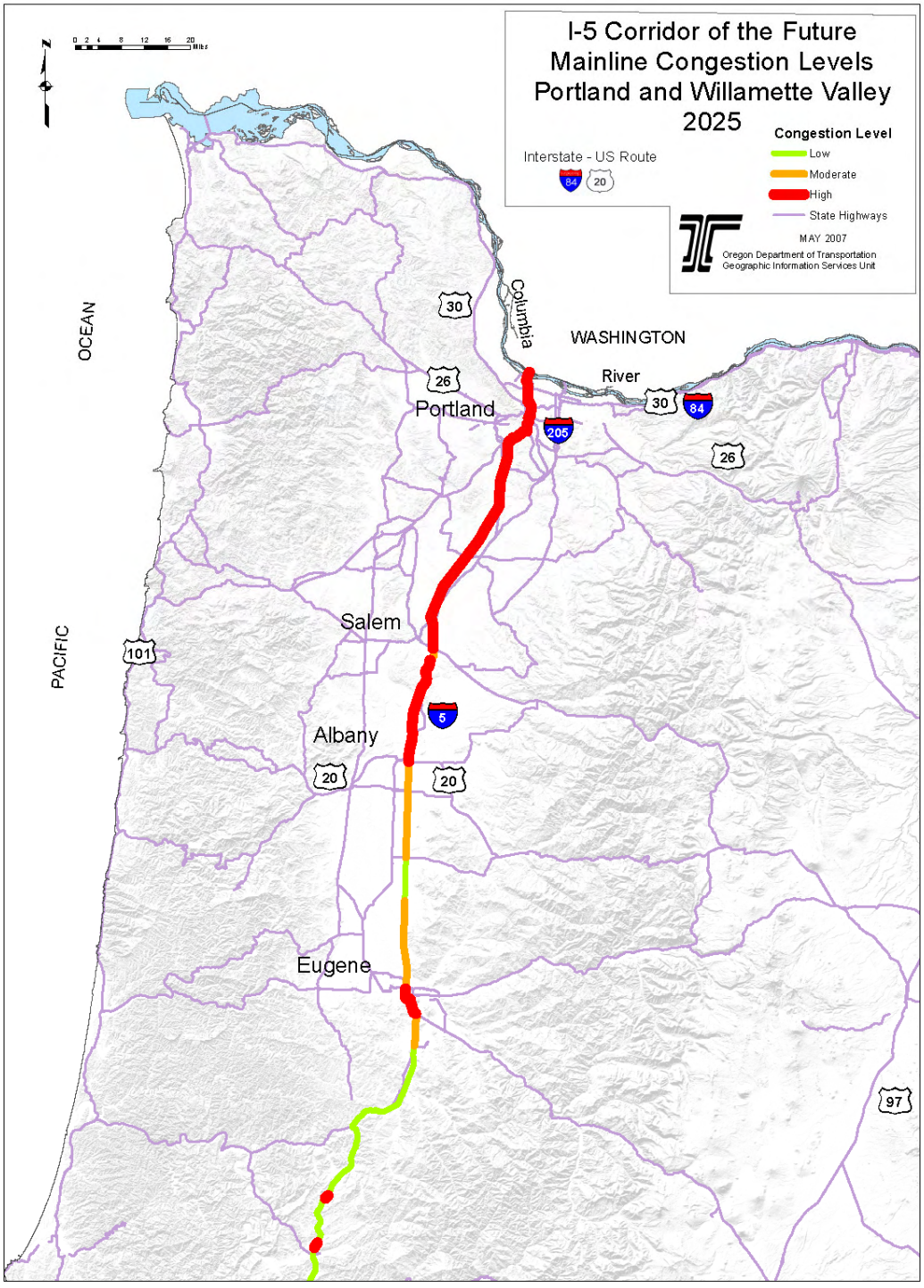
Oregon Map 1B: Portland and Willamette Valley Truck AADT 2005



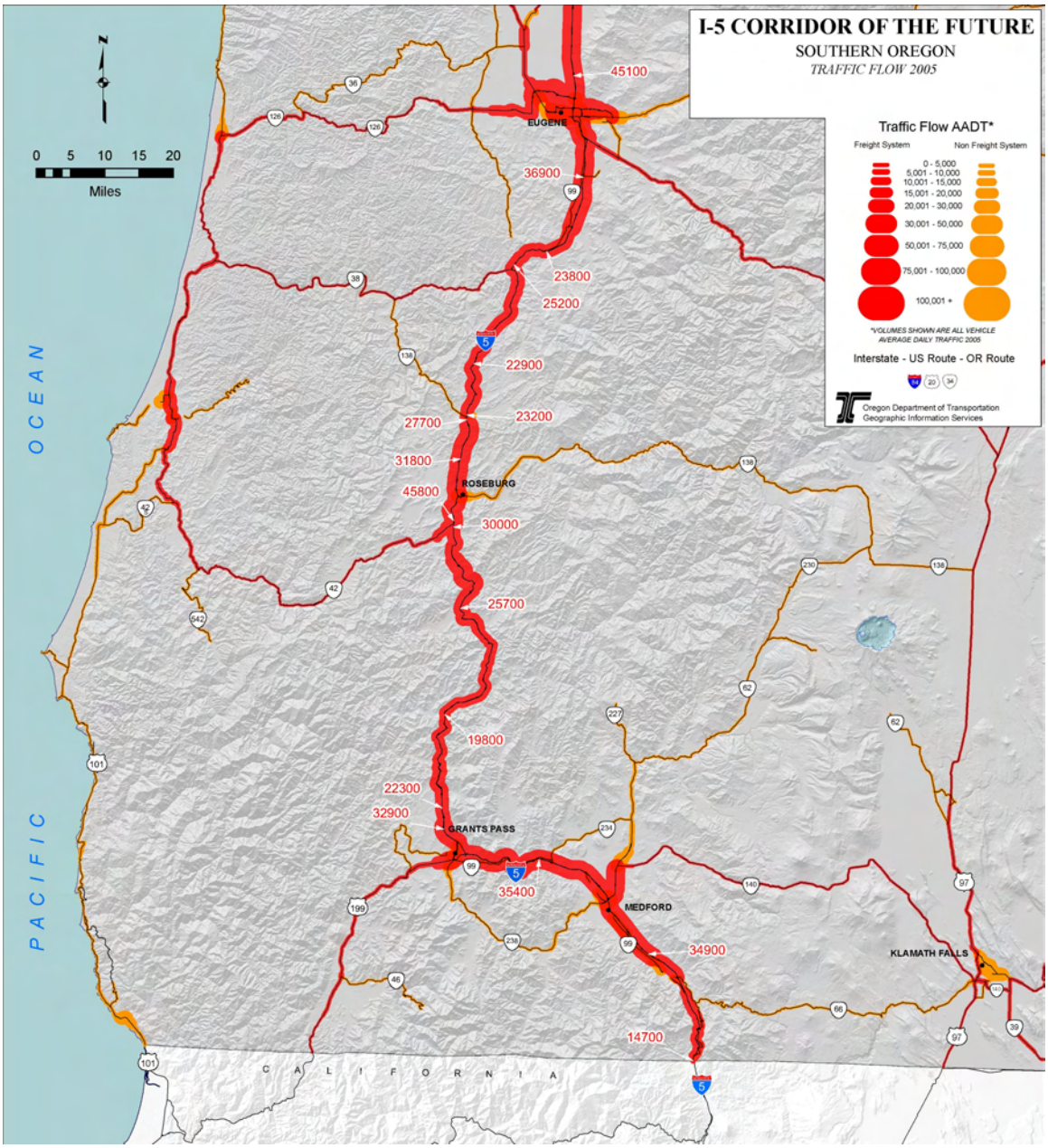
Oregon Map 1C: Portland and Willamette Valley Congestion 2005



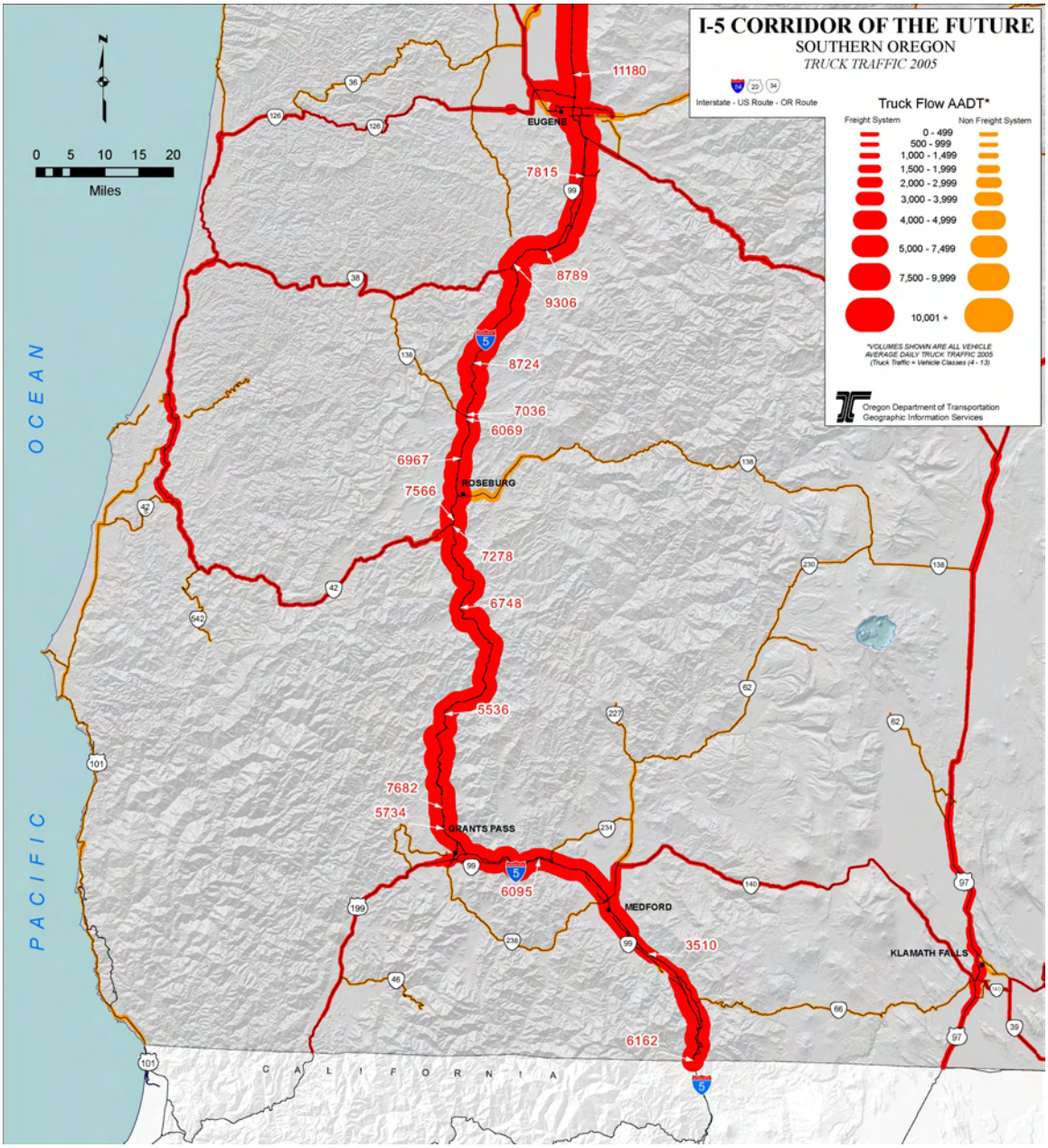
Oregon Map 1D: Portland and Willamette Valley Congestion 2025



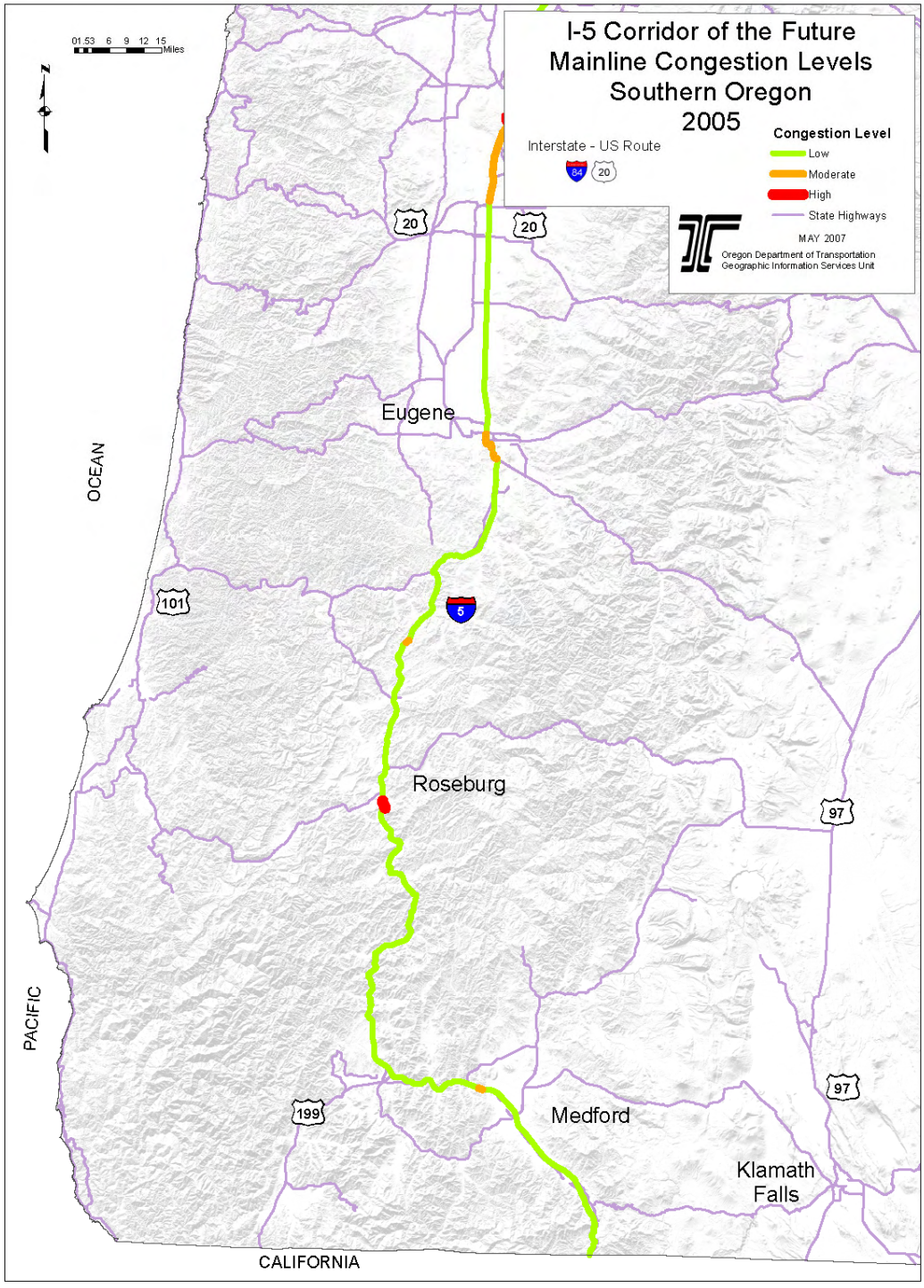
Oregon Map 2A: Southern Oregon AADT 2005



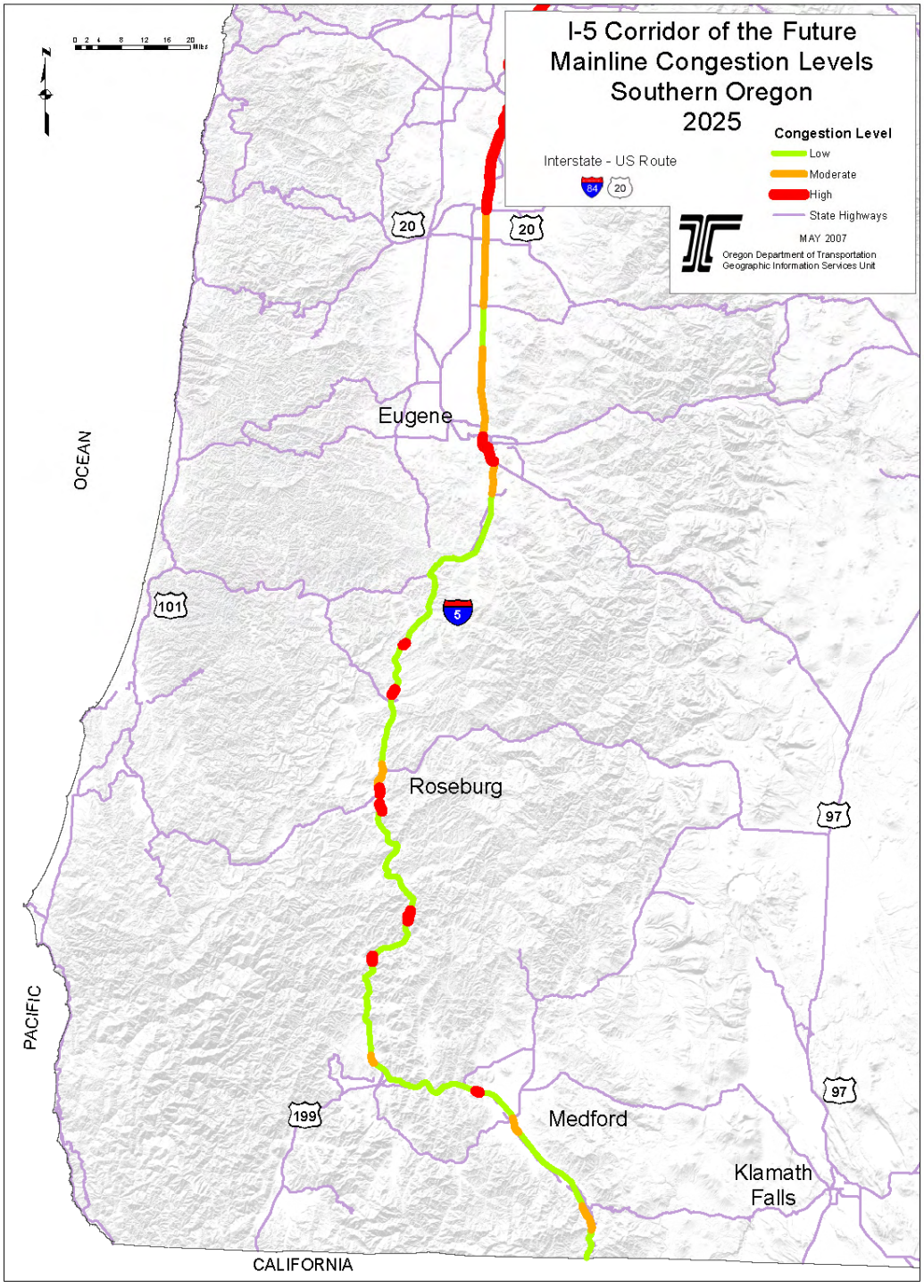
Oregon Map 2B: Southern Oregon Truck AADT 2005



Oregon Map 2C: Southern Oregon Congestion 2005



Oregon Map 2D: Southern Oregon Congestion 2025



III. Individual State Report

C. California

Interstate 5 (I-5) in California is the backbone for north – south movement of people and freight. The corridor extends almost 800 miles from the Mexico border into the State of Oregon, and continues on through the states of Oregon and Washington into Canada. I-5 is the work-horse for mobility in the western pacific region. The corridor serves Interstate, interregional and intra-regional travel throughout its length; providing connectivity to international water and airports, major freight warehousing and transfer facilities, and major east-west freeway corridors. Intercity passenger rail and commuter rail services operate adjacent to the corridor in southern California adding to the total corridor capacity. Multiple passenger rail service improvements and extensions along I-5 are planned in San Diego, Orange and Los Angeles Counties and in Sacramento. Freight rail (Union Pacific and Burlington Northern Santa Fe) are proximate in portions of the corridor statewide, and in all portions there may be potential intermodal opportunities for shifting a portion of truck freight volumes onto freight rail. Eight urbanized areas are directly on the I-5 corridor path, including the most highly urbanized areas in the State, Los Angeles and San Diego. Three additional urbanized areas are nearly adjacent and at least one additional area is expected to be declared urbanized in the 2010 federal decennial census.

Annually over 22 billion vehicle miles of travel (VMT) occur in the corridor. Twenty three percent of all statewide five plus axle truck VMT is on I-5. Population growth in California and growth in goods movement is rapidly increasing traffic in the corridor. In the year 2000, I-5 had over 75 miles operating at a level of more than 200,000 vehicles a day in the largest urbanized areas, with the highest daily traffic at 300,000 along a 12-lane section in Orange County. In the year 2005, the number of miles carrying more than 200,000 vehicles per day increased by 26 percent to over 95 miles, and the highest daily traffic has increased by 18 percent to 355,000. Approximately 110 miles of I-5 carry between 100,000 to 200,000 vehicles per day. The remaining 600 miles carry a range between 14,400 to 100,000 average annual daily traffic (AADT).

Currently travelers and freight movement along the corridor experience over 47 thousand hours of recurrent daily vehicle hours of delay (DVHD). This delay impedes mobility and negatively impacts the economy of the State and regions. California has undertaken a major statewide initiative referred to as the Strategic Growth Plan (SGP) to reduce all statewide DVHD below current levels by 2016 through both aggressive integrated deployment of transportation management system (TMS) strategies and major infrastructure improvements, such as freeway to freeway direct connectors. The voters of the State recently approved over $19.9 billion in bond funds to support this effort. Four and one-half billion dollars are specifically ear-marked for infrastructure projects, combined with TMS elements that will reduce congestion on California's most congested corridors.

This report is for the California portion of Interstate 5 however it was developed in coordination with the states of Oregon and Washington. The multi-state importance of I-5 cannot be over-stated for north-south long-haul freight movement. This is graphically illustrated by the high percentage of five axle trucks (25 percent) to total volumes into/out of the state of Oregon from California. The corridor as a whole in California is otherwise diverse due to the long distance it traverses and characteristics of surrounding urbanization, commerce and industry.

1. Description of Corridor

Current Corridor

The current I-5 corridor in California extends 800 miles from the Mexico international border into Oregon. The entire multi-state I-5 corridor connects Mexico to Canada and traverses the three western states of California, Oregon and Washington. The corridor includes major intercity and commuter passenger rail services; the Pacific Surfliner, Coaster and Metrolink in southern California and within proximity the San Joaquins in the Central Valley and northern California. I-5 is paralleled by major freight rail lines (Union Pacific (UP) and Burlington Northern and Santa Fe (BNSF)) either immediately adjacent or within proximity. I-5 is generally 7 to10 plus freeway lanes through San Diego, Orange, and Los Angeles County with 98 miles of high occupancy lanes (HOV) operating, under construction or programmed for funding and are currently in design. The number of lanes transition down to 4 to 6 plus above Los Angeles to the Oregon state line.

I-5 directly serves or provides connectivity to the major international water ports of Los Angeles and Long Beach, San Diego, Stockton, and Sacramento. The corridor directly serves or provides connectivity to the major international airports of Los Angeles, John Wayne (Orange County), San Diego, and Sacramento. Major freight warehousing and transfer facilities are immediately served or connected by I-5 throughout southern California, in the Central Valley (primarily the Tracy area in San Joaquin County with connections to I-205 and I-580), in the larger Sacramento area, and in northern California. Warehousing along the corridor is rapidly increasing.

A map of the current corridor and characteristics is on page 121. For this application the corridor is divided into four segments based on major characteristics of travel volumes and urbanization.

Future Corridor

The future corridor in approximately the year 2040 is described below by corridor segment by mode. The future corridor could be in place earlier depending upon additional funding and expedited project delivery. A map on page 122 displays the current and future projected population in the surrounding counties, traffic levels, AADT, and numbers of large trucks. The projected 2040 growth in AADT and DVHD should not occur if comprehensive and coordinated improvements, strategies and actions are implemented as described below and the corridor is managed for highest productivity, across jurisdictions and modes.

It should be noted that for Segment 4 (State Route 99 Junction to Oregon Border) the first few miles of the segment includes the Sacramento International Airport, a major bridge structure over the Sacramento River, and the fast growing City of Woodland and Yolo County areas. This portion of the segment represents an impending confluence of urbanization to Segment 3 for the

Sacramento area. It was decided however for this report to keep Segment 4 as displayed on the map due to the currently distinct rural characteristics of I-5 immediately north of Woodland.

Segment 1 – Mexico Border to State Route 138 in Los Angeles County

Freeway – the freeway is 10 plus lanes throughout with continuous HOV lanes and/or managed toll lanes. HOV lanes are converted to managed lanes based upon productivity, regional and private sector interests, and State legislative authority. Barrier separated transit ways operate within the corridor. Direct freeway to freeway to connectors and HOV and managed toll lane direct connectors are in place corridor wide. Interchanges at all local arterials are metered for efficient corridor operations. Direct freeway to freeway and HOV and managed lane connectors are selectively metered for highest corridor productivity. Major parallel local arterials are managed within the corridor through integrated corridor management. Region wide Transportation Management Centers (TMCs) coordinate freeway and local arterial operations and are staffed by the Department, California Highway Patrol and related agencies. Traveler information and incident response is corridor wide. Detection to measure and monitor real-time corridor performance is robust. Corridor performance is continually evaluated by a coordinated team representing the State Department of Transportation, metropolitan planning agencies, transit/rail operators, and other regional and local partners. Corridor strategies, actions, and improvements are adjusted to sustain highest corridor performance.

Modal – intercity and commuter transit and passenger rail services are expanded corridor wide. Service frequencies are enhanced, new line extensions brought into operation and new services added. New multi-modal transfer stations are operating and existing stations improved. Transit and rail services are managed comprehensively within the larger corridor to increase total corridor productivity. The Pacific Surfliner intercity passenger rail service is expanded to 17 plus round trips a day between Los Angeles and San Diego with ridership doubling to 7.2 million passengers per year. Commuter passenger rail frequency in San Diego, Orange, and Los Angeles on the Coast Express Rail, Metrolink and Sprinter is expanded with a projected tripling of current combined ridership of 6 million to 18 million. Rail and transit services provide real-time traveler information and performance is measured and monitored as part of comprehensive corridor and system management.

Freight – exact freight movement improvements are difficult to describe at this time in the corridor. A State Department of Transportation Survey in 2005 of the UP and BNSF indicated their major choke points are where they operate on the same facility. Capacity improvements for portions proximate to I-5 are primarily needed at the Tehachapi Pass between Bakersfield and Tehachapi Summit. Both railroads also noted capacity improvements are needed to accommodate additional commuter rail services that share the same tracks. There may be potential to move a portion of truck freight from I-5 onto rail freight throughout the corridor however future studies will be required.

Segment 2 – State Route 138 to I-205 Junction

Freeway – the freeway in the Central Valley, near the Bakersfield urbanized area to the Tracy urbanized area, is widened from 4 to 6 plus lanes in most portions due to high volumes of Interstate and interregional truck freight. All local road interchanges are metered to sustain corridor productivity. Additional road side rests are operating in the corridor and are state of the art for services and information technologies. Road side rests may be privatized. TMS elements maximize corridor productivity. Freeway improvements on the I-5 also provide benefits to the State Route 99 corridor through the Central Valley that has high demands for both regional trips and truck freight.

Modal – intercity passenger rail services on the San Joaquins are expanded to five round trips or more per day between Sacramento and Bakersfield and 7 round trips or more between Oakland and Bakersfield with total annual ridership of 2.5 million.

Freight – exact freight movement improvements are difficult to identify at this time. UP has intermodal facilities in Fresno and Lathrop and BNSF in Stockton, Modesto, Fresno and Bakersfield. Currently a study referred to as “California Interregional Intermodal Shuttle” (CIRIS) Market Assessment and Public Benefit Analysis is being conducted. The study is examining the feasibility of operating a short-haul intermodal freight rail shuttle between the Port of Oakland and the Central Valley. Additionally the City of Shafter and logistics services provider Northwest Container Services, Inc. have signed a partnership with the Port of Oakland to create a rail logistics service to handle cargo moving between the port’s container terminals and points throughout central and southern California. Several project proposals exist to move truck freight onto freight rail in the future through this segment. The potential projects have positive congestion reduction benefits to both I-5 and I-580/ I-205, major east/west connecting routes into the San Francisco Bay Area.

Segment 3 – I-205 to State Route 99 Junction

Freeway – the freeway is expanded to 6 to 10 lanes throughout with both mixed flow and HOV lanes. HOV lanes may be converted to managed lanes as demand grows. Freeway to freeway direct connectors are in place, all local interchange ramps are metered, and the segment managed through TMS elements.

Modal – light rail is extended from Sacramento along the I-5 corridor to serve the fast growing south Sacramento County area and north to the Sacramento International Airport. San Joaquin intercity passenger rail is expanded (see segment 2 discussion). Expanded express bus operates in continuous HOV and/or managed lanes between the three urbanized areas of Tracy, Stockton, and Sacramento.

Freight – exact freight movement improvements are difficult to identify at this time. The Ports of Stockton and Sacramento are within the corridor sphere (I-80 connects directly to the Port of Sacramento) and the UP freight rail. The Port of Sacramento plans to significantly increase bulk freight activity over the next 20 year horizon by utilizing channel and river barging to connect with the Port of Oakland. Transition of truck freight from the port to river barging will assist in managing truck demand on the I-5.

Segment 4 – State Route 99 Junction to Oregon Border

Freeway – the freeway is 4 to 8 mixed flow lanes throughout with truck climbing lanes in mountainous segments. HOV and potentially managed lanes operate from the Woodland area into Sacramento. Additional roadside rest areas are operating with state of the art information technologies and services. All local interchanges are metered and freeway to freeway connectors constructed as demand warrants.

Modal - intercity passenger rail service is expanded to Redding from Sacramento on the San Joaquin Corridor (replacing the current connecting bus route). Express bus services operate from the Woodland area into downtown Sacramento.

Freight – exact freight movement improvements are difficult to identify at this time. Major warehousing exists now throughout the corridor and is expected to expand. The rate of expansion is slower than the more highly urbanized segments however the corridor is expected to be a major location for new warehousing due to access to I-5. There may be opportunities to move a portion of truck freight unto rail.

2. Congestion Reduction

This application addresses both current and future congestion on the I-5 corridor and includes capacity increases through freeway infrastructure improvements, restoring lost corridor lane capacity from congestion through aggressive deployment and integration of TMS elements, and managing the corridor for highest sustained productivity through system management based upon performance measurement. The application also emphasizes expansion of intercity passenger and commuter transit/rail, integrated operation of major local arterials, and freight rail improvements. Due to complementary aspects between both the congestion reduction and mobility improvements sections of the application the mobility improvements section provides information appropriate to both sections.

Current and Future Congestion

Currently travelers and truck freight in the corridor experience over 47 thousand DVHD of recurrent congestion each weekday. Twenty eight percent of all delay in the San Diego region is on the I-5, approximately 10 percent in the Orange and Los Angeles County area, and 15 percent in the San Joaquin and Sacramento County areas. This delay is projected to grow to over 78 thousand hours per day by 2040 unless major mobility improvements are made, deployed in a coordinated manner corridor wide, and the corridor managed for sustained productivity.

While the I-5 represents only 10 percent of the congestion in the Orange and Los Angeles County area, due to the large numbers of congested Interstates and other major state freeways, the I-5 is the principal north-south corridor that provides both through movement and connectivity to other principal routes, as well as connectivity to major intermodal freight facilities. The total DVDH on I-5 in these counties is over 25.6 thousand hours, contributing to the overall degradation of corridor performance and adversely impacting the economic health of the region and state.

Population Growth

Nearly two and a half million people are projected to be added into the San Diego, Orange and Los Angeles County areas by 2040. Another almost one half million people are projected to be added into the Central Valley, one million into the San Joaquin and Sacramento County areas, and a half million into the northern I-5 counties area. The impact of population growth due to in-migration as well as growth in birth rates from current residents is significant to the future of I-5 corridor productivity. The corridor will experience significant further degradation in level of service if comprehensive, coordinated, near-term and long-term investments are not made corridor wide, across modes, and the corridor comprehensively managed based on a foundation of performance measurement.

Currently eight urbanized areas are immediately on the I-5 path with three in proximity. Considering the trend of urbanization in California from prior to 1970 and continuing, it is anticipated that each decennial census additional urbanized areas will be added along the I-5 as well as current urbanized area boundaries expanding. New urbanized areas are anticipated through all corridor segments including Segment 4 in northern California. Refer to map of urbanization trends in California on page 123.

Freight Growth

The Freight Analysis Framework (FAF) developed by the U.S. Department of Transportation identifies projected freight volumes and flows to 2020. The tool is used to assist in matching infrastructure supply to demand and for assessing potential investment and operational strategies. In California the largest percentage of freight tonnage and value of shipments is moved by trucks, followed by rail by tonnage and air by value. The FAF projects that most of the growth in freight in the next twenty years will be in urban areas and on the Interstate highway system. Truck traffic moving to and from California accounted for 12 percent of the average annual daily truck traffic (AADTT) on the FAF road network. The map on page 124 from the FAF displays the magnitude of freight impact to California and displays the comparative volumes on I-5. The map also graphically displays the importance of California's Interstate highway system to the rest of the nation.

In 1998 over 1.1 billion tons of freight was moved to, from and within California by truck freight, more than 81 percent of all freight by mode type. The value of the freight was $900 billion, 75 percent of the total statewide value of all freight. The FAF projects that by 2020 highways will carry 83 percent of all freight with 73 percent of the total statewide value.

While exact future freight assignments of all truck freight cannot be forecasted with certainty, the current pattern and growth of freight in the I-5 corridor is expected to continue. As discussed in the Introduction, I-5 accounts for more than 23 percent of all truck freight VMT in the State, nearly one-quarter of all freight movement. The corridor is strategic for freight as the north-south freight pathway, gateway into Mexico and into Oregon. The percentage of truck freight at the Oregon border is 25 percent; throughout the corridor length the percentages stay typically constant within a range of 10 to 20 percent, with higher percentages near major route junctions such as State Route 99. The number of large trucks is nearing 34 thousand per day currently at the I-5 / I-205 junction. While this is 21 percent of the total AADT through this area, the sheer numbers of truck freight is significant. The volumes exemplify the critical confluence of the I-5/205 and 580 Interstate corridors and the importance of the I-5 and connecting Interstate system routes for the State and nation.

Role of Intercity Passenger and Commuter Rail and Transit

Intercity passenger and commuter rail and public transit now operating in the corridor offer significant opportunities to move commute trips onto rail/transit modes and increase freeway capacity for freight. Modal services operating in the corridor are summarized on page 125 and are shown on the corridor maps.

Relationship of Congestion Reduction and Mobility Improvements

The following section (Mobility Improvements) describes the State of California's initiative to reduce congestion below today's current levels through aggressive and comprehensive corridor and system management. These congestion reductions will benefit both the movement of people and freight and ensure reliable travel times, restored freeway lane capacity, and preservation of mobility gains.

3. Mobility Improvements

Background

This section addresses California's approach to congestion reduction in the I-5 corridor through comprehensive corridor and system management, based upon a foundation of detection for continual performance measurement and evaluation. Four graphics and charts are included to emphasize the importance of TMS to restore freeway capacity. The section also includes examples of primary major infrastructure or modal improvements by category by corridor segment needed to restore corridor productivity and preserve mobility gains.

Corridor and System Management

Three critical efforts preface California's approach to restoring productivity in its urban freeway corridors and are the basis of this application for Corridors of the Future. The intent of these efforts is to remove existing congestion, restore corridor productivity, and manage the corridor for highest sustained mobility outcomes. These efforts are maturing as depth analyzes on selected corridors are being conducted by the Department, in coordination with university researchers and other specialists, to understand exact causality of delay and test, through micro-simulation, the most effective mix of improvements, strategies and actions to restore corridor capacity. The three major efforts are described below.

Traffic Operations Strategies – TOPS

In the late 1990's California undertook a major effort to examine operational strategies to reduce and remove congestion in urban corridors and avoid it from occurring in non-congested corridors in

the future. The initial effort was presented to the State Legislature in 2000 in a report entitled "Traffic Operations Strategies" or TOPS.

The goals of TOPS are to reduce congestion, increase trip reliability and enhance safety. The report identifies three levels of project types to remove congestion and preserve mobility gains. These are described as Level 1: intelligent infrastructure, such as, changeable message signs, traffic monitoring stations, transportation management center upgrades, metering and metering control and other technology enhancements. In Level 1 are also lower cost physical operational improvements such as auxiliary lanes, intersection upgrades and ramp modifications. Level 2 continues with HOV network gap closures through HOV connectors, drop ramps and HOV/managed lanes. Level 3 progresses to freeway interchange modifications such as freeway connectors and connector metering.

Transportation Management System (TMS) Master Plan

After TOPS the Department undertook a second intensive effort to identify core TMS processes for more effective system management and improved business processes to implement and sustain its effectiveness. The results of this effort are in a report entitled Transportation Management System (TMS) Master Plan. The report published in 2004 identifies three core TMS processes based upon a foundation of detection to measure corridor performance. The three processes are traffic control, incident response, and traveler information. Comprehensively applying these three processes, and building upon a foundation of strong detection, the Department estimates that 20 percent or more of all congestion on California's urban freeways can be removed. The reductions may be achieved in combination with additional operational improvements and infrastructure improvements however the TMS elements are the corner stone to restoring corridor productivity and preserving mobility gains. The report summary is included in the appendices.

Summary of TMS Master Plan and Congestion Reduction Benefits

The four following charts and narratives briefly describe California's approach to removing existing congestion in the I-5 corridor and preserving mobility gains through comprehensive application of TMS strategies.

The following graphic (Chart I) describes the loss of productivity on an urban freeway corridor during congested periods. The goal of applying comprehensive TMS elements to manage the corridor and measure performance is to restore this lost lane capacity due to congestion.

Chart I – Lost Productivity

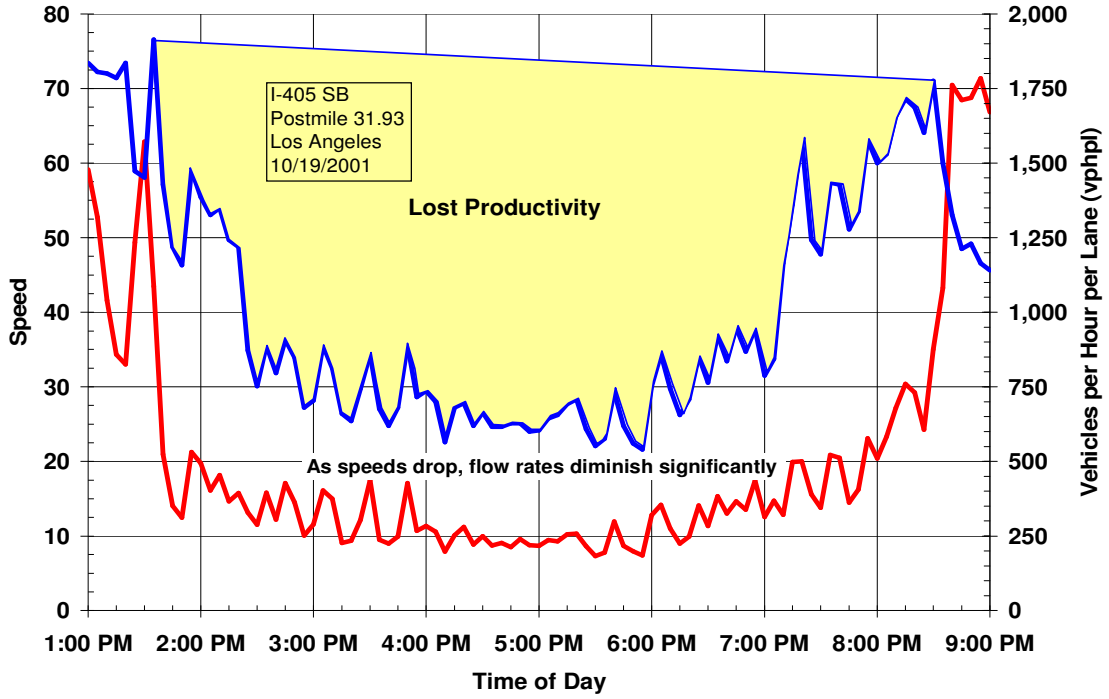


Chart II – Lost Lane Miles by Region

Chart II below shows the magnitude of lost capacity due to "inefficiencies", a less technical way to explain the impact is what is called "lost lane miles, i.e. when you need your built capacity the most, in effect, we unbuild or loose those lane miles. The chart below is from the Southern California Association of Government's (SCAG's) Regional Transportation Plan and graphically describes the impacts of congestion in lost lane miles at a regional level.

Southern California Association of Governments - Equivalent Lost Lane Miles from Congestion

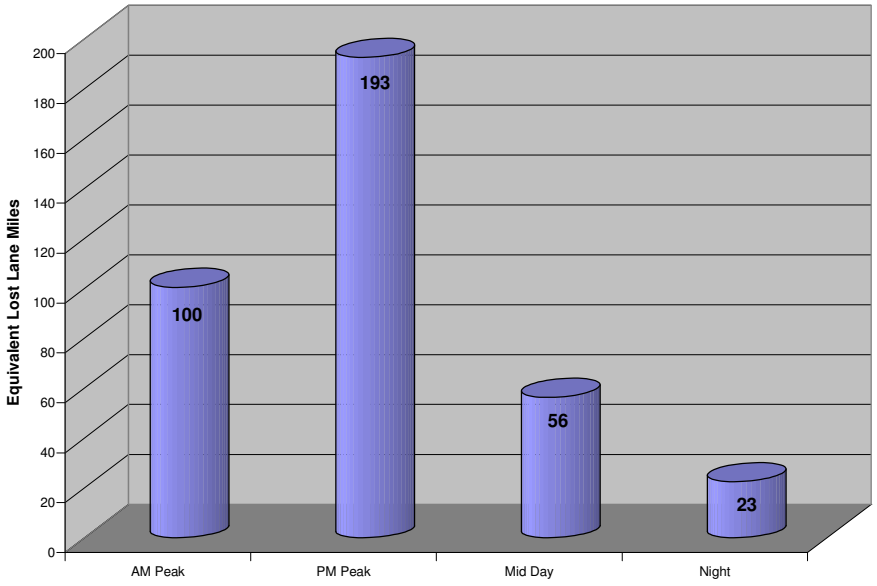


Chart III – Performance Measurement System

The chart on the following page is an example of a PeMS screen. PeMS is the Department's program for monitoring corridor and system performance on a real-time basis. Data for urban freeways is collected now by daily vehicle hours of delay, annual average daily traffic, and by numbers of incidents. Incidents (such as crashes or debris in freeway) slow traffic flow and create congestion. For corridors with detection (typically embedded loops in pavement) information flows on a real-time basis into a system called PeMS (performance measurement system). These are the most highly congested urban corridors. PeMS allows both Department and regional agencies the ability to see how the system is performing and identify periods of congestion. With that information staff can then disaggregate the data further to identify causes. Detection is being expanded rapidly to support system and corridor management based on performance measurement. The Department may do actual "on the ground" counts in corridor segments or ramp termini depending

on the existence of detection or other detailed information needed. On a statewide basis including rural areas the Department has a traffic census program to collect and estimate average annual daily traffic and truck volumes.

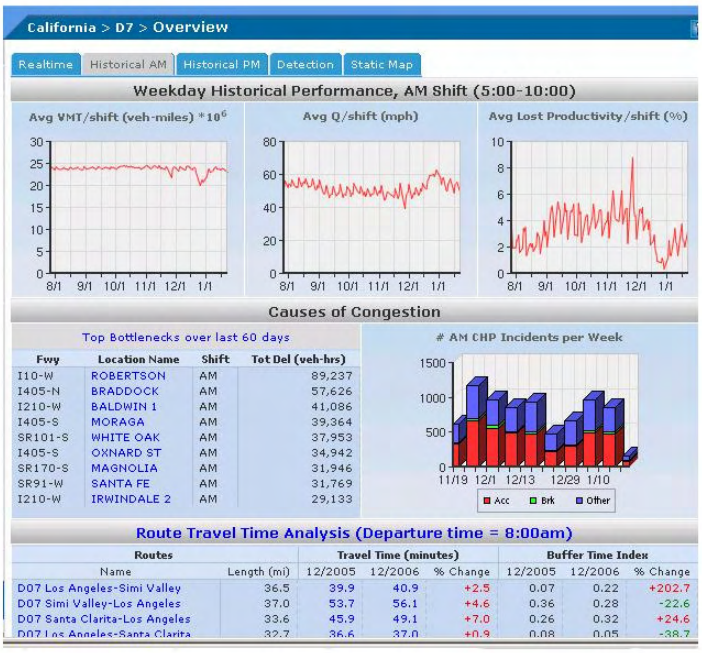


Chart 4 – Corridor System Management Plans

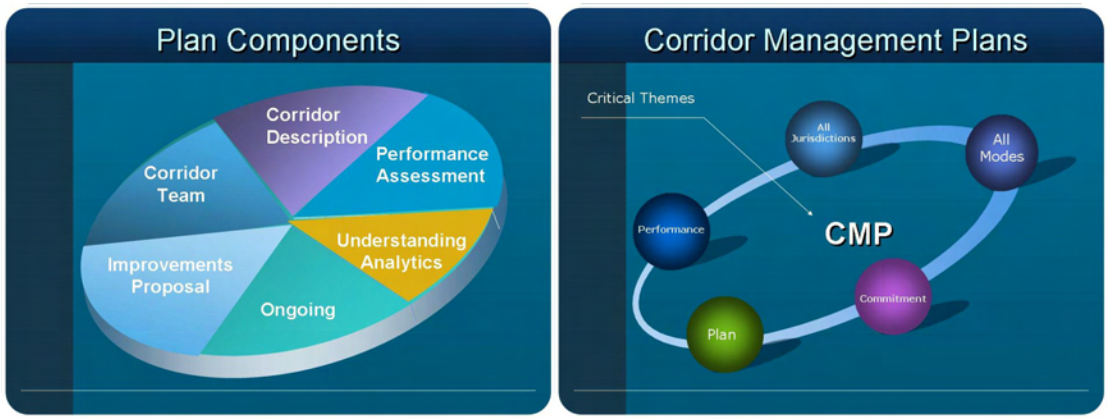


Chart 4 describes basic principles of corridor system management plans to restore and preserve capacity and manage the system. California recently required that urban freeway corridor management, operations, and improvement be guided by a Corridor System Management Plan (CSMP). The first iterations of these plans are currently being developed on over 20 congested corridors statewide in coordination with regional and local partners. Guidance will be developed in the near future for implementing system and corridor management, based upon performance

measurement, across jurisdictions and modes corridor wide through applying the concepts in the TMS Master Plan. The Department is working now with regional and local agencies on securing process commitments to the concept of system management through execution of charters or memorandums of understanding and development of work plans for conducting performance assessment and other steps towards a final corridor system management plan. The CSMP will assess current corridor performance, identify causality of congestion by type, alternatives to remove the congestion, and micro-simulate strategies, actions and improvements to determine the most effective mix and sequencing to restore and sustain corridor productivity, based on a foundation of corridor performance measurement and monitoring through PeMS.

Strategic Growth Plan (SGP)

The third effort, and a highly significant step, is that in 2004 the Administration undertook a concerted effort to comprehensively reduce current congestion in California, avoid future increases where it now exists, and avoid its occurrence otherwise in developing areas statewide. The effort evolved from an initiative termed “GoCalifornia” to the Strategic Growth Plan (SGP). The SGP resulted in a multi-billion dollar bond package that was passed by the voters in November 2006. Over $19.9 billion of bonds for new transportation infrastructure, preservation, rail and transit, and local streets and roads are included in the package. The basis of this effort was the concept for congestion reduction and restoration of lost lane miles from the TMS Master Plan. The appendices include a summary of the SGP and multiple elements of the transportation bonds.

The mobility pyramid below, adapted from the TMS Master Plan, is the basis of the SGP transportation element. Funding is in the bond package for multiple transportation components that contribute towards improvements in all pyramid elements. Maximum mobility gains can be made by coordinating bond funded improvements in corridors and managing the corridor through the CSMP by all jurisdictions and modes. The largest percentage of congestion reduction by a single element can be achieved from the “blue” layer (Intelligent Transportation Systems – ITS) in coordination with system monitoring and evaluation provided by PeMS.

Governor’s Strategic Growth Plan: Performance – Driven, Outcome - Oriented

Improvements and Revenue Needed to Restore Corridor Productivity

Improvements

This section summarizes only major project categories needed to restore corridor productivity in combination with intensive integration of TMS elements and detection. Modal improvements are a critical element of corridor development and management and are also summarized. Freight is included to the extent known. These project categories are referred to as "strategic" and are considered to be beyond current funding streams. Combined with projects in the metropolitan transportation plans both are critical to achieve the 2040 and post 2040 concept for mobility. The current total numbers of projects in various stages of planning and project development within the corridor are too large to include in this section. An inventory of major improvements by category only is included in the appendices and displayed on enlarged segment maps. Primarily the inventory includes projects from the constrained metropolitan transportation plans. There are a total of 158 major improvements.

The strategic projects, combined with those in the appendices, understate the magnitude of improvement need in the I-5 corridor. State Highway Operations and Protection Plan (preservation) needs are not inventoried or projected to 2040. Pavement rehabilitation needs are significant due to the high truck freight volumes. The magnitude of need for ITS and other TMS elements on the major parallel local arterial system in highly urbanized areas are also not included and will be vital for effective corridor management. Further detailed project information can be provided as requested for specific corridor segments and sub-segments, including detailed funding and delivery schedules. Refer to page 126 for a summary table of total unfunded needs by category.

Strategic Projects ($ in Millions)	
Highway*	
San Diego - Mixed Flow, HOV and Freeway/Freeway Connectors	$ 3,500
Orange/Los Angeles - Mixed Flow, HOV, and Freeway/Freeway Connectors	$ 6,900
Central Valley - Mixed Flow, HOV and Freeway/Freeway Connectors	$ 1,200
Sacramento/North State - Mixed Flow, HOV and Freeway/Freeway Connectors	$ 1,000

*From MTP financial unconstrained plan element or other major study.

***Modal**	
Intercity Passenger Rail Expansion	$ 3,600
Commuter and Light Rail Expansion	$ 7,654

Freight Rail	
Burlington Northern Santa Fe (BNSF) - Tehachapi Pass Double Track, Tunnel Modification	$ 82

Refer to page 126 for table of complete unfunded needs.

Revenues

California is unique in the nation in bringing significant amounts of State and Local Measure dollars to the funding table to improve and manage the Interstate and other National Highway System corridors. The SGP transportation bonds for the Corridor Mobility Improvement Account (CMIA) are funding $483 million in I-5 improvements primarily in Los Angeles County and also in northern California (truck climbing lanes). The Los Angeles County improvements will add HOV and mixed flow lanes to this highly congested corridor. Local (temporary) sales tax measures in five counties contribute over $683 million per year to transportation improvements throughout the counties including on I-5. The permanent Los Angeles County sales tax contributes over $3.06 billion per year for county-wide transportation improvements and operations. A summary of major revenues to the corridor and additional information is provided on page 127.

4. Economic Benefits and Support of Commerce

Support of Commerce

The proposed future I-5 corridor will support U.S. economic growth in several ways. In development of the Strategic Growth Plan for California it was estimated that the value of the State's highway system was over $3 trillion. This rough calculation was based on a forecasted Gross State Product (GSP) of $1.5 trillion per year and assumed that goods must be transported at least twice on one or multiple major state highways (to markets and then consumers). This calculation actually understates the economic impact to the State and nation from the transportation system.

As I-5 both directly serves and connects the largest population, commercial and financial, industrial, intermodal and distributing centers in the State, and in some sectors the nation, the economic impact of the corridor is highly significant although not now quantified. More than sixty four percent of all private industry and government employment in California is in regions where the I-5 corridor, and connecting Interstates, is the principal corridor. The economic impact to freight movement is highly significant however again it is not quantified. As stated earlier, more than 23 percent of all statewide truck freight VMT is on the I-5 and 13 percent of all total statewide VMT. These numbers underscore the importance of the corridor to both freight movement and regional mobility and by extension to economic growth and commerce.

San Diego Region Example

In some regions along the I-5 corridor, the corridor is both the principal pathway and gateway for most people and goods movement and is also the cornerstone of regional economic and commercial activities. An example is the I-5/805 corridor in San Diego County that provides access to over 330,000 existing jobs with over 40 percent located in the "Golden Triangle" where many of

the companies are biotechnology and wireless communication companies and their markets extend far outside of the San Diego Region. The metropolitan transportation planning agency estimates that an additional 100,000 jobs (direct, indirect and induced) planned for the Golden Triangle will generate an annual value of $11 billion of total output, $5 billion of labor income related impacts in the region, and $2 billion of projected state, federal, and local taxes.

The San Diego Association of Governments (SANDAG) has an aggressive corridor development program in place to expand the I-5 and other major freeway and transit corridors to increase capacity and manage the corridor and larger system for highest productivity. By 2010 the HOV lanes under development for the I-5 in San Diego will be converted to managed lanes and value priced. SANDAG has applied to be an Urban Partner and for the related separate funding programs (see appendices). The region's Transnet local sales tax for transportation, in addition to an "Early Action Program", and bonding authority make the region a front-runner in corridor development.

Strategic Growth Plan

Expedited and enhanced corridor development by extension is a cornerstone for economic growth both State wide and nationally. Investments in improvements create both construction and support jobs within the State and in the nation (for example manufacturing steel). During development of the SGP it was estimated that a $105 billion in capital outlay expenditures on freeways, expanded roadway preservation and transit/rail, plus ITS would generate over $165 billion to the gross state product (GSP), produce over $105.2 billion in labor earnings and create almost 2 million jobs. While this investment is much higher than that proposed for the I-5 future corridor, the correlation of funding and economic growth is certain.

Freight Traffic

It is conservatively estimated that by 2040 truck freight will account for approximately 13 plus percent of all AADT averaged throughout the corridor. This number is a low range only due to the large increases in regional vehicle trips forecasted from growth and development along the corridor and current challenges in creating a robust statewide freight forecast model that accounts for the complex future considerations of freight movement in California. Anticipating increases in freight transfer from the major ports into warehousing and distributing facilities and the need to support new urbanized and urbanizing areas with goods and services, a range of up to 30 percent truck freight could occur. A methodology that includes these multiple variables has not been applied to date.

5. Value to Users of the Corridor

The benefits to people and freight movement in the corridor from rapidly improving, expanding and comprehensively managing the corridor are significant. Travel times will be reduced, travel times will be faster and reliable, the corridor will be safer, additional or more frequent service levels for modal travel options will be available and dependable, and modal transfer more efficient. Transitioning Interstate and interregional truck freight to rail freight will allow more freeway capacity for regional freight and regional person trips. Access to water and airports and to transfer facilities and warehousing will be improved.

Enhanced development and management of the I-5 corridor benefits freight movement statewide and nationally (and internationally). There is a potential for truck only toll lanes. The Southern California Association of Governments is studying the potential for exclusive lanes region wide. The concept appears viable however more detailed studies need to be completed, policy issues elevated, and ultimately State legislation will be required.

Exact values of corridor project benefits for all proposed projects are not available. Recently however, during project selection for the Corridor Mobility Improvement Account (CMIA) bond funding, 19 projects were submitted statewide for consideration on the I-5. These 19 projects totaled over $4.2 billion dollars and were representative of all I-5 corridor segments. The Department used its CAL B/C model to do life cycle cost benefit analysis for each project. The twenty year average annual benefits for the projects was 1.8 billion in vehicle hours saved, $8.4 billion in delay savings, and $382 million in safety savings. The average B/C ratio was 2.3 with an average return on investment of 13.6 percent. The TMS projects had the highest rate of return. The daily person-minutes saved during the peak period duration per day was 13.4 million minutes or 233.3 hours of delay saved during peak commute times. The HOV projects in San Diego had B/C ratios of 4.4:1 due to the high AADT's and current congestion. HOV lanes in the Los Angeles area and other projects were likewise high for the rate of return on the investment, although lower B/C's due simply to higher project costs.

These projects are only a small example of the numbers of projects planned, programmed and in design for the I-5 corridor. Considering the magnitude of improvement needs, the examples of savings and values above only point to the larger value from a comprehensive I-5 improvement program.

Underscoring all of these investments and outcomes, as discussed earlier, is the critical need to integrate TMS elements across modes and manage the corridor based upon performance measurement so that the benefits to people and freight movement described above are preserved. The importance of improving and integrating all modes across the breadth of the corridor is highlighted by travel characteristics in the I-5 corridor from the I-805 south in San Diego. The

metropolitan transportation planning agency estimates that 80.8 percent of trips in the corridor are on the I-5, almost 2 percent on commuter rail and transit, 10.1 percent on local streets, and 7.5 percent on a parallel conventional state highway. Each corridor element contributes to the total corridor capacity and the productivity of each element can be increased through integration and coordinated operation of TMS elements.

6. Innovations in Project Delivery and Finance

Currently the Department does not have authority to utilize design-build. The Department has provided oversight in the past and is currently on several major projects for which it is not the lead, such as the Southbay Expressway (State Route 125) and Garden Grove project (State Route 22). The authority for these design-build projects comes through separate legislation for other agencies or relates to franchise agreements for public-private partnerships. This Administration is however interested in pursuing workable legislation that would allow the Department to undertake design-build. These discussions are continuing in the Legislature. Design-build authority is an important component of the SGP.

Improvements are eligible for Transportation Infrastructure Finance Innovation Act (TIFIA) funding however this authority has currently not been requested. TIFIA has however been used on other California state highway projects. Private Activity Bond authority has not been requested due to not currently having legislative authority that would enable the State to use it. Finance innovations are discussed on page 119.

7. Exceptional Environmental Stewardship

Expedited Review in San Diego

In the San Diego region the I-5 North Coast project has been selected as a priority project under Executive Order (EO) 13274 “Environmental Stewardship and Transportation Infrastructure Project Reviews”. This project includes 26 miles of I-5 from San Diego to Oceanside and a 2-mile segment of I-805. The impacts of proposed improvements to wetlands and associated endangered or threatened species are a major consideration in the improvement plans. The I-5 through this area crosses five different coastal lagoon areas. The Department is working with federal, state, and local agencies and the public to find ways to reduce, avoid, or mitigate impacts. The San Diego region additionally has an aggressive and innovation ongoing EIR/EIS effort underway for the corridor.

National Environmental Protection Act (NEPA) Delegation

Overall California has an outstanding history of environmental stewardship through preservation and enhancement of the natural environment. To efficiently deliver projects, California is committed to environmental streamlining, that is, partnering with natural, cultural, and historic resource agencies to establish effective timeframes for environmental review of transportation projects.

Environmental streamlining has proven to be an effective process to improve project delivery without compromising environmental protection. The efficient and effective coordination of multiple environmental reviews, analyses, and permitting actions is essential to meeting the environmental streamlining and stewardship mandates under SAFETEA-LU. Environmental stewardship helps demonstrate that we are guardians of the natural and human environment while addressing mobility and safety needs of the public. Environmental streamlining solutions must go hand-in-hand with principles of stewardship. California's commitment to environmental stewardship and environmental streamlining has earned California the opportunity to be selected to assume FHWA's responsibilities under the NEPA as well as other federal environmental laws. NEPA delegation under this new Pilot Program will allow the Department to certify compliance with federal environmental regulations, policies, and guidance. Implementation of this Pilot Program will simplify and expedite the environmental review process for transportation projects, while ensuring the same level of protection for environmental resources.

To prepare for the Pilot Program, the Department established a NEPA Delegation Office that is taking action to expand upon its well-developed environmental procedures. Department staff of over 700 environmental professionals is well qualified to assume new responsibilities under the Pilot Program, and has many years of experience in preparing NEPA documents on behalf of FHWA. After approval of the application, the Department will enter into a formal MOU with FHWA describing how the Pilot Program will be implemented. This Program is expected to begin in the summer of 2007 and end in August 2011. If the Pilot Program is successful, Congress may extend it beyond 2011. This Pilot Program will allow California to efficiently obtain environmental clearance for projects related to the Corridors of the Future program.

8. Finance Plan and Potential Private Sector Participation

The finance plan below is conceptual only. The plan estimates revenues to the corridor itself from certain major sources, such as Regional Improvement Project (RIP) funds, it does not identify federal transit dollars, earmarks and other discretionary funding. The infusion of almost $500 million of State bond dollars expedites completing critical corridor improvements however it falls short of total improvement needs. Needs are estimated at more than $48 billion and will grow. The plan identifies the magnitude of additional funding for transportation from local sales tax measures however these cannot be assigned to the corridor. Assignment of portions of these funds is subject to future discussions, actual measure/ballot language unique to each county and other factors for leveraging dollars. Measure funds are identified to underscore the amount of these dollars in California.

Corridors of the Future
I-5 Freeway Corridor Revenue

Proposition 1B Transportation Bond - Corridor Mobility Improvement Account (CMIA) Program		$483 million
Los Angeles County, add HOV and Mixed Flow lanes form Orange County line to I-605	$ 387	
Los Angeles County, add HOV lanes from SR-134 to SR-170	$ 73	
Shasta County, Cottonwood Hills truck climbing lanes	$ 23	
Commited 2006 State Transportation Improvement Program (5-Year STIP)		$1.9 billion
Future STIP Cycle (Note 3)		$168 million/5-Yr. Cycle
Preservation - 2005 State Highway Operation and Protection Program (4-Year SHOPP)		$604 million
Future SHOPP Cycle (Note 4)		$302 million/4-Yr. Cycle
Local Sales Tax Measures (Note 1)		$1.28 billion/year
San Diego, Orange, Fresno, San Joaquin and Sacramento Counties		
Local Transportation Funds (1/4% General Sales Tax for Public Transit)		$683 million/year
Los Angeles County Metropolitan Transit Agency (1% Permanent Sales Tax) (Note 2)		$3.06 billion/year

Footnotes:

1) Sales Tax Measures are countywide and typically covers a 20-year period. Funds are for state highway, local roads and transit. The $1.28 billion/year is for countywide projects that include improvements on the I-5 corridor.

2) LACMTA permanent sales tax revenue is regionwide and may include system expansion improvement along I-5 Corridor.

3) Total STIP Regional Shares for ALL highways and other eligible projects are $559 million/5 years. Assumes 30% to I-5 Corridor. Revenue availability not certain.

4) Assumes 50% of 2005 SHOPP. SHOPP needs vary based on lifecycle of preservation and improvements. Revenue availability not certain.

9. Private Sector Involvement

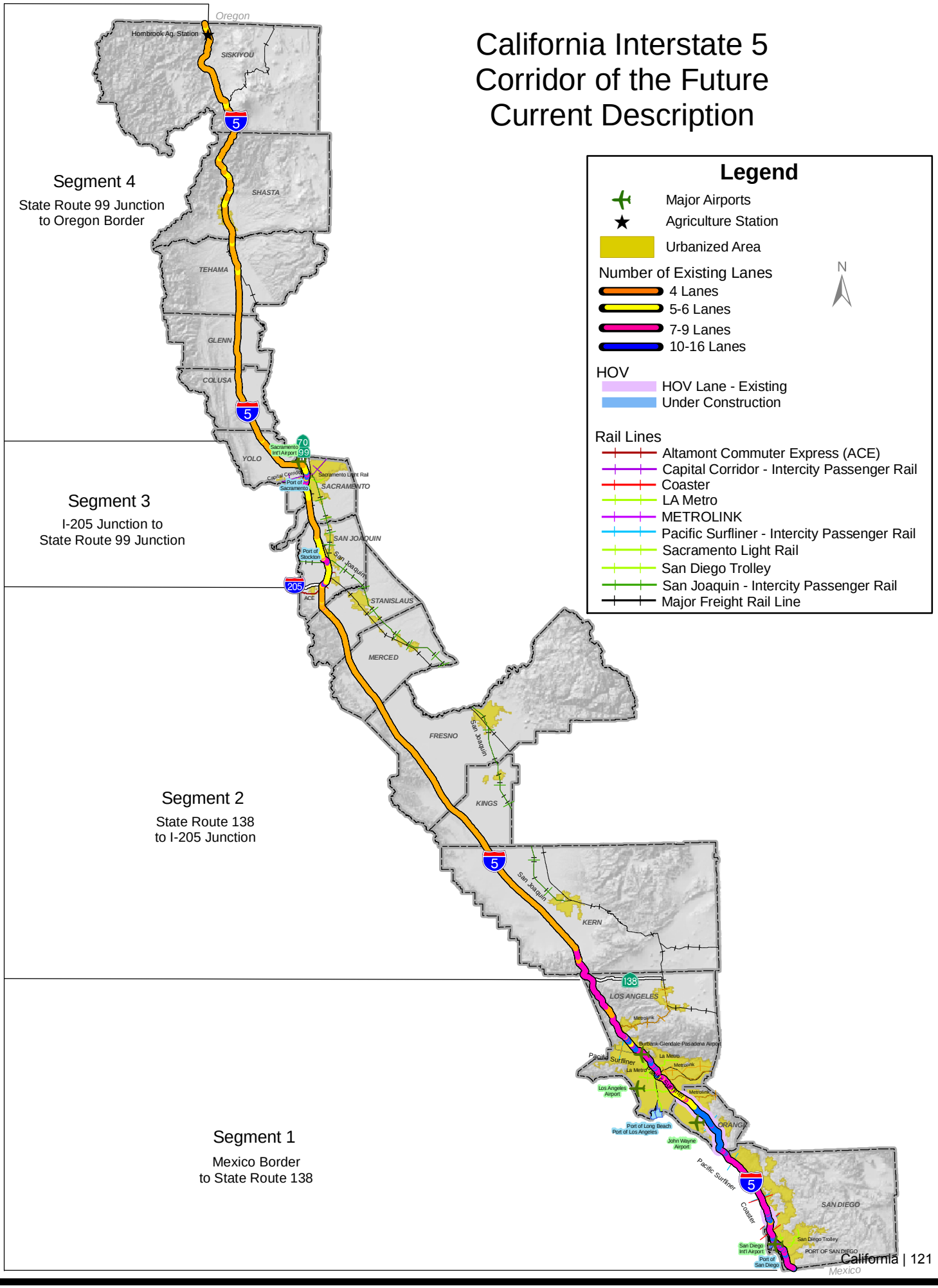
There may be nearer term opportunities for private sector involvement in I-5 corridor development in the areas of roadside rests and for managed lanes although legislation would be required. Potentially additional opportunities may be available for truck toll lanes however these opportunities are longer term. Currently California has some limited legislative authority for private sector involvement however the legislation is not readily workable. Public private partnerships are however of significant interest to the current Administration and are an element of the Governor's Strategic Growth Plan for the State as indicated earlier. It can be anticipated that discussions will continue in the Legislature to find meaningful and workable legislation to allow more public private partnerships that will aid I-5 corridor development. An exact timeframe cannot currently be predicted.

Currently California has a limited number of public private partnerships for managed lanes (San Diego I-15 and Orange 91 for example) and private toll roads in southern California. The San Francisco Bay Area is now developing a regional HOT lane plan that will in the future lead to a region wide HOT lane network. Discussions will be continuing in the Legislature on the future of many opportunities to use these partnerships to increase and manage transportation infrastructure more efficiently.

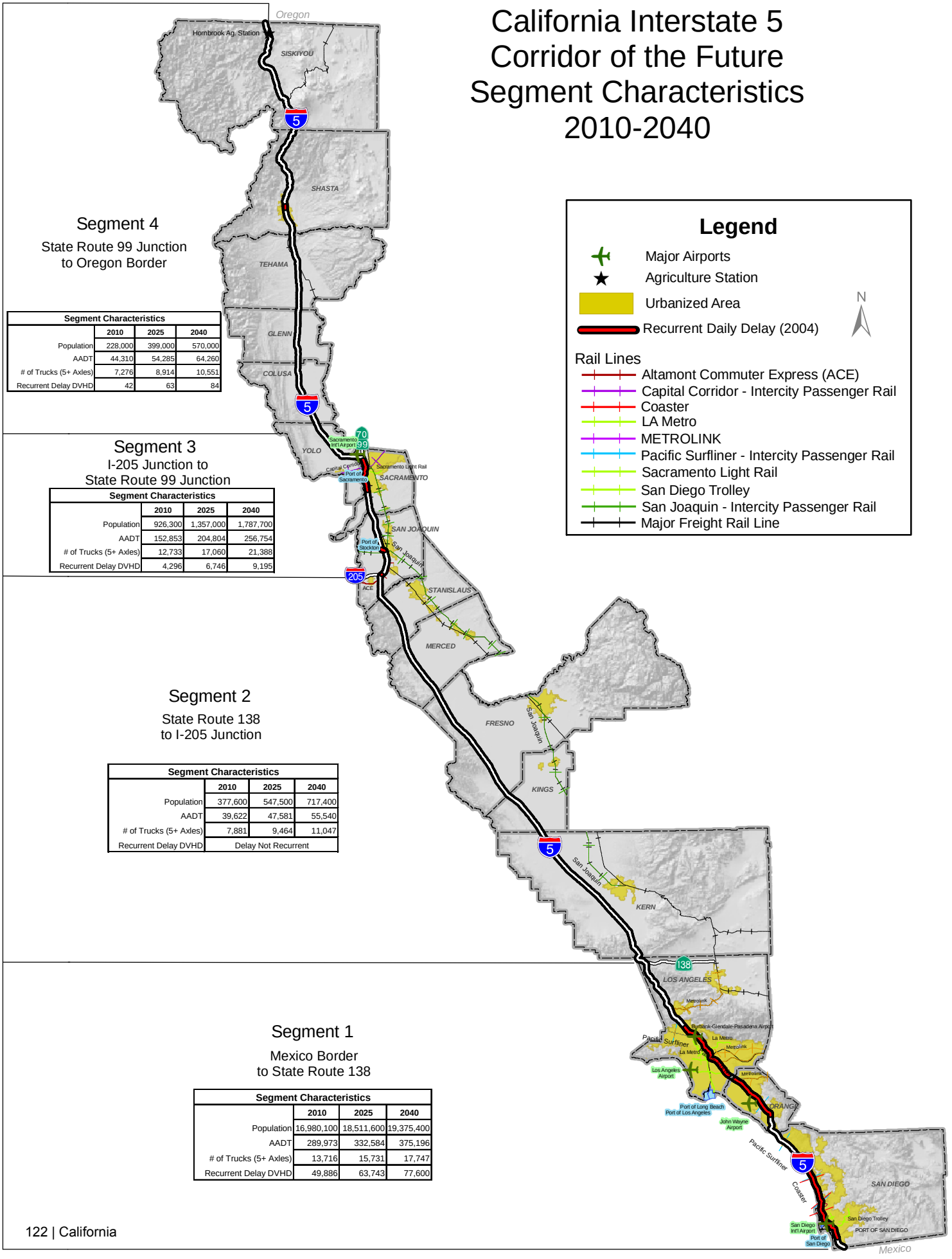
There is expected to be opportunities in the future to transition more planned and existing HOV to managed lanes statewide. Over 216 HOV lane miles are now in the planning stage for I-5 in the major metropolitan areas.

10. Proposed Project Time Line

Due to the large numbers of improvements planned for the I-5 in primarily the twenty year period of the metropolitan transportation plans (more than 100 freeway projects more than 30 passenger rail/transit) a detailed time line is not identified. The three major projects funded from transportation bond dollars will be under construction before 2012. Depending upon the availability of funding to support planned improvements, typically improvements can be designed and on the ground within five years. Using design-build and other innovative methods a shorter time frame may be possible.


California Interstate 5
Corridor of the Future
Current Description
Legend
Major Airports
Agriculture Station
Urbanized Area
Number of Existing Lanes
4 Lanes
5-6 Lanes
7-9 Lanes
10-16 Lanes
HOV
HOV Lane - Existing
Under Construction
Rail Lines
Altamont Commuter Express (ACE)
Capital Corridor - Intercity Passenger Rail
Coaster
LA Metro
METROLINK
Pacific Surfliner - Intercity Passenger Rail
Sacramento Light Rail
San Diego Trolley
San Joaquin - Intercity Passenger Rail
Major Freight Rail Line
N
Segment 4
State Route 99 Junction
to Oregon Border
Segment 3
I-205 Junction to
State Route 99 Junction
Segment 2
State Route 138
to I-205 Junction
Segment 1
Mexico Border
to State Route 138
Oregon
Hombrook Ag. Station
SISKIYOU
SHASTA
TEHAMA
GLENN
COLUSA
YOLO
SACRAMENTO
SAN JOAQUIN
STANISLAUS
MERCED
FRESNO
KINGS
KERN
LOS ANGELES
ORANGE
SAN DIEGO
Mexico
5
70
99
205
138
Sacramento Int'l Airport
Port of Sacramento
Port of Stockton
ACE
Capital Corridor
Sacramento Light Rail
San Joaquin
Metrolink
Burbank-Glendale-Pasadena Airport
La Metro
Pacific Surfliner
Los Angeles Airport
Port of Long Beach
Port of Los Angeles
John Wayne Airport
Coaster
San Diego Trolley
San Diego Int'l Airport
PORT OF SAN DIEGO
Port of San Diego

California Interstate 5 Corridor of the Future Segment Characteristics 2010-2040



Legend

- Major Airports
- Agriculture Station
- Urbanized Area
- Recurrent Daily Delay (2004)

Rail Lines

- Altamont Commuter Express (ACE)
- Capital Corridor - Intercity Passenger Rail
- Coaster
- LA Metro
- METROLINK
- Pacific Surfliner - Intercity Passenger Rail
- Sacramento Light Rail
- San Diego Trolley
- San Joaquin - Intercity Passenger Rail
- Major Freight Rail Line

Segment 4

State Route 99 Junction to Oregon Border

Segment Characteristics	2010	2025	2040
Population	228,000	399,000	570,000
AADT	44,310	54,285	64,260
# of Trucks (5+ Axles)	7,276	8,914	10,551
Recurrent Delay DVHD	42	63	84

Segment 3

I-205 Junction to State Route 99 Junction

Segment Characteristics	2010	2025	2040
Population	926,300	1,357,000	1,787,700
AADT	152,853	204,804	256,754
# of Trucks (5+ Axles)	12,733	17,060	21,388
Recurrent Delay DVHD	4,296	6,746	9,195

Segment 2

State Route 138 to I-205 Junction

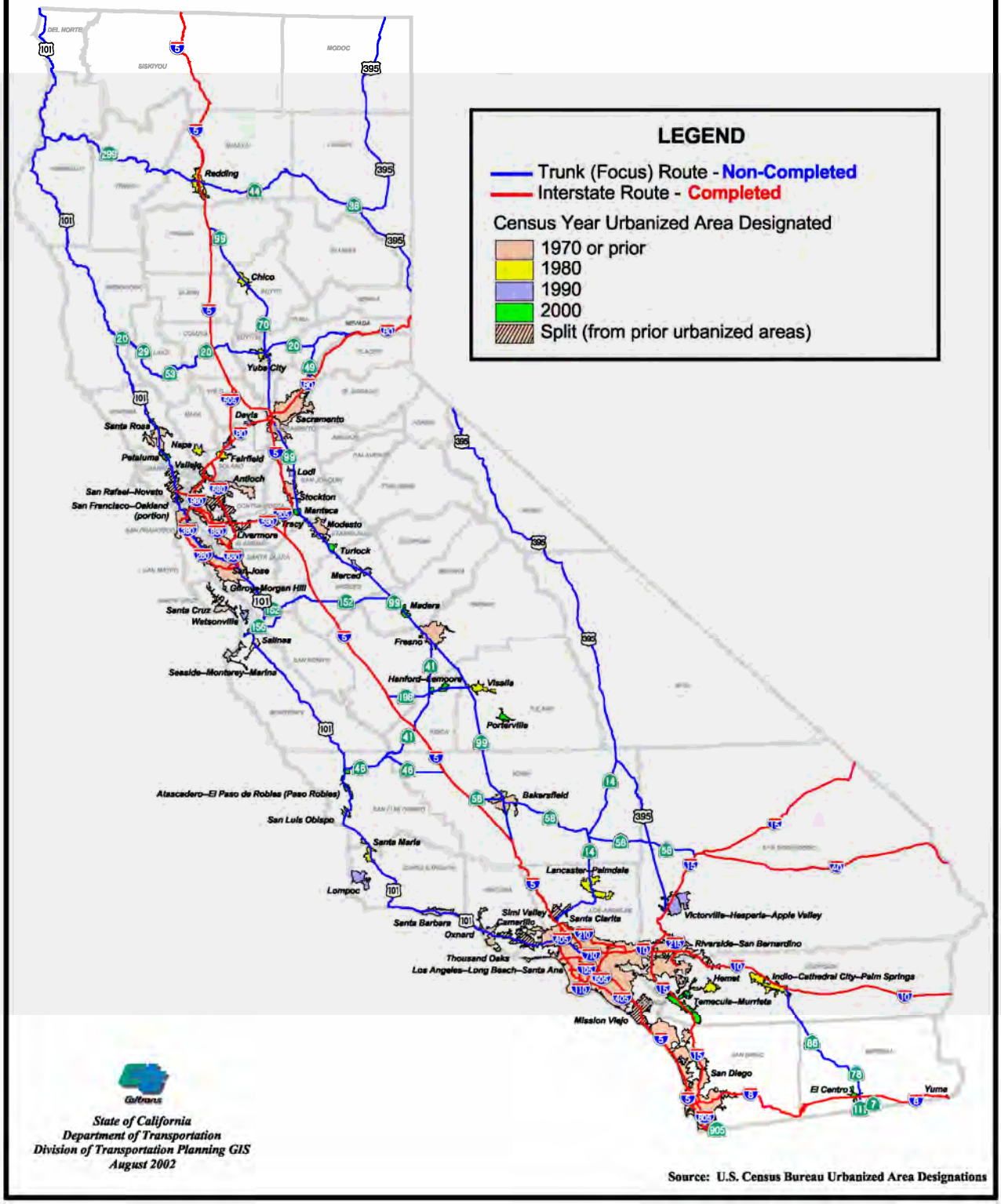
Segment Characteristics	2010	2025	2040
Population	377,600	547,500	717,400
AADT	39,622	47,581	55,540
# of Trucks (5+ Axles)	7,881	9,464	11,047
Recurrent Delay DVHD	Delay Not Recurrent		

Segment 1

Mexico Border to State Route 138

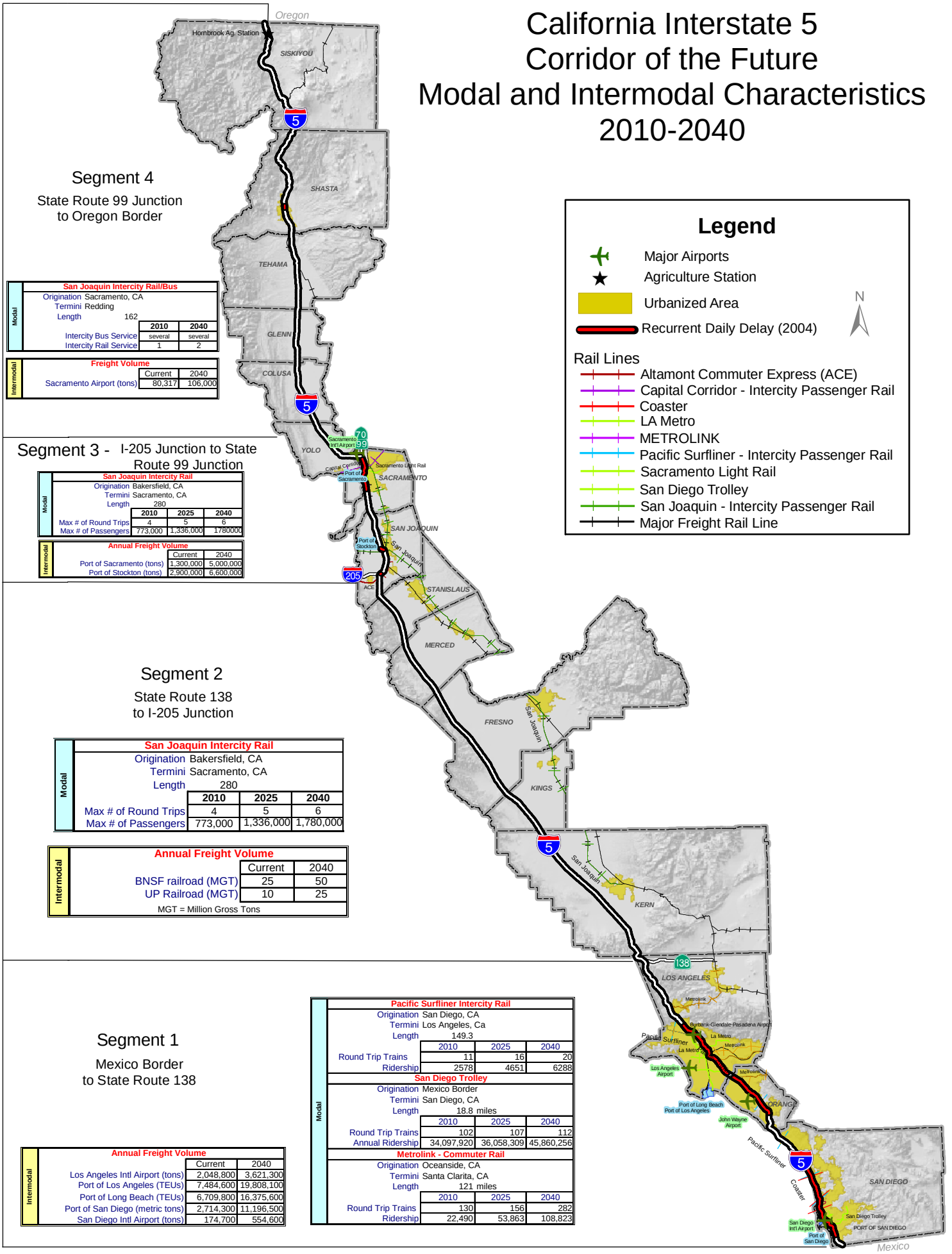
Segment Characteristics	2010	2025	2040
Population	16,980,100	18,511,600	19,375,400
AADT	289,973	332,584	375,196
# of Trucks (5+ Axles)	13,716	15,731	17,747
Recurrent Delay DVHD	49,886	63,743	77,600

Designation Trends of Urbanized Areas on Transportation Paths




C A N A D A
Pacific Ocean
Atlantic Ocean
M E X I C O
Gulf of Mexico
U.S. Department of Transportation
Federal Highway Administration
Office of Freight Management and Operations
Operations Core Business Unit
CALIFORNIA
Total Combined Truck Flows
(1998)
Network Flows
(Tons)
0 to 500,000
500,001 to 1,000,000
1,000,001 to 10,000,000
10,000,001 to 50,000,000
More than 50,000,000
State to State Flows
(Tons)
0 to 1,000,000
1,000,001 to 5,000,000
5,000,001 to 10,000,000
More than 10,000,000

California Interstate 5 Corridor of the Future Modal and Intermodal Characteristics 2010-2040



Segment 4

State Route 99 Junction to Oregon Border

Modal — San Joaquin Intercity Rail/Bus

Origination	Sacramento, CA
Termini	Redding
Length	162

	2010	2040
Intercity Bus Service	several	several
Intercity Rail Service	1	2

Intermodal — Freight Volume

	Current	2040
Sacramento Airport (tons)	80,317	106,000

Segment 3 - I-205 Junction to State Route 99 Junction

Modal — San Joaquin Intercity Rail

Origination	Bakersfield, CA
Termini	Sacramento, CA
Length	280

	2010	2025	2040
Max # of Round Trips	4	5	6
Max # of Passengers	773,000	1,336,000	1780000

Intermodal — Annual Freight Volume

	Current	2040
Port of Sacramento (tons)	1,300,000	5,000,000
Port of Stockton (tons)	2,900,000	6,600,000

Segment 2

State Route 138 to I-205 Junction

Modal — San Joaquin Intercity Rail

Origination	Bakersfield, CA
Termini	Sacramento, CA
Length	280

	2010	2025	2040
Max # of Round Trips	4	5	6
Max # of Passengers	773,000	1,336,000	1,780,000

Intermodal — Annual Freight Volume

	Current	2040
BNSF railroad (MGT)	25	50
UP Railroad (MGT)	10	25

MGT = Million Gross Tons

Segment 1

Mexico Border to State Route 138

Intermodal — Annual Freight Volume

	Current	2040
Los Angeles Intl Airport (tons)	2,048,800	3,621,300
Port of Los Angeles (TEUs)	7,484,600	19,808,100
Port of Long Beach (TEUs)	6,709,800	16,375,600
Port of San Diego (metric tons)	2,714,300	11,196,500
San Diego Intl Airport (tons)	174,700	554,600

Modal — Pacific Surfliner Intercity Rail

Origination	San Diego, CA
Termini	Los Angeles, Ca
Length	149.3

	2010	2025	2040
Round Trip Trains	11	16	20
Ridership	2578	4651	6288

San Diego Trolley

Origination	Mexico Border
Termini	San Diego, CA
Length	18.8 miles

	2010	2025	2040
Round Trip Trains	102	107	112
Annual Ridership	34,097,920	36,058,309	45,860,256

Metrolink - Commuter Rail

Origination	Oceanside, CA
Termini	Santa Clarita, CA
Length	121 miles

	2010	2025	2040
Round Trip Trains	130	156	282
Ridership	22,490	53,863	108,823

Legend

- Major Airports
- Agriculture Station
- Urbanized Area
- Recurrent Daily Delay (2004)

Rail Lines

- Altamont Commuter Express (ACE)
- Capital Corridor - Intercity Passenger Rail
- Coaster
- LA Metro
- METROLINK
- Pacific Surfliner - Intercity Passenger Rail
- Sacramento Light Rail
- San Diego Trolley
- San Joaquin - Intercity Passenger Rail
- Major Freight Rail Line

*Rail freight volumes and San Joaquin Intercity Rail are multiple segmments.

Corridors of the Future I-5 Freeway Corridor Unfunded Need for period 2015-2040 *($ in Millions)*		
TOTAL I-5 Corridor Need	**$**	**38,136**
Highway		
Strategic Projects*	$	12,600
2006 State Transportation Improvement Program (STIP) and Future STIP	$	1,300
20-Year Metropolitan Transportation Plans and Estimated Future Needs	$	8,400
State Highway Operation and Protection Plan	$	4,500
Subtotal Highway	**$**	**26,800**
Highway Footnote: *1) Cost in current dollars.* *2) Estimate assumes projection of current plan and program needs.* *3) *Strategic Projects include San Diego - Mixed Flow, HOV and Freeway/Freeway Connectors $3.5 billion; Orange/Los Angeles - Mixed Flow, HOV, and Freeway/Freeway Connectors $6.9 billion; Central Valley - Mixed Flow, HOV and Freeway/Freeway Connectors $1.2 billion; Sacramento/North State - Mixed Flow, HOV and Freeway/Freeway Connectors $1 billion.*		
Modal		
Sacramento Regional Transit District - Extend Light Rail on I-5 Corridor - North to Sacramento International Airport and South to Elk Grove	$	1,000
San Diego - Mid Coast Light Rail and Coastal Rail - Double track, tunneling, and new light rail	$	3,400
Intercity Passenger Rail - Pacific Surfliner South	$	3,600
Southern California Regional Rail Authority (Metrolink)	$	3,200
Altamont Corridor Express Commuter Rail to Sacramento Extension	$	54
Intercity Passenger Rail Extension - Sacramento to Redding Proposed	not available	
Subtotal Modal	**$**	**11,254**
Modal Footnote: *1) Cost in current dollars.* *2) Constrained project list.*		
Freight Rail		
Burlington Northern Santa Fe (BNSF) - Tehachapi Pass Double Track, Tunnel Modification	$	82
Subtotal Freight	**$**	**82**
Freight Rail Footnote: *1) Cost in current dollars.* *2) Constrained project list.*		
TOTAL I-5 Corridor Need	**$**	**38,136**

Corridors of the Future
I-5 Freeway Corridor Revenue

Proposition 1B Transportation Bond - Corridor Mobility Improvement Account (CMIA) Program		$483 million
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4) Assumes 50% of 2005 SHOPP. SHOPP needs vary based on lifecycle of preservation and improvements. Revenue availability not certain.

IV. Appendices

A. Washington

B. California

STATE OF WASHINGTON
TRANSPORTATION COMMISSION
Transportation Building, PO Box 47308, Olympia Washington 98504-7308 • (360) 705-7070
Fax (360) 705-6802 • E-Mail: transc@wstc.wa.gov • http://www.wstc.wa.gov

April 11, 2007

The Honorable Mary E. Peters
Secretary of Transportation
U.S. Department of Transportation
400 7th Street SW
Washington, DC 20590

Dear Secretary Peters:

We are pleased that portions of the I-5 corridor have been designated as semi-finalists for designation as a Corridor of the Future. We believe the entire Interstate 5 corridor is an excellent candidate because of its importance as a trade transport corridor.

There are many significant opportunities in the Washington portion of I-5 to relieve congestion to improve the movement of people and goods. This state, in cooperation with local government and the private sector, is already laying the groundwork for the future of an improved I-5 corridor.

Examples of recent undertakings include:

*Two studies by the Washington State Transportation Commission during 2006 which recommend policies to implement a broader use of tolling; and a rail capacity and needs study advocating continued and expanded public investment in rail system improvements.

*Significant multimodal investments in passenger rail and improved freight rail access and capacity.

*Substantial added miles of HOV lanes on I-5, and a pilot HOT lanes project on a route parallel to I-5 to determine how HOT lanes may help facilitate travel.

*Study of a new Columbia River Crossing on I-5 connecting Washington and Oregon. This program, with inputs of federal agencies, local governments, transit agencies and the broad public, has already received substantial study funds from federal and state agencies.

We applaud your corridor initiative with this program. Because of I-5's national importance and as a logical follow-up to this state's innovative efforts, this Commission urges you to select the I-5 corridor border to border as a finalist for designation as a Corridor of the Future.

Sincerely,

Richard Ford

Richard Ford
Chairman

cc: James Ghielmetti, Chairman, California Transportation Commission
Stuart Foster, Chairman, Oregon Transportation Commission
Doug MacDonald, Secretary, WSDOT
Steve Reinmuth, Government Relations Director, WSDOT

Corridors of the Future – A Roadmap to Mobility
A Joint Application from California, Oregon, and Washington

I-5 Corridor of the Future
California Appendices

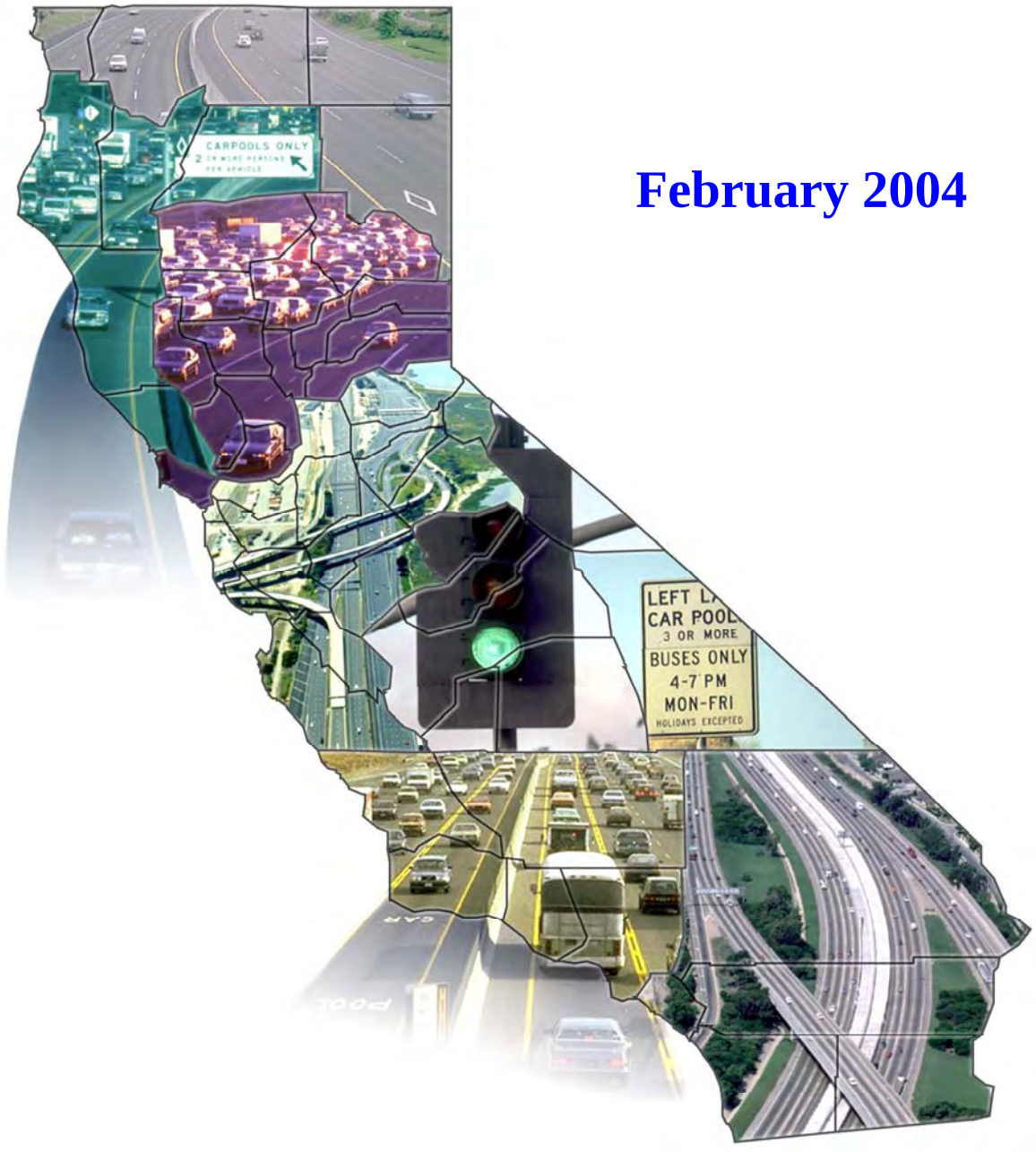
1. Transportation Management System Master Plan (summary)

2. Strategic Growth Plan Summary

3. SANDAG Urban Partnership Proposal Summary

4. Major Project Categories by Segment

Transportation Management System Master Plan



February 2004

System Metrics Group, Inc.

I. Summary

Business is about developing a viable product or service, delivering it to the market, and managing the enterprise to do both effectively. Business success is dependent upon: knowing the market, designing something the market values, and delivering it at a recoverable cost and price the market is willing to bear.

The principles for managing an enterprise evolve over time. While a publicly traded company may focus continuously on maximizing shareholder value, the methods necessary to achieve success change as the company matures. Growth is critical during the early stages of many businesses. Accordingly, an organization may focus on growth strategies, such as capital investments, acquisitions, and opportunistic expansion. As the business matures, the focus shifts from growth to productive operations. This evolution is natural for a manufacturing company, an airline, a retailer, or a service enterprise. It is also inevitable for the California Department of Transportation (Department) and its partners.

California's transportation system has matured and its initial growth phase is nearing its end. The system is largely built and California expands its transportation infrastructure by only a fraction of a percent each year. When expansion is necessary, the Department and its partners choose projects strategically to get the biggest return on what are very expensive investments. Despite these investments, highway congestion continues to grow in California's urban regions at nearly five times the rate of population growth. Californians experienced double the congestion in 2000 compared to 1990.[1] Population and employment projections suggest congestion will double again this decade unless the Department and its partners manage to improve the productivity of the transportation system and restore lost capacity.

The Department and its regional and local partners recognize that addressing congestion requires a multi-pronged approach that includes: adding new capacity, maintaining its infrastructure, investing in and encouraging the use of alternate modes such as transit and rail, and transportation management systems (TMS) and strategies. In fact, the Department has approximately $7 billion of such work under way that reflects this multi-pronged approach, which is referred to as "system management" and discussed in more detail throughout this report.

Restoring lost capacity is a central theme of system management. As congestion has increased, the highway system's productivity has diminished, sometimes as much as 50 percent during the peak commute periods. Just when the highway system needs to "serve" the most customers per hour, it actually serves the fewest. Imagine a fast food restaurant with fewer cashiers during the busy lunch hour. Recovering some of the lost productivity requires adoption of the operational strategies discussed first in the Traffic Operations Strategy (TOPS) report submitted to the California State Legislature in 2000. These strategies include small operational improvement investments that adjust highway

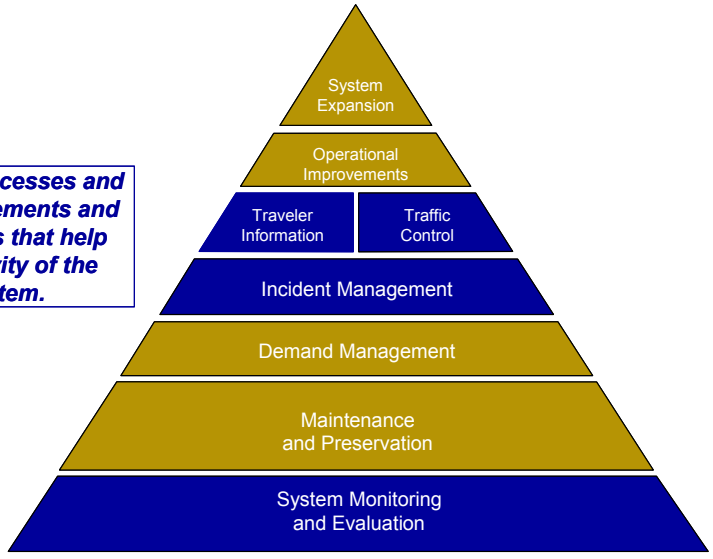
[1] Source: Department of Finance

infrastructure to reduce bottlenecks. The strategies also include improvements in three core business processes that are essential for improved operations: traffic control, traveler information and incident management. These processes rely heavily on technology to manage growing congestion and are generally referred to as the Transportation Management System (TMS). In today's transportation environment, TMS are increasingly critical, particularly in light of the general consensus in the transportation community that capital-intensive infrastructure projects are not enough to meet mobility needs, today and in the future.

This report summarizes the Department's action plan for core TMS processes and describes the expected benefits for more effective system management and improved business processes. The plan recognizes that an evolution in the way the Department does business is necessary. The Department must work closely with and rely heavily on its partners – including the Department of California Highway Patrol (CHP), regional agencies, counties, and local cities – in order to enable it to change. However, the plan also commits the Department and its partners to demonstrate the benefits of this transformation to its partners, the California State Legislature (Legislature) and control agencies each step of the way. The new business model has to be TOPS-style system management, which incorporates TMS, operational improvements, demand management, maintenance and operations, and selective system expansion, as illustrated in Exhibit I-1. The difference between this approach and previous models for managing California's transportation system is an emphasis on the middle sections of the triangle (incident management, traveler information, and traffic control), which are all operational processes. The success of these processes depends on the availability of real-time performance information (found at the base of the triangle), reflecting a new focus on maximizing the system's productivity. It also depends on the Department and the regional and local agencies working closely together and coordinating their technology initiatives and funding priorities.

Exhibit I-1: System Management Framework

TMS are the business processes and associated tools, field elements and communication systems that help maximize the productivity of the transportation system.



The TMS Master Plan outlines several commitments and guiding principles for TMS:

- The Department is committed to system management as an overall way of doing business and recognizes that operational business processes are critical components of the approach.

- The Department recognizes that any success with TMS requires close coordination with and reliance on its state, regional, and local partners. The Department will therefore work with and rely upon regional and local agencies to address challenging strategies, such as ramp metering implementation. Coordination and commitment will be critical for successful implementation of the TMS Master Plan.

- The Department will work with regional agencies to identify and secure new funding sources for expediting implementation of the TMS Master Plan.

- The Department is committed to integrating performance measurement into every aspect of planning and operations so that stakeholders understand current system performance, future scenarios, and system management options. As part of performance measurement, the Department will report regularly on the benefits achieved to provide accountability at every level.

- The Department is committed to integrate its planning and operations activities and improve its tools to better plan for TMS strategies.

- The Department is committed to improving the reliability of its current detection systems first and then expanding detection coverage to all needed areas. Data gathered from this detection will be shared with the Department's regional and local partners, the private sector, and most importantly travelers who function as system co-managers.

- The Department will build on previous system development efforts, enhance current systems, and ensure that each region in the State has similar functionality to manage its system. Enhancements to existing systems will be justified and reviewed by State and regional partners before implementation.

- The Department will redirect resources internally as needed to ensure that the analysis and evaluation of operations is integrated throughout the organization, including the Division of Planning.

- The Department will meet all federal regulations related to the design and deployment of technology-based transportation systems and ensure consistency with regional plans and adherence to State Information Technology rules.

- The Department is focusing on core TMS and recognizes that other State-managed TMS (such as those related to transit) are in earlier stages of development. The Department has initiated a new effort to complement the TMS Master Plan with a plan for other TMS. This effort will also address federal regulations.

The Department expects these commitments and full implementation of the action plan to generate many benefits for Californians:

- At least a 20-percent reduction in congestion statewide and a commensurate increase in freeway productivity by restoring lost capacity.
- Travel reliability or predictability improvements of at least 20 percent (benefiting commuters and truckers alike).
- Increased safety on California highways.
- Improved ability to respond to natural disasters.
- Better security preparedness, as Department staff are able to monitor almost every mile of the urban freeway system and eventually key interregional corridors.

The remainder of this document discusses the background, issues, benefits and action plan for TMS in more detail. As shown in Table I-1, it addresses the requirements set forth in the 2001 budget language with more detail available under separate covers.

Table I-1: Budget Language Requirements

Reporting Requirement	**Section ……..……Page(s)**
(a) A description of the current business processes for managing the transportation system and an assessment of current practices.	TMS Business Process Review Report (under separate cover) Section II Background ……..…..……Page 9 Section V Major Issues ……Page 20
(b) Definitions of the roles and responsibilities of various entities, including the Department, the CHP, and regional transportation planning agencies, with regard to incident management and recurrent congestion.	Section III Roles and Responsibilities.....Page 12
(c) A description of the conditions under which co-location of State transportation management centers and local transportation management centers or CHP communication centers is cost effective and desirable.	Section III Roles and Responsibilities...Page 15
(d) A list of specific measurable objectives and performance measures for system management and how each element and strategy contributes towards those objectives.	Section VI Goals and Objectives ……Page 22
(e) An action plan for improving traffic management that will ensure statewide consistency and coordination of transportation management center activities.	Section VIII Action Plan ……Page 30 Action Plan Schedule …Attachment

Governor Arnold Schwarzenegger's Strategic Growth Plan: Transportation Investments for Mobility and Quality of Life

A Plan for the Future

Governor Arnold Schwarzenegger's Strategic Growth Plan (SGP) calls for a $222 billion infrastructure improvement program to fortify the state's transportation system, education, housing and waterways.

The SGP includes a historic and comprehensive transportation investment package designed to decrease congestion, improve travel times and increase safety, while accommodating future growth in the population and the economy.

This SGP deploys demand-management strategies, such as dedicated truck lanes and high occupancy toll lanes, and builds new capacity. It will enable more traffic to move through existing roadways, rehabilitate thousands of lane miles of roads, add new lanes and increase public transportation ridership. This requires innovation in transportation planning, construction and management, sustained coordination between regional transportation agencies and the state and dedicated funding.

The SGP presents a bold vision of mobility improvements and investments. The initiative is performance-based and outcome-driven, targeting significant reduction in congestion, improved quality of life for Californians, and a world-class transportation system that supports a globally-competitive economy and promotes prosperity.

Investments for the Future

The SGP calls for investing $107 billion in transportation infrastructure during the next decade. Funding includes $47 billion in existing transportation funding sources such as the gas tax, sales tax on gasoline, and federal funds. A total of $40.1 billion in new funding is proposed from other fund sources and leveraging existing funds to attract increased federal, private, and local funding. The remaining $19.9 billion of need will come from General Obligation (GO) bonds.

Complete System Approach

The SGP is based on the premise that investments in mobility throughout the system yield significant improvements in congestion relief. This pyramid outlines the strategies to be used to achieve the outcome of reduced congestion. The base of the pyramid is as important as the apex. System monitoring and preservation are the basic foundation upon which the other strategies are built. System expansion and completion will provide the desired mobility benefits to the extent that investments in and implementation of the strategies below it establish a solid platform.

Performance-Based, Outcome-Driven

The SGP targets a significant decrease in traffic congestion below today's levels. This will occur even while accommodating growth in population and the economy over the decade. Over the next ten years, daily congestion (measured by daily hours of delay) is projected to increase 35% from 558,143 hours in 2005 to 753,000 hours in 2016 based on current trends. With the SGP, congestion levels are estimated to be 454,000 hours daily in 2016, a reduction of more than 100,000 hours (18.7%) below today's levels. Capacity or "throughput" will increase by 15 percent. In addition to congestion relief, the $107 billion investment also results in:

- 550 New HOV lane miles
- 750 new highway lane miles
- 9,000 lane miles rehabilitated
- 15 percent increase in throughput
- 600 miles new commuter lines
- 310,000 more transit ridership
- 11 more intercity rail round trips
- 150 percent increase in intercity rail ridership
- 8,500 miles of separated bike and pedestrian paths

Strategic Growth Plan (SGP) Reforms

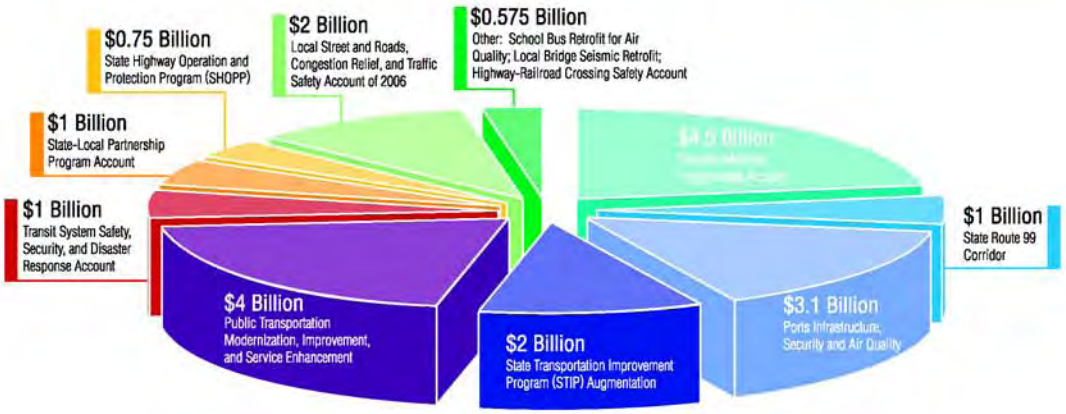
- Provide authority to deliver projects more quickly and efficiently through the use of design-build contracting and design-sequencing
- Enable broader authority for public-private partnerships to attract private capital that can fund priority infrastructure projects

Funding the Right Improvements

The SGP relies on continued cooperative partnerships with the California Transportation Commission (CTC), regional transportation agencies, and local governments to achieve the performance objectives. Increased accountability for outcomes, particularly congestion reduction, is a centerpiece of the transportation portion of the SGP.

Proposition 1B - Highway Safety, Traffic Reduction, Air Quality, and Port Security

Category of Investment	Total Bonds (in Billions)
Corridor Mobility Improvement Account	$4.5
State Route 99 Corridor	$1.0
Trade Corridors/Ports Infrastructure, Security and Air Quality	$3.1
School Bus Retrofit for Air Quality	$0.2
State Transportation Improvement Program (STIP) Augmentation	$2.0
Public Transportation Modernization, Improvement, and Service Enhancement	$4.0
Transit System Safety, Security, and Disaster Response Account	$1.0
State-Local Partnership Program Account	$1.0
Local Bridge Seismic Retrofit	$0.125
Highway-Railroad Crossing Safety Account	$0.25
State Highway Operation and Protection Program (SHOPP)	$0.75
Local Street and Roads, Congestion Relief, and Traffic Safety Account of 2006	$2.0
	$19.9 Billion



SANDAG URBAN PARTNERSHIP AGREEMENT PROPOSAL

INTRODUCTION

The development of the Urban Partnerships Agreement proposal from SANDAG to USDOT is currently under way. We have active dialogues open with potential public and private sector partners and have reached the point where a preliminary list of projects has been defined. SANDAG staff supported by California PATH and PBS&J are leading the proposal development.

This document provides a brief explanation of the UPA program, the expected content of the proposal, SANDAG's approach, the current status of the proposal development effort and the support needed from state and regional leadership as we move towards submission of the proposal.

URBAN PARTNERSHIPS AGREEMENT PROGRAM

As part of the U.S. Department of Transportation's National Strategy to Reduce Congestion on America's Transportation Network, the Urban Partnership Agreement solicited proposals from metropolitan areas to enter into agreements with the Department of Transportation in order to demonstrate strategies with a combined track record of effectiveness in reducing traffic congestion. To the maximum extent possible, the Department will support its Urban Partners with regulatory flexibility and dedicated expertise and personnel.

To support congestion-reducing strategies adopted by the Department's urban partners ("Urban Partners"), the Department expects to utilize discretionary funding available under the Department's Intelligent Transportation System Operational Testing to Mitigate Congestion Program (the "ITS-OTMC Program"), its Value Pricing Pilot Program (the "VPP Program"), and other discretionary grant, lending and credit support programs administered by the Department. Approximately $130 million is currently available to be disbursed under this program, and it is expected that this will be supplemented with additional authorizations.

EXPECTED PROPOSAL CONTENT

USDOT has defined a set of requirements for the proposal. These can be summarized under the following headings:

Background: Discuss why traffic congestion in the region is severe, a summary of the problem, the readiness of the region's political leadership to solve the problem and solutions to congestion that incorporate tolls, transit, technology and telecommuting.

Participating Parties: Provide a preliminary, non-binding list of public and private partners

Comprehensive Congestion Reduction Strategy: Explain a regional plan for reducing congestion through a coordinated set of projects and policies

Congestion Pricing Measures and Affected Areas: Identify the congestion pricing strategy and include the role that pricing would play in affecting congestion as well as specific vehicle categories and coverage area.

Transit Services: Describe transit services, including transit fare pricing policies, BRT and other commuter transit services that are to be provided or supplemented, and the expected impacts of the expanded transit services on congestion.

Telecommuting: Indicate telecommuting, flextime, and various related employer-employee policies to be adopted.

Expedited Project Completion: Discuss any major transportation projects that may be expedited by the UPA.

Travelers Affected Daily: Estimate the number of daily travelers affected including vehicles charged, travel time reductions, traveler mode shift, and telecommuting.

Use of Technology: Indicate what innovative technologies will be applied to achieve the regions congestion reduction goals.

Research, Planning, and Experience: Present the prior work that the proposer and partners have done to reduce congestion, including research, planning, and actual implementation of congestion related activities.

Other Time-Frame Considerations: Indicate the dates during which applicants expect to conduct congestion reduction activities.

Funding Support: Estimate the cost to implement the overall congestion reduction strategy, anticipated source of funds and the amount requested to be covered by Federal sources.

SANDAG'S APPROACH

Our approach is to develop an effective proposal by focusing on the transportation needs of the San Diego region and aligning them with the direction of the USDOT. We have held initial discussions with senior USDOT staff to determine grant application requirement needs and to understand the background and context of the initiative.

Our strategy is based on the reduction of congestion on a region wide basis by tackling the dual aspects of demand management and capacity management in a coordinated manner. An effects-driven approach will be adopted with a strong focus on the definition of the relationship between dollars invested and effects achieved.

Demand management will be accomplished through the implementation of a range of projects designed to empower us with tools for demand management through traveler information services and behavior changing approaches, utilizing market and variable pricing and through mandatory traffic control and regulation.

Capacity management will be achieved through a complementary array of projects designed to maximize the operational management effectiveness of regional transportation across modes. This will reinforce the capacity gains being achieved through our current TransNet-driven infrastructure investment program.

Travelers will be empowered to make smarter travel decisions and have an extended range of user choices, including mode and service.

CURRENT STATUS

The program definition effort has included discussion with a number of potential public and private sector partners. This has resulted in the definition of a preliminary program of 10 major project elements as follows:

SWOOP

Using advanced lane-keeping technology fitted to transit vehicles, this project will enable a small fleet of transit vehicles to service a new BRT route that makes use of the hard shoulder to secure reliable journey times for transit along the I-805 corridor. The emphasis will be placed on overall journey time reliability and spatial efficiency in road use rather than vehicle speed in order to manage differential speeds between lanes. Technology will be harnessed to assist transit operators in driving under space-constrained conditions.

This will enable SANDAG to offer transit as a competitive, reliable, congestion-avoiding alternative to the private car.

In the later stages of the project, a small number of selected freight operators will be offered the opportunity to run similarly equipped goods vehicles on the same shoulders as the transit vehicles, on a fee-paying basis. This will enable the goods operators to improve delivery reliability and provide SANDAG with the ability to evaluate a new business model for making the best use of available road space.

SMART PARKING

A sophisticated parking information and management system making use of web technologies, wireless telecommunications and a parking sensor network will be deployed to deliver new services to the citizens of San Diego. As the first step towards a regional parking management system, drivers who park at selected stations along the Coaster route paralleling the I-5 will be able to determine parking space availability in real time and, if desired, reserve a predetermined parking space for an additional service fee.

In coordination with the managed lanes and public transit ticketing initiatives, this project will enable SANDAG to experiment with coordinated pricing for travel and explore ways to balance transportation demand by increasing value to transit users.

CONGESTION AND VALUE PRICING ON MANAGED LANES, CONNECTORS, AND RAMPS

Building on the initial success delivered through the I-15 Managed Lanes and Dynamic Toll projects, this project will extend and enhance the portfolio of dynamic pricing mechanisms that SANDAG currently employs for demand management. Pricing infrastructure will be extended to cover selected connectors and a network of ramp meters in the region. Using a range of pricing strategies and mechanisms, SANDAG will offer regional commuters a wider range of new choices to purchase journey time savings and increased reliability.

Drivers will be offered the choice to purchase a range of premium, value -priced service options such as express lane use and ramp meter by-pass capabilities. This will provide drivers with a wider range of choices including – pay for a higher level of service, qualify through HOV, or choose to use the basic level of service currently provided. Recognizing that commuters' needs may vary from day to day, this enables trade-offs between time and money savings.

The project will also provide a link between ramp meters and managed lane equipment allowing all elements to be managed in a coordinated fashion, towards the achievement of a coherent set of transportation performance measures. The project will also introduce open road tolling technologies similar to the current FasTrak system to connectors and ramps, enabling drivers to pay fees without stopping.

Smart Vehicles

Approximately 600 vehicles in the current SANDAG vanpool fleet will be equipped with in-vehicle equipment that will enable them to communicate with the roadside and to a management back office. This will enable SANDAG to "push" information to travelers regarding real time transportation conditions, transit alternatives and possibly value-added services including dynamic route guidance and parking information.

The equipped vehicles will also act as "probe data" sources enabling a wide range of data to be collected and converted to information for demand and capacity management. Data to be collected includes travel times, vehicle status and operating information. This will be supplemented by the development of applications that use probe data to develop transportation management strategies and information based services for customers.

This will provide the opportunity to evaluate vehicle related components as possible future enhancements to the current electronic toll collection system to support automated fee payment for parking and managed lanes/ramps usage.

Another important dimension to the project lies in the ability to explore and evaluate the possible use of technology to support distance-based user fees as a possible alternative to fuel-based taxation. The project will address the back office needs of the system.

Advanced Regional Wireless Telecommunications

The project will involve the planning, design, deployment and operation of a region-wide high speed wireless data service capable of supporting the full range of technology projects defined for the region.

Primarily designed to support transportation applications such as smart vehicles, enhanced arterial data collection, public access to WiFi on transit vehicles and a wide range of other advanced transportation technology projects, this will also offer a platform for cities in the San Diego region to enhance public safety operations. It will also include the evaluation and consideration of regional or state-wide business models for maintenance and operations, adopting a managed service approach to wireless service delivery.

Universal Transportation Account

This will deliver increased value and convenience of payment for transportation services by providing users with simpler and more flexible choices for the payment of transportation-related user fees such as tolls, parking fees and transit tickets. This pilot project would build on current FasTrak and Compass card initiatives by integrating the computer systems for tolling, transit and parking payments providing users with a single account to manage all their transportation expenses. The project will also test the use of new public-private partnerships and managed service approaches to system delivery, operation and management.

Enhanced Flexible Transit Services

A range of transit service enhancements will be deployed to provide a more comprehensive, attractive and flexible service offering. This will include a field and operational test involving the provision of rented/leased personal electric vehicles at each end of selected transit routes. This will provide SANDAG with the opportunity to gauge whether additional transit ridership could be achieved by addressing the distance gap that exists between where the transit service ends and where the user needs to go.

In a second element of this project, a 'club coach' type approach to ride sharing will be tested and evaluated. This involves the use of full sized transit buses on a subscription basis by defined group of users. This element will address coordination, administration, business model and data needs associated with the delivery of such a service.

Finally, the current carpool program will be enhanced to provide focused carpool services to and from transit facilities, addressing the "first mile/last mile" needs of transit services.

Transportation Incentives

In order to further promote telecommuting, this project includes "flex schedule" programs as a method to provide peak spreading in addition to removing vehicles from the system on certain days. A regional/ state program that would provide financial rewards to employers for actual telecommuting by employees will be piloted.

Leveraging the Universal Transportation Account pilot and new enforcement strategies for FasTrak, this project provides a means to introduce a comprehensive incentive program that rewards the "smart traveler".

This project will also test the technological and business model needs of a "congestion avoidance rewards" approach to demand management. Peak hour drivers will be invited to participate in a pilot project that offers loyalty program rewards in return for positive travel behavior changes such as mode shift or peak avoidance.

Enhanced Multi-Modal Trip Planner

Enhancements will be made to the current 511 traveler information system to provide customized trip planning services and information on competitive mode choice options delivered via smart vehicles, mobile and personal devices.

This includes the provision of concierge style services to travelers enabling them to make the best mode, route and timing choices for their trips. The possibility for commercialization of traveler information and related services to provide revenue for transportation will also be explored.

Transportation Network Optimization

This project will facilitate the management of the regional transportation network in a coordinated manner taking full account of transportation policy objectives and the desired effects. This involves the development of a data collection and data communications plan to supply data to a special purpose back office focused on management decision support for network wide operations and performance management.

The back office will support the conversion of data to information and the creation of transportation network management strategies. In addition to the technical development of the back office system, the project will address organizational and commercial aspects associated with the establishment and operation of the system.

A focus of the activity will be the provision of information that supports the management and direction of the overall program towards effects attainment and value for dollars invested.

PUBLIC PRIVATE PARTNERSHIPS

Partnerships are a significant feature of this effort. The following partners are currently engaged in the delivery of these services:

- SANDAG and member agencies
- Caltrans / PATH
- Motorola
- ParkingCarma
- SWOOP
- Origin Technologies
- IBM

PROPOSAL SCHEDULE

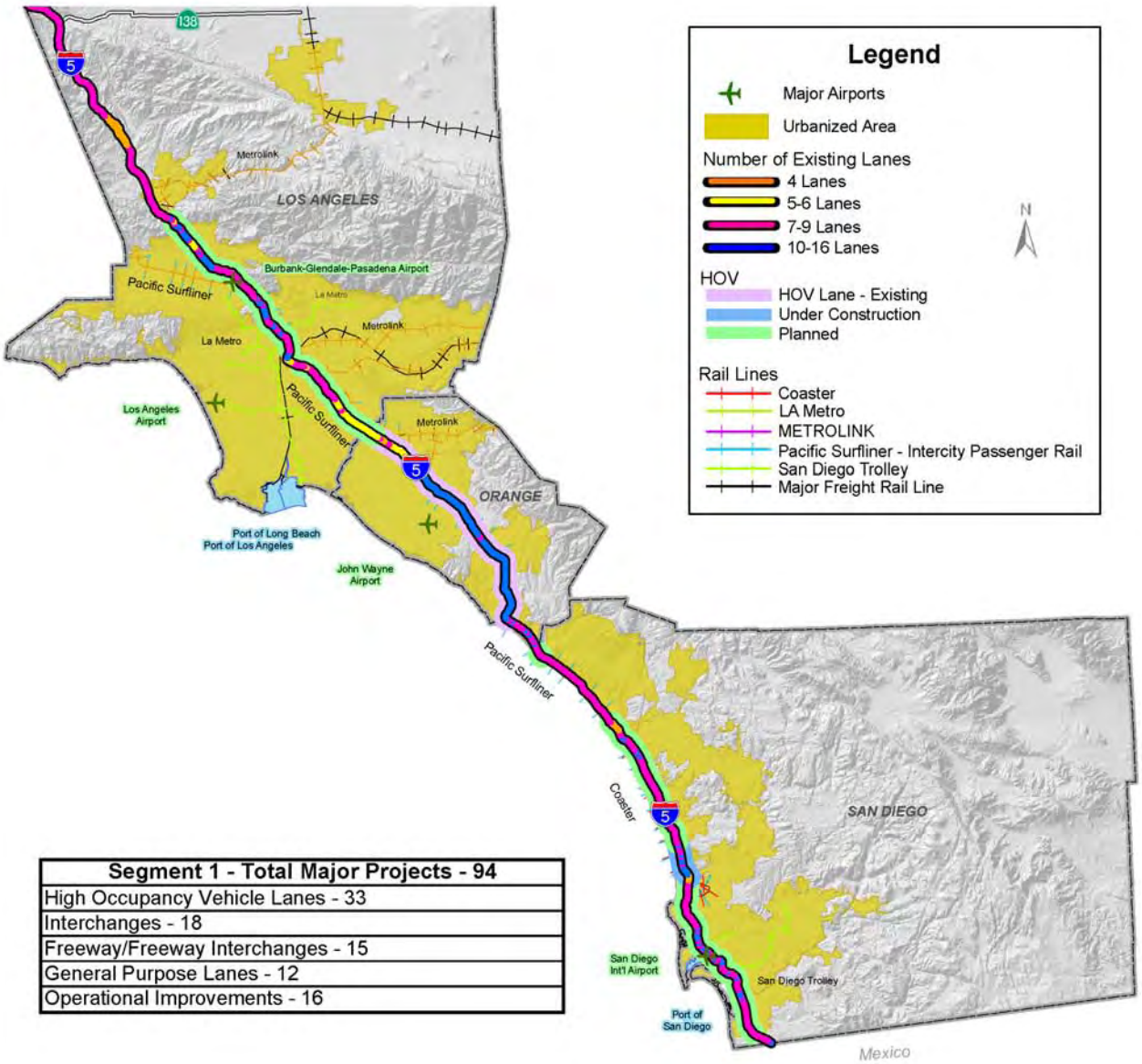
The proposal is due for delivery to USDOT on April 30 2007. USDOT has indicated that a negotiation period will then take place leading to a selection in August 2007 and project initiation in October 2007. An advanced draft of the proposal will be available to senior SANDAG leadership by March 30th to enable direction setting, fine tuning and the necessary approvals.

WHAT WE NEED FROM LEADERSHIP

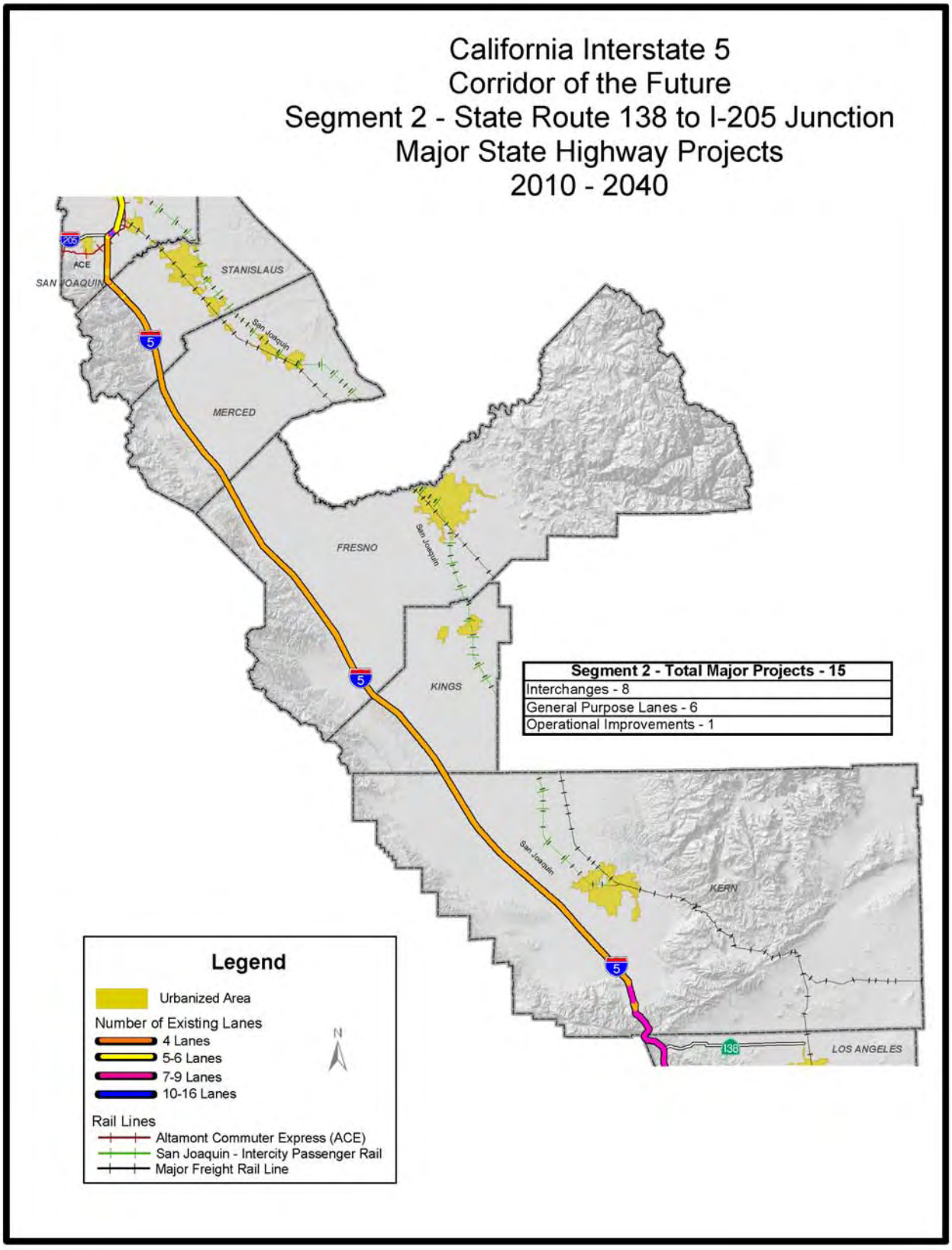
USDOT has indicated that strong local political support is required to be demonstrated if the proposal is to be successful. Leadership action and direction setting is requested with regard to achieving the political support required and demonstrating this to USDOT. Over the next two weeks we would like to receive the following support from senior management and leadership in the region:

1. Letters of support
2. Quotations that can be used to demonstrate strong top down support at state and regional levels

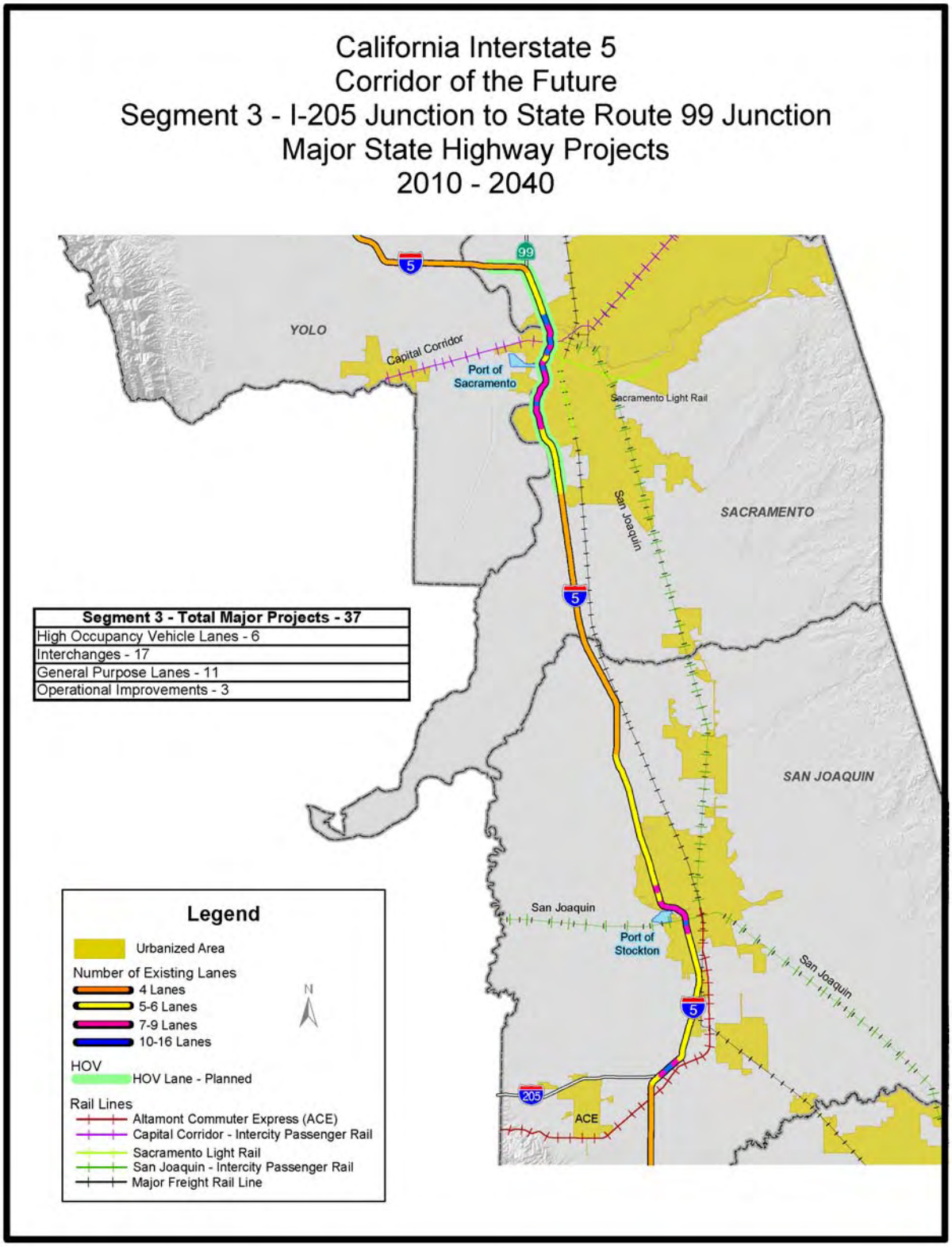
California Interstate 5
Corridor of the Future
Segment 1 - Mexico Border to State Route 138
Major State Highway Projects
2010 - 2040

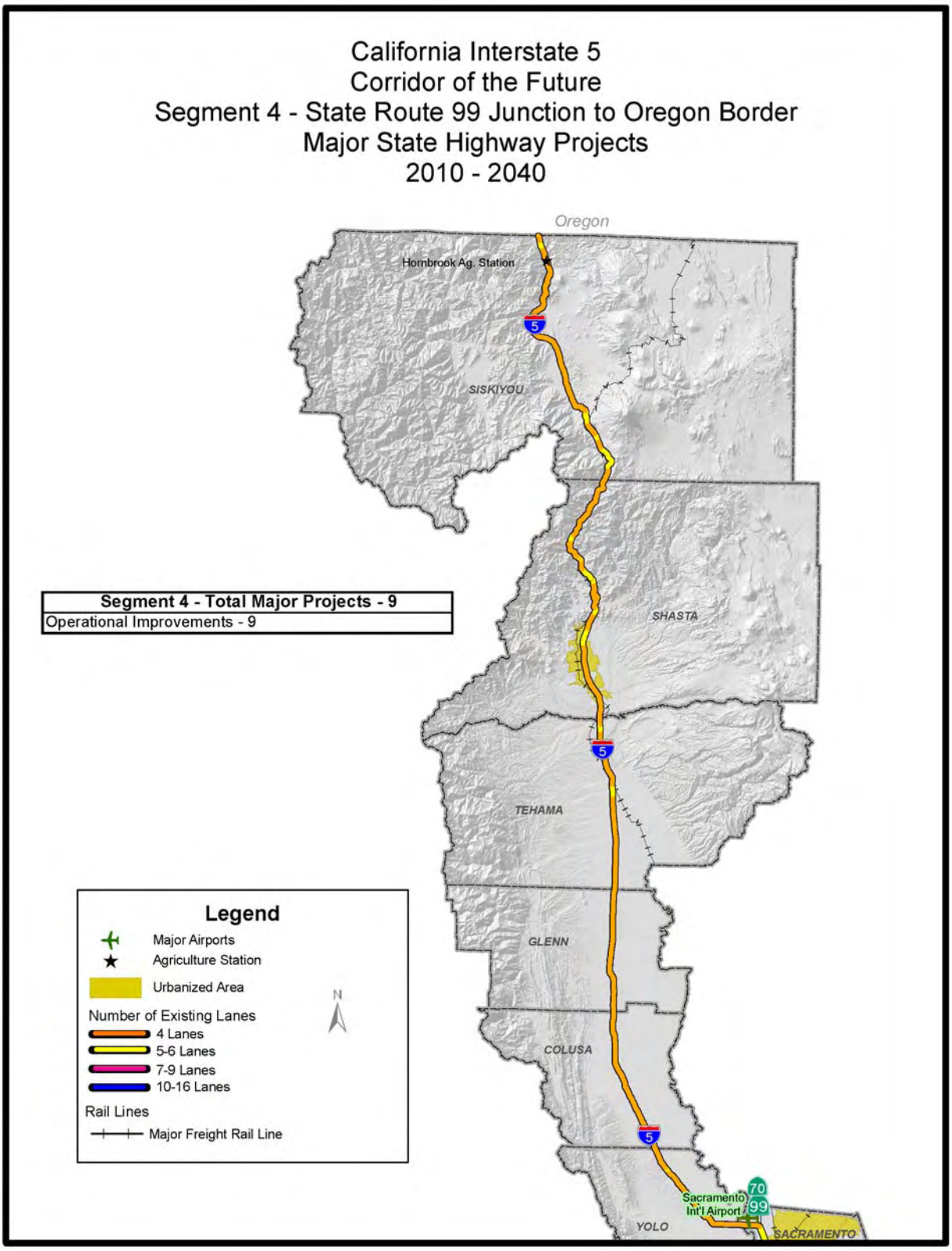


Segment 1 - Total Major Projects - 94
High Occupancy Vehicle Lanes - 33
Interchanges - 18
Freeway/Freeway Interchanges - 15
General Purpose Lanes - 12
Operational Improvements - 16


California Interstate 5
Corridor of the Future
Segment 2 - State Route 138 to I-205 Junction
Major State Highway Projects
2010 - 2040
ACE
SAN JOAQUIN
STANISLAUS
MERCED
FRESNO
KINGS
KERN
LOS ANGELES
San Joaquin
Segment 2 - Total Major Projects - 15
Interchanges - 8
General Purpose Lanes - 6
Operational Improvements - 1
Legend
Urbanized Area
Number of Existing Lanes
4 Lanes
5-6 Lanes
7-9 Lanes
10-16 Lanes
Rail Lines
Altamont Commuter Express (ACE)
San Joaquin - Intercity Passenger Rail
Major Freight Rail Line
N

California Interstate 5
Corridor of the Future
Segment 3 - I-205 Junction to State Route 99 Junction
Major State Highway Projects
2010 - 2040




California Interstate 5
Corridor of the Future
Segment 4 - State Route 99 Junction to Oregon Border
Major State Highway Projects
2010 - 2040
Oregon
Hornbrook Ag. Station
SISKIYOU
SHASTA
TEHAMA
GLENN
COLUSA
YOLO
SACRAMENTO
Sacramento Int'l Airport
5
70
99
Segment 4 - Total Major Projects - 9
Operational Improvements - 9
Legend
Major Airports
Agriculture Station
Urbanized Area
N
Number of Existing Lanes
4 Lanes
5-6 Lanes
7-9 Lanes
10-16 Lanes
Rail Lines
Major Freight Rail Line