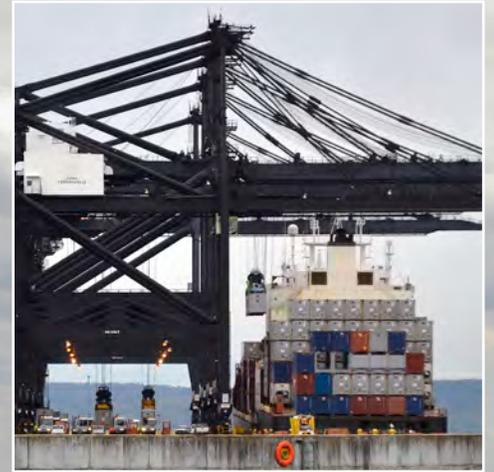


# Washington State FREIGHT MOBILITY PLAN

October 2014



*We can meet this challenge together*



**Washington State  
Department of Transportation**

**Lynn Peterson**  
Secretary of Transportation

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October 1, 2014

The mission of the Washington State Department of Transportation (WSDOT) is to provide and support safe, reliable and cost-effective transportation options to improve livable communities and economic vitality for people and businesses.

To develop the Washington State Freight Mobility Plan, WSDOT worked in close partnership with hundreds of goods shippers, receivers and freight carriers; the Washington State Freight Advisory Committee; state, regional and local agencies and jurisdictions; Tribes; ports; air quality associations; and many other stakeholders. The Plan provides both the public outreach and the analysis necessary to support implementing and funding the state's priority multimodal freight policies, programs and projects in the reauthorization of the federal transportation bill and in future state transportation packages.

The Freight Plan brings Washington into compliance with the Moving Ahead for Progress in the 21st Century (MAP-21) Act, Section 1118 to "develop a freight plan that provides a comprehensive plan for the immediate and long-range planning activities and investments of the state with respect for freight" and with detailed FHWA guidance for State Freight Plans. The Freight Plan also meets the state's legal requirements for a freight mobility plan under RCW 47.06.045 and RCW 47.06.070.

The Freight Plan documents the state's interest in:

- The economic output produced by freight-dependent industries;
- Maintaining and improving the condition and performance of the State Freight Economic Corridors;
- Providing freight transportation services to support future growth; and
- Implementing priority freight policy, operational and capital strategies.

Public comments indicate strong support for the Plan and a desire to move forward. We thank everyone involved in production of the Plan, and look forward to working with them and with you to implement the Plan's recommendations.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Lynn Peterson', written over a light blue circular stamp.

**Lynn Peterson**  
Secretary of Transportation



STATE OF WASHINGTON

FREIGHT MOBILITY STRATEGIC INVESTMENT BOARD

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October 21, 2014

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**Board Members**

Sheri Call

Secretary Peterson:

John Creighton

On behalf of the Freight Mobility Strategic Investment Board, I would like to congratulate the Washington State Department of Transportation on the completion of The Washington State Freight Mobility Plan.

Johan Hellman

Pat Hulcey

Geir-Eilif Kalhagen

This multi-year process has been inclusive of the stakeholders representing freight in our state. As a result, it reflects the importance of freight movement and the need to invest in a freight system that will continue to support our state's economy.

Michael Karnofski

Mark Knudsen

The Freight Mobility Strategic Investment Board served as the lead agency for the Washington State Freight Advisory Committee (WAFAC). Many of the WAFAC policy recommendations are reflected in this plan and demonstrate the importance of our two agencies working together to support freight issues in Washington State.

Lynn Peterson

Robin Rettew

Tom Trulove

Brian Ziegler

I would also like to congratulate WSDOT for working with both Metropolitan and Regional Transportation Planning Organizations for taking a first step to map Washington State Freight Economic Corridors. As this continues to be refined, it will serve as a platform for future investment strategies and performance measures.

**Web Site**

[www.fmsib.wa.gov](http://www.fmsib.wa.gov)

As the plan notes, FMSIB and WSDOT collaboratively developed a new process to identify and inventory first and last mile connectors in Washington State. This inventory is a first of its kind.

Although the Washington State Freight Mobility Plan is complete, we view this plan as a first step to guide future state freight investments. FMSIB is looking forward to a continued partnership with WSDOT as future Washington State freight mobility plans are updated.

Sincerely,

Dan Gatchet, Chair  
Freight Mobility Strategic Investment Board

cc: Barb Ivanov

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# CHAPTER 1: STRATEGIC GOALS

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## Introduction & Statutory Basis

The Washington State Department of Transportation (WSDOT) has led development of the Freight Mobility Plan to ensure that the transportation system in Washington State supports and enhances trade and sustainable economic growth. As one of the most trade-dependent states in the nation, Washington relies on an efficient freight transportation network. In 2012, freight-dependent industries accounted for approximately 44 percent of the state's jobs.<sup>1</sup> Our freight transportation system plays a critical role in fostering economic vitality and competitiveness in regional and global markets.

**ALIGNMENT WITH STATE POLICIES & PLANS.** State law (RCW 47.06.045) requires that “the state-interest component of the statewide multimodal transportation plan shall include a freight mobility plan which shall assess the transportation needs to ensure the safe, reliable, and efficient movement of goods within and through the state to ensure the state’s economic vitality.” At the federal level, the Moving Ahead for Progress in the 21<sup>st</sup> Century Act (MAP-21) directs the U.S. Department of Transportation to encourage states to develop a freight plan.<sup>2</sup>

This Plan was created to meet state and federal legal requirements; to align with the Legislature’s six transportation policy goals: economic vitality, preservation, safety, mobility, environment, and stewardship outlined in RCW 47.04.280, with a significant focus on the newest goal, economic vitality; and to support freight-related strategies and recommended actions in the statewide *Washington Transportation Plan 2030*. This Plan also incorporates key points and findings from WSDOT’s statewide *Rail Plan*, *Highway System Plan*, and statewide *Aviation System Plan* by highlighting the essential role that these modes play in freight mobility.

**CONFORMS TO NATIONAL FREIGHT GOALS.** Informed by research, data, analysis, and stakeholder input, this Plan will improve Washington’s ability to achieve national freight goals:

- Improve the contribution of the freight transportation system to economic efficiency, productivity, and competitiveness
- Reduce congestion on the freight transportation system
- Improve the safety, security, and resilience of the freight transportation system
- Improve the state of good repair of the freight transportation system
- Use advanced technology, performance management, innovation, competition, and accountability in operating and maintaining the freight transportation system
- Reduce adverse environmental and community impacts of the freight transportation system

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<sup>1</sup> This statistic is calculated from Washington State Employment Security covering employment data for the 60 most freight-dependent industry sectors stratified by 3-digit NAICS code in Washington State.

<sup>2</sup> H.R. 4348, Section 1118 State freight plans, page 69. Available at: <http://www.gpo.gov/fdsys/pkg/BILLS-112hr4348enr/pdf/BILLS-112hr4348enr.pdf>

## Purpose & Objectives

The primary purpose of this Plan is to guide cost effective capital and operating investments in the state freight system to ensure maximum benefit and efficient movement of goods. This Plan makes a case for the importance of investing federal and state funds in freight priority projects and programs through: an overview of the essential role of freight to our economy; a discussion on the condition and performance of the State's transportation's assets and system; and a summary of the policies, strategies, and institutions that support freight.

The Plan will help Washington successfully compete for federal freight funds by providing a data-driven benefit analysis supporting truck freight and intermodal freight projects that meet federal criteria and goals, and by integrating existing state modal plans into a single state freight plan to address all freight modes in the state system: truck, rail, waterway, and aviation.

**GUIDED BY THREE KEY OBJECTIVES.** Reflecting the diversity of the state and the various ways in which freight contributes to Washington's economy, three objectives guided development of this Plan:

- Developing an urban goods movement system that supports jobs, the economy, and clean air for all; and provides goods delivery to residents and businesses.
- Maintaining Washington's competitive position as a global gateway to the nation with intermodal freight corridors serving trade and international and interstate commerce, and the state and national Export Initiatives.
- Supporting rural economies' farm-to-market, manufacturing, and resource industry sectors.

# CHAPTER 2: ECONOMIC CONTEXT OF THE STATE FREIGHT TRANSPORTATION SYSTEM

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## The Importance of Freight

Washington’s freight system is important to the economy of our state and country in many ways: it underpins our national and state economies, supports national defense, directly sustains hundreds of thousands of jobs, and delivers the necessities of life to residents on a daily basis. Goods are shipped through, into, out of, and around Washington through our system of roads, railroads, marine and air ports, waterways, and other intermodal facilities.

**FREIGHT CREATES JOBS AND SUPPORTS ECONOMIC DEVELOPMENT.** The number of Washington jobs in freight-dependent industries (including wholesale, retail, manufacturing, construction, transportation, and agriculture/timber and wood products) grew by 2.6 percent, from 1.20 million jobs in 2011 to 1.23 million jobs in 2012.<sup>3</sup> In 2012, total imports and exports were valued at \$123.2 billion and gross business income for freight-dependent industries totaled \$450 billion.<sup>4</sup>

Washington State’s freight system has three components:

- **Global Gateway.** Washington is a gateway state, connecting Asian trade to the U.S. economy, Alaska to the Lower 48 states, and Canada to the U.S. West Coast. As the fifth largest exporting state in the country, a significant amount of Washington jobs are linked to international trade. Trade in our state also supports the larger U.S. economy – imports support U.S. manufacturers and provide goods to consumers, while agricultural exports support family farms throughout the Pacific Northwest and Midwest. Goods coming into Washington by container ship are often headed to the Midwest and East Coast.
- **Made in Washington.** Washington’s manufacturers and farmers rely on the freight system to ship Washington-made products to local customers, to U.S. markets in California and on the East Coast, and worldwide. Washington’s producers generate wealth and jobs in every region in the state.
- **Delivering Goods to You.** Washington’s distribution system is a fundamental local utility, since without it our residents would have nothing to eat, nothing to wear, nothing to read, no spare parts, no fuel for their cars, and no heat for their homes, among other things.

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<sup>3</sup> Washington State Employment Security Department, Covered Employment Classified by Industry, Q1 2011 & Q1 2012.

<sup>4</sup> US Census Bureau Foreign Trade Statistics, Imports and Exports by State, 2012. Washington State Department of Revenue Gross Business Income, 2011.

For more information about the economic context of the freight system, freight data and statistics, please see the Freight Mobility Plan Data Report at:

<http://www.wsdot.wa.gov/NR/rdonlyres/881F4A29-E45A-46F6-85E2-D5B1B7510EB3/0/Task2ReportFinal.pdf>

### ***What Will Happen to the State and Regional Economies if Truck Freight Encounters More Congestion on our Highways?***

It is estimated that a 20-percent increase in congestion would result in a net loss of more than 27,250 jobs and \$3.3 billion (in 2011 dollars) in economic output in Washington State.

To fully evaluate this question WSDOT, together with the Washington State University (WSU) Social & Economic Sciences Research Center and the WSU Freight Transportation Policy Institute, conducted an extensive survey of freight-dependent industries and companies in Washington State. Questions included information about their transportation and warehousing costs, as well as their response to a 20-percent increase in road congestion. Survey data was used in conjunction with an input-output analysis to quantify these congestion impacts on the local economy. Key findings from this effort include:

- Many firms surveyed in this effort reported that a 20-percent increase in the level of congestion would translate into significant direct business cost increases – in the form of rising fuel and labor costs, new equipment, or increased inventory carrying costs. In fact, it is projected that 20 percent more truck congestion would result in over \$14 billion (in 2011 dollars) of increased operating costs to Washington’s freight-dependent industries.
- Of the 1,000 private-sector freight-dependent industries that responded to the surveys during this research effort, 56 percent indicated that they would pass costs onto consumers. Six percent indicated that they would be forced to close, and three percent would relocate. Nineteen percent of industries would absorb the costs, and 16 percent would make internal operational changes to offset increasing transportation costs.

For more information see the full report at:

<http://www.wsdot.wa.gov/NR/rdonlyres/0DA2A843-8BC3-41B7-A0F3-C72A610BEA90/0/EconomicImpactCongestion.pdf>

## Global Gateway

**FREIGHT CONNECTS OUR ECONOMY TO ASIA, CANADA, ALASKA, AND BEYOND.** Many of the state’s key international trading partners are in Asia, and Washington plays a critical role in connecting Asian trade to the U.S. economy. Washington’s 2012 exports to Asia are valued at over \$37 billion.<sup>5</sup> The Ports of Seattle and Tacoma handle the majority of Washington’s international container exports and imports, while our rail corridors, highways, and waterways serve to transport those goods to locations in Washington and beyond. The Ports of Vancouver USA, Kalama, Longview, Grays Harbor, Pasco, and Everett handle the majority of bulk goods.

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<sup>5</sup> Office of Trade and Industry Information, 2012 NAICS Total All Merchandise Exports to Asia. Available at <http://tse.export.gov/TSE/TSEReports.aspx?DATA=SED>

Sea-Tac International Airport ranks 19<sup>th</sup> by air cargo volume in U.S. and is the third largest airport for international cargo on the West Coast (excluding Alaska). The airport offers daily, non-stop service to 17 international destinations. King County International/Boeing Field Airport is ranked the 25<sup>th</sup> largest air cargo center in the nation.

Washington's multimodal freight system facilitates trade with Alaska and Canada. The value and volume of freight moved between Puget Sound seaports and Alaska makes this one of the nation's most important routes for domestic waterborne commerce. Canada is also an important trading partner. In 2011, Canadian goods valued at more than \$14.4 billion entered the U.S. economy through Washington, and American goods valued at \$8.4 billion entered Canada through Washington.

**FREIGHT SUPPORTS NATIONAL DEFENSE.** The U.S military depends on Washington's freight system to move cargo for national defense. The military bases in Washington State are: Joint Base Lewis-McChord (JBLM), Fairchild Air Force Base, Naval Base Kitsap, Naval Station Everett, and Naval Air Station Whidbey Island. Employing more than 91,000 people, the military provides more than \$3.1 billion annually in total payroll in Snohomish, King, Pierce, and Kitsap counties.<sup>6</sup>

JBLM, which is the only Power Projection Platform (an Army installation that strategically deploys one or more high priority active component brigades or larger and/or mobilizes and deploys high priority Army reserve component units<sup>7</sup>) on the West Coast, would rely on the I-5 corridor in the event of a major conflict. If such an event were to occur, military goods from across the nation would surge through I-5 in Central Puget Sound to the Ports of Seattle, Tacoma, Olympia, and Everett.

**FREIGHT PLAYS A KEY ROLE IN SUPPORTING SUPPLY CHAINS IN WASHINGTON STATE.** A supply chain is defined as the movement of materials and information as they flow from the production source to the end consumer. Thus, it is made up of the people, activities, and resources involved in moving a product from supplier to consumer. The most important Washington state supply chains, by value, are described throughout this chapter. They include the following: international logistics and trade, aerospace manufacturing, fuel, apples, milk, wheat, potatoes, and retail/wholesale.

In 2012, Washington's **international logistics and trade**<sup>8</sup> cluster had a gross business income of \$1.3 billion. The international logistics and trade cluster is made up of businesses such as shipping agents, customs brokers, and freight forwarders that facilitate arrangement of transportation between shippers and carriers for importing and exporting goods to and from the U.S. from many foreign locations. In Washington State these businesses are mainly clustered around the central Puget Sound, with smaller centers in the Vancouver, Washington and the Spokane area. These businesses facilitate the entry of many different kinds of goods into Washington through ports and land border locations. In 2012 there were 392 of these businesses located in Washington State, up from 340 in 2009, a 15 percent increase as shown in Exhibit 2.1. A larger map can be viewed in Appendix A.

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<sup>6</sup> Prosperity Partnership, *Regional Economic Strategy for the Central Puget Sound Region*, July 2012, page10.

<sup>7</sup> John Pike, "Power Projection Platform," available at: <http://www.globalsecurity.org/military/facility/ppp.htm>.

<sup>8</sup> The international logistics and trade cluster corresponds with NAICS code 488510 – Freight Transportation Arrangement.

## Exhibit 2.1 International Logistics and Trade Cluster in Washington State



### LEGEND

● International Logistics and Trade Business Locations (NAICS code 488510 - Freight Transportation Arrangement)

### Freight Economic Corridors

— T1 Truck Freight Economic Corridors: Freight corridors carrying more than 10 million tons per year

— T2 Truck Freight Economic Corridors: Freight corridors carrying 4 million to 10 million tons per year.

— Alternative Freight Economic Corridors: Corridors carrying 600,000 to 4 million tons per year and serve as alternatives to T1 freight routes

Source: Washington State Department of Revenue; Washington State Freight and Goods Transportation System.

## Made in Washington

**FREIGHT SUPPORTS OUR REGIONAL ECONOMIES.** Washington’s regional economies and their manufacturing, agriculture, construction, and forestry components depend on an effective and efficient freight transportation system. Manufacturers and farmers rely on the freight system to ship Washington-made products to customers here and abroad. Freight-dependent industries produce 44 percent of all Jobs in Washington State<sup>9</sup>. The state’s major regions, primary freight-dependent industries, freight-dependent jobs, and regional domestic output are summarized in Exhibit 2.2 and Exhibit 2.3. Freight-dependent jobs occur in the most heavily freight-dependent industry sectors such as wholesale and retail, manufacturing, construction, agriculture, and transportation. These sectors are very reliant on the multimodal freight network to conduct day-to-day business.

<sup>9</sup> Total Jobs, Taxes on Production and Imports less Subsidies, and Regional Domestic Output figures are from 2010 Washington State IMPLAN data.

### Exhibit 2.2 Freight-Dependent Industries

Region	Freight Dependent Industries	Jobs	Taxes on Production and Imports less Subsidies	Regional Domestic Output
Central Puget Sound	Wholesale/Retail	465,599	\$ 5,775.1 million	<b>\$91.9 billion</b>
	Manufacturing	232,897	\$ 762.8 million	
	Construction	130,914	\$ 124.4 million	
	Agriculture/Timber/Wood Products	15,888	\$ 59.4 million	
	Transportation	47,422	\$ 569.2 million	
	<b>Total</b>	<b>892,721</b>	<b>\$7,291 million</b>	
Columbia Basin and North Central Washington	Wholesale/Retail	76,864	\$ 888.3 million	<b>\$10.8 billion</b>
	Manufacturing	20,986	\$ 83.0 million	
	Construction	19,105	\$ 23.3 million	
	Agriculture/Timber/Wood Products	55,085	\$ 124.8 million	
	Transportation	7,423	\$ 26.7 million	
	<b>Total</b>	<b>179,463</b>	<b>\$1,146.1 million</b>	
SW Washington	Wholesale/Retail	21,949	\$ 651.7 million	<b>\$7.7 billion</b>
	Manufacturing	53,339	\$ 90.8 million	
	Construction	18,153	\$ 23.5 million	
	Agriculture/Timber/Wood Products	6,353	\$ 13.5 million	
	Transportation	7,046	\$ 36.1 million	
	<b>Total</b>	<b>106,841</b>	<b>\$815.6 million</b>	
NW Washington	Wholesale/Retail	38,711	\$ 426.8 million	<b>\$6.4 billion</b>
	Manufacturing	14,379	\$ 69.7 million	
	Construction	13,634	\$ 14.4 million	
	Agriculture/Timber/Wood Products	8,484	\$ 25.9 million	
	Transportation	2,896	\$ 23.9 million	
	<b>Total</b>	<b>78,105</b>	<b>\$560.8 million</b>	
NE Washington	Wholesale/Retail	60,009	\$ 738.1 million	<b>\$6.3 billion</b>
	Manufacturing	16,759	\$ 43.7 million	
	Construction	16,751	\$ 23.1 million	
	Agriculture/Timber/Wood Products	5,964	\$ 10.4 million	
	Transportation	5,614	\$ 33.7 million	
	<b>Total</b>	<b>105,098</b>	<b>\$849 million</b>	
SE Washington	Wholesale/Retail	19,236	\$ 256.9 million	<b>\$3.2 billion</b>
	Manufacturing	10,547	\$ 37.2 million	
	Construction	5,337	\$ 6.3 million	
	Agriculture/Timber/Wood Products	18,511	\$ 38.3 million	
	Transportation	3,085	\$ 12.7 million	
	<b>Total</b>	<b>56,716</b>	<b>\$351.4 million</b>	
Coastal Counties	Wholesale/Retail	21,391	\$ 234.9 million	<b>\$2.5 billion</b>
	Manufacturing	8,752	\$ 34.6 million	
	Construction	6,763	\$ 6.8 million	

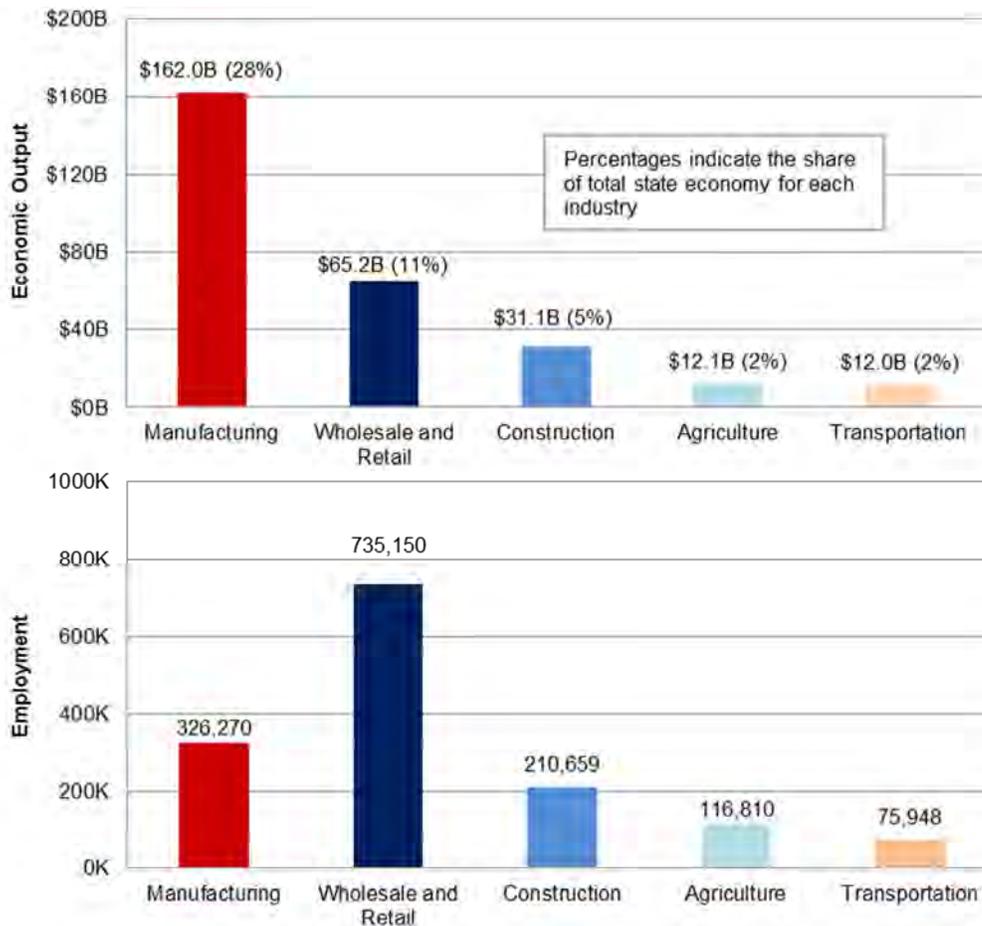
Agriculture/Timber/Wood Products	6,526	\$ 25.6 million
Transportation	2,462	\$ 13.4 million
<b>Total</b>	<b>45,893</b>	<b>\$315.3 million</b>

**Exhibit 2.3 Regions Used to Define Freight Dependent Jobs/Industries**



Exhibit 2.4 shows the industries that are most important in terms of economic output and employment. Note that while manufacturing has the highest economic output, it is second to the wholesale and retail industry in terms of the number of people employed.

## Exhibit 2.4 Economic Output and Employment by Industry in Washington State, 2010



Note: Dollars are in billions.  
Source: IMPLAN 2010.

Some of the most important made-in-Washington supply chains include manufacturing, fuel, and agricultural supply chains described as follows:

Manufacturing supply chains are heavily dependent on freight systems and accounted for \$155 billion in gross business income, 24 percent of the total produced in Washington State in 2012. The most significant manufacturing subsector in Washington is **aerospace manufacturing** with \$51.2 billion in gross business income<sup>10</sup> in 2012. The other most significant manufacturing subsectors by gross business income are petroleum and coal products manufacturing, food manufacturing, computer and electrical product manufacturing, and wood product manufacturing. Within food manufacturing subsector seafood production alone generated \$2.5 billion in gross business income in 2012, and fish products exported out of the Seattle Customs District worth \$1.6 billion in value.

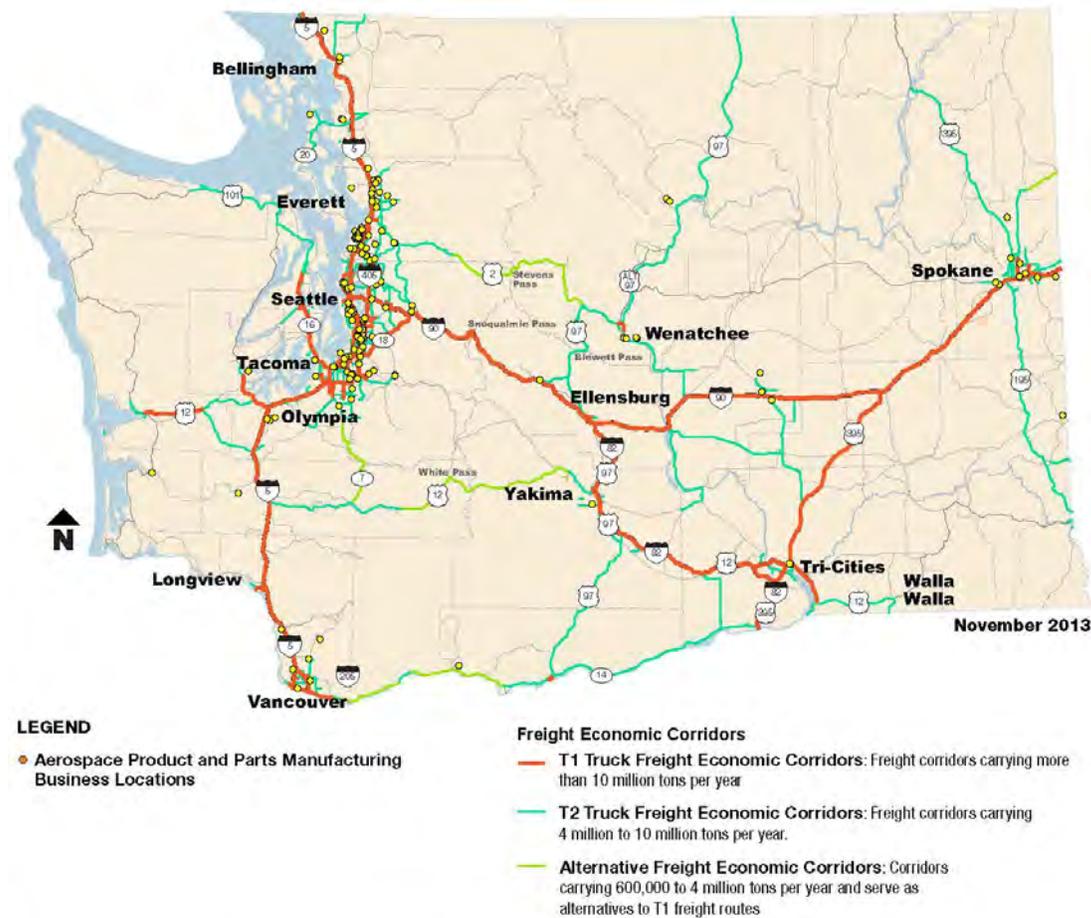
The Boeing Company is the largest aerospace manufacturer in the state and is a world-wide industry leader. Boeing's manufacturing supply chain is global. Boeing maintains established

<sup>10</sup> Gross Business Income is defined as total business sales less cost of goods sold. Economic Output is defined as the productivity of the region, in this case Washington State, as measured by the value of goods and services produced.

manufacturing, service, and technology partnerships around the world through contracts with 26,500 suppliers and partners, many of which are located in Washington State. Its exports, which are generally flown directly overseas from Boeing’s assembly plants, lift Washington from an average exporting state to one of the highest in the country in terms of export value per resident in the country. Boeing has customers in 150 countries and produced \$81.7 billion total revenue in 2012.<sup>11</sup>

To support its assembly plants in Everett and Renton and final production and testing activity at Boeing Field, Boeing’s supply chain requires an efficient highway network in the Central Puget Sound region and multistate highway corridors between their plants with access for over-dimensional truck loads. Exhibit 2.5 shows the business locations of aerospace product and parts manufactures in Washington on the state’s truck freight economic corridors (see Chapter 4 for definition). A larger map can be viewed in Appendix A.

**Exhibit 2.5 Aerospace Supply Chain in Washington State**



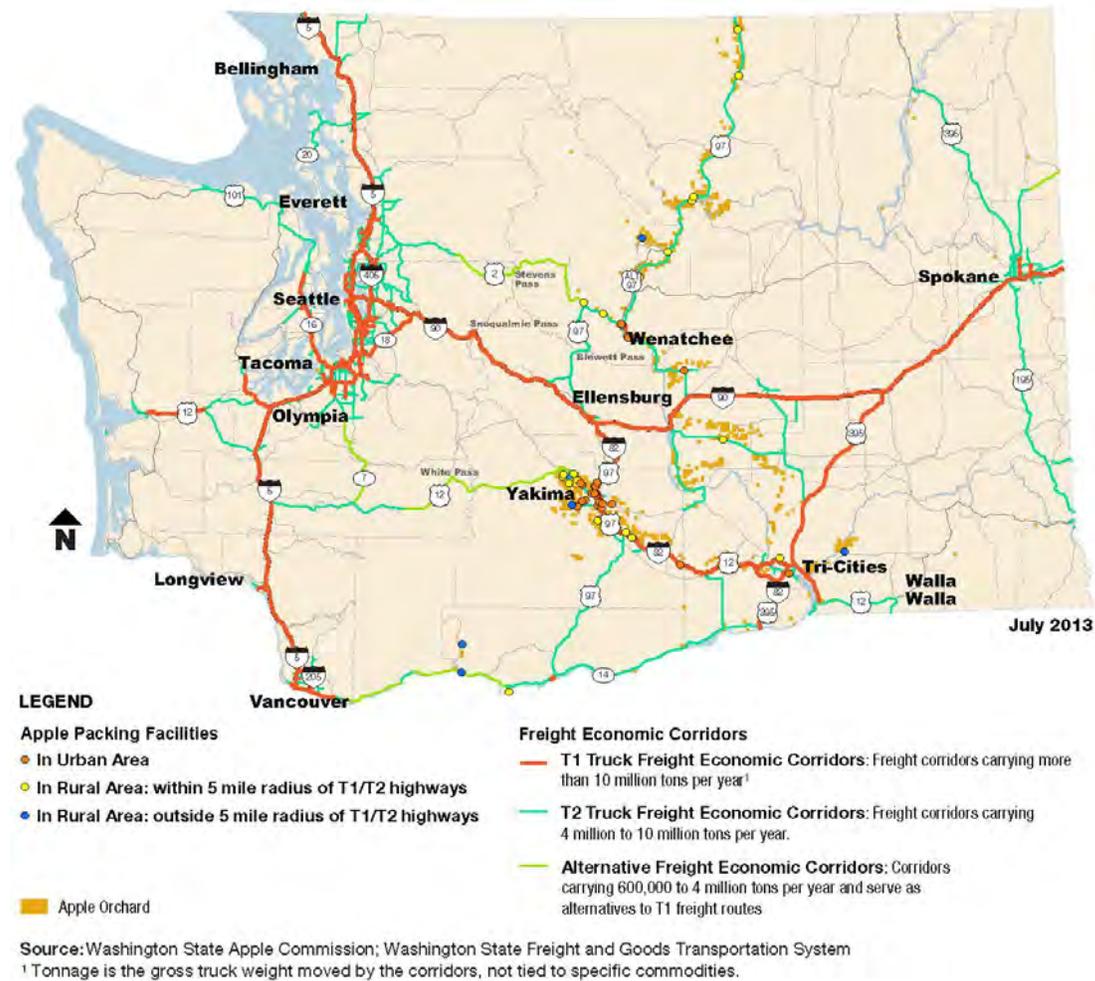
Source: Washington State Department of Revenue; Washington State Freight and Goods Transportation System

The top four agricultural supply chains in Washington are apples, dairy, wheat, and potatoes. In 2011, **apples** were one of Washington’s top agricultural commodities by value, worth \$1.83 billion. In 2012, approximately 130 million 40-pound boxes were harvested from

<sup>11</sup> The Boeing Company Overview. Available at <http://www.boeing.com/companyoffices/aboutus/brief.html>

Washington apple orchards.<sup>12</sup> After harvest, the fruit travels by truck in bins to processing facilities. It is important to note that apples are not necessarily processed at the nearest facility; some of the apples from the Wenatchee area are trucked to processing facilities in the Yakima area and vice-versa. Due to labor availability, nearly all the apples grown in the Columbia Basin (south of Moses Lake and east of Ellensburg) are trucked to Wenatchee or Yakima for processing. Apples leave the processing facility packed into 40-pound boxes, about 10 to 15 percent of which travel by rail to the Midwest and East Coast. The remaining 85 to 90 percent travel by truck to other locations inside and outside Washington, with approximately 38 million boxes being exported internationally. In 2012, 10 million boxes were exported to Mexico and 7 million boxes were exported to Canada by truck. The remaining 21 million boxes were trucked to the container ports in the Puget Sound for export to 42 other countries.<sup>13</sup> Exhibit 2.6 shows the locations of apple packing facilities on the state's truck freight economic corridors. A larger map can be viewed in Appendix A.

**Exhibit 2.6 Apple Supply Chain in Washington State**

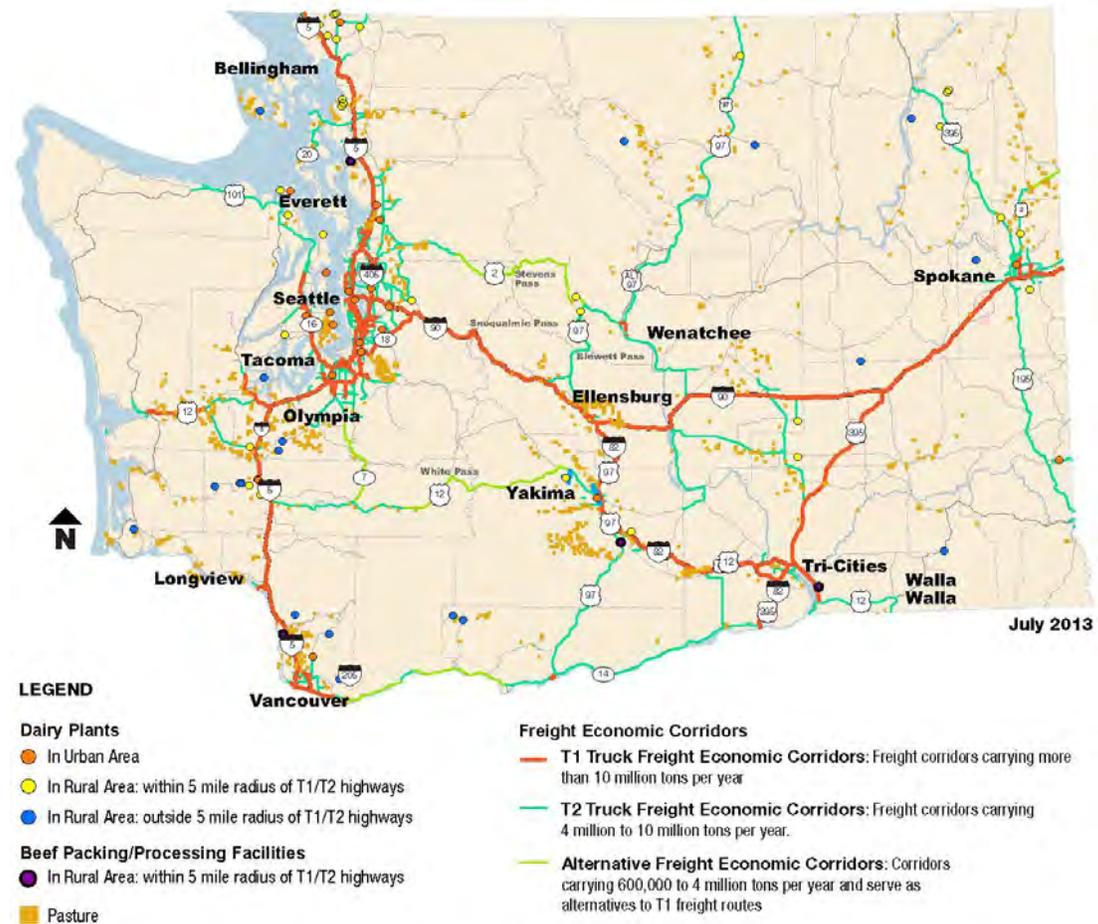


<sup>12</sup> Washington State Apple Commission and Washington Growers Clearing House Association.

<sup>13</sup> Washington State Apple Commission and Washington Growers Clearing House Association.

In 2011, **milk** was one of Washington’s top agricultural commodities by value, worth \$1.28 billion. There are dairy farms in both western and eastern Washington. On the west side of the state most dairy farms are located along the I-5 corridor, mostly in Whatcom and Skagit Counties. Over the past several decades there has been a gradual loss of farms in western Washington, as increasing property values have encouraged milk production to move east to Sunnyside and the Spokane Valley. Milk travels by tanker truck from farms to processing facilities, most of which are located near population centers on the west side of the state. About 90 percent of fluid milk moves from processing facilities to in-state or in-region destinations such as supermarkets. A portion of Washington milk is processed for use as an ingredient in other food products. This type of processed milk product is sold in truckload or railcar quantities, with about half being shipped to U.S. destinations and the other half being transported to the Port of Seattle, the Port of Tacoma, or the Port of Portland for export. Exhibit 2.7 shows the locations of dairy plants and beef packing/processing facilities on the state’s truck freight economic corridors. A larger map can be viewed in Appendix A.

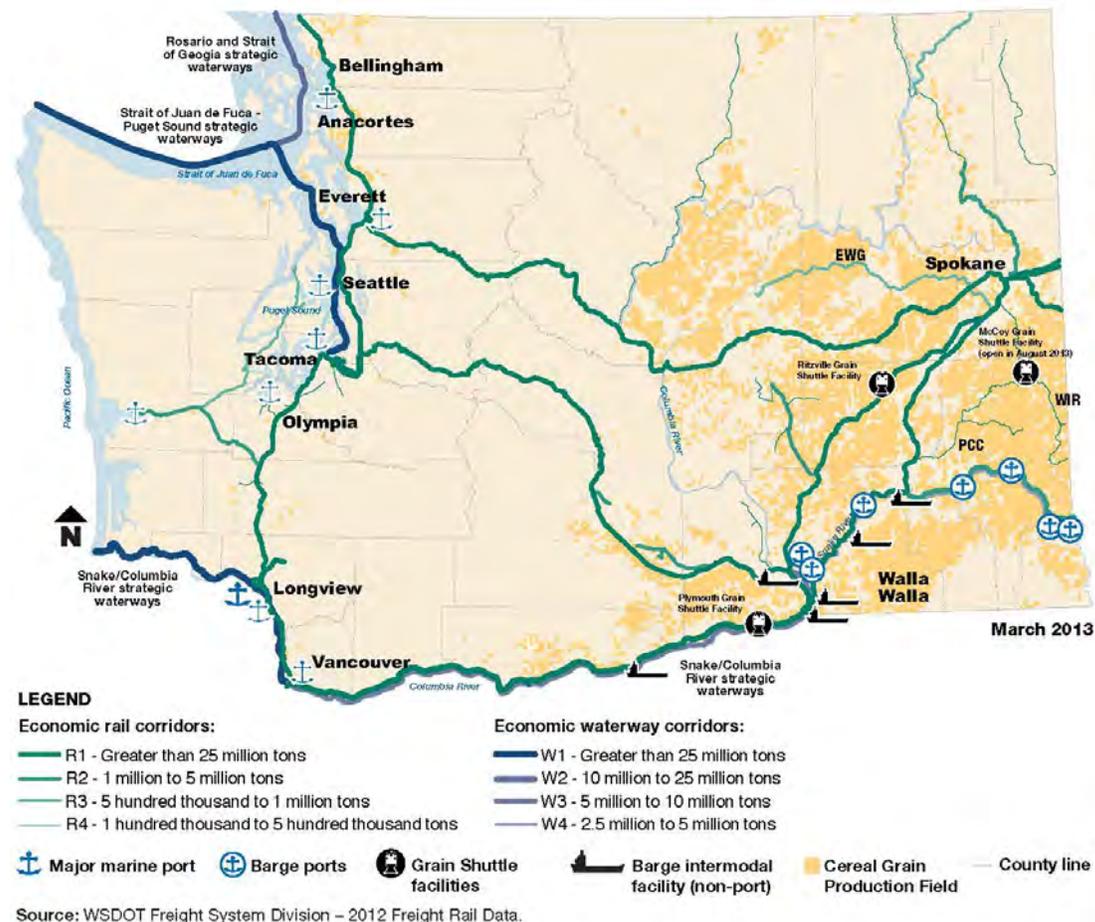
**Exhibit 2.7 Milk Supply Chain in Washington State**



Source: Washington State Department of Agriculture; Washington State Freight Goods Transportation System

In 2011, Washington was the fourth largest **wheat grower** in the nation, producing 167.8 million bushels of wheat grown on 2.3 million acres. Getting this product from the fields in southeastern Washington to consumers across the world involves the following steps: Harvested wheat is taken by farmers' grain trucks to on-farm storage or nearby commercial grain elevators. Once the wheat is sold, it is transferred by truck to regional rail or barge-loading facilities. Some of the wheat travels by rail to coastal grain terminals, while some travels to Portland by barge from intermodal facilities along the Columbia-Snake River system. Nearly 74 percent of the down-river barge traffic on the Columbia-Snake River system is wheat. From these seaport terminals, grain is loaded onto ocean freighters and exported around the world.<sup>14</sup> Exhibit 2.8 shows the locations of cereal grain production fields on the state's rail and waterway freight economic corridors. A larger map can be viewed in Appendix A.

**Exhibit 2.8 Wheat Supply Chain in Washington State**



In 2011, **potatoes** were one of Washington's top agricultural commodities by value, worth \$771 million. Approximately 9.8 billion pounds of Washington potatoes are grown in three

<sup>14</sup> Washington Grain Commission. *Washington Wheat Facts 2011-2012* Available at: <http://www.wawg.org/core/files/wawg/uploads/files/2011WF4Web.pdf>

distinct growing regions: the lower Columbia Basin, upper Columbia Basin, and the Skagit Valley. The potatoes grown in the upper and lower Columbia Basin move from the fields by truck to local potato processing facilities to be turned into frozen potato products (73 percent), fresh potatoes (14 percent), dehydrated potato products (11 percent), or potato chips (2 percent). The majority of the Skagit Valley potato crop remains fresh potatoes (86 percent), with the rest of the crop (14 percent) being processed into dehydrated potato products outside the Skagit Valley. After processing, most potatoes or potato products (76 percent) travel by truck to their final destinations, with a smaller portion traveling by rail (12 percent), container truck to ocean port (9 percent), and truck repacked to railcar (2 percent).<sup>15</sup> Exhibit 2.9 shows the locations of potato processing/packing facilities on the state's truck freight economic corridors. A larger map can be viewed in Appendix A.

**Exhibit 2.9 Potato Supply Chain in Washington State**



Source: Washington State Potato Commission; Washington State Freight and Goods Transportation System 2011 Update

<sup>1</sup> The term 'urban area' means the highway urban and urbanized areas defined by FHWA after each decennial US Census. It includes all areas with 50,000 or more people by the Census bureau, and urban areas of 5,000 through 49,999 people, using city limits or Census Designated Place boundaries with some adjustments.

<sup>2</sup> Tonnage is the gross truck weight moved by the corridors, not tied to specific commodities.

<sup>15</sup> Creamer, Selmin and Jessup, Eric. Washington State Industry Outlook and Freight Transportation Forecast: Potato Industry, 2008.

Washington’s fresh and processed potato crops consumed within Washington, other states and other countries. The table below shows these destinations differ based on origin:

Destination	Lower Columbia Basin	Upper Columbia Basin	Skagit Valley
Washington	27%	13%	9%
Idaho	0%	34%	0%
Oregon / California	17%	13%	45%
States West of the Mississippi River	22%	13%	13%
States East of the Mississippi River	24%	12%	24%
Canada	9%	3%	7%
International	1%	12%	2%

Source: 2007 Potato Survey: Creamer, Selmin and Jessup, Eric. Washington State Industry Outlook and Freight Transportation Forecast: Potato Industry, 2008.

While different industries rely more on one mode of transportation over another, waterways, airports, railway, highways and roads, and intermodal facilities all play a key role in facilitating supply chains that support international trade, regional economies, and the delivery of goods to Washington businesses and residents.

## Delivering Goods to You

**LOCAL DISTRIBUTION SYSTEMS RELY ON FREIGHT.** Our freight system enables local distribution of an enormous variety of goods to Washington’s residents and businesses. The state’s local distribution system serves the retail, wholesale, and business service sectors, and produces up to 80 percent of all truck trips in metropolitan areas. The efficiency and reliability of the system is critical, as distribution companies must provide fast and ubiquitous service that is dependable under all conditions. Hospitals cannot wait for medical supplies and small businesses are unlikely to succeed without reliable local delivery of stock.

The freight transportation system supports **retail/wholesale supply chains** for consumer goods purchased in grocery stores, restaurants, medical centers and pharmacies, gas stations, and clothing and electronics stores across the state. Some goods are manufactured in-state and many others are imported from other countries or states, arriving by ship, rail, truck, or plane (for high-value goods). Both goods produced in Washington and imported goods are typically consolidated in a distribution center before moving to their final destination. Approximately 735,000 employees work in the retail/wholesale sector in Washington State, which produced over \$247 billion in gross business income in 2012. The majority of goods arriving at distribution centers come in large trucks with trailers. Staff in distribution centers unload incoming goods, then assemble individual stores’ orders and load them into smaller trucks for final delivery to stores and homes.

The freight transportation system also supports Washington's **fuel supply chain** from production to delivery. Although Washington has no local crude oil production, it serves as a major refining center for Pacific Northwest markets with five refineries, processing 630,700 barrels per day, which is about 20 percent of the West Coast District<sup>16</sup> capacity. Most of the fuel travelling to Washington's refineries is transported by oil tanker from Alaska, although in recent years an increasing amount is transported by rail from the Bakken oil fields in North Dakota. The fuel is then transported from refineries to distribution centers, and finally transported from distribution centers to gas stations, industrial facilities, and airports. The fuel that is transported to gas stations and industrial facilities after being refined is primarily carried by pipeline, barge, and then by truck on the statewide road system.<sup>17</sup> Washington's refineries are located in Tacoma, Ferndale, Blaine, and Anacortes, and distribution hubs are located near population centers across the state.

The volume of consumer goods transported throughout the state on a daily basis is very high. A recent study of grocery stores in the Puget Sound region found that just one store receives an average of two to three truck deliveries per day<sup>18</sup>.

## Washington is Connected to the Pacific Northwest Region

Some Washington State businesses primarily use nearby major intermodal facilities in the neighboring states of Idaho and Oregon and the province of British Columbia (B.C.) for their logistics needs. The cities of Vancouver, Washington and Portland, Oregon function as one major economic region and depend on freight transportation corridors connecting the states. Shippers and goods receivers in southwest Washington may use the Portland International Airport (located 12 miles from downtown Vancouver) or the Portland, Oregon marine port (8 miles from downtown Vancouver) more often than other intermodal facilities within the state as shown in [Exhibit 2.10](#). A larger map can be viewed in Appendix A.

Several high-volume truck corridors in Idaho, Oregon and B.C. act as primary routes for companies shipping and carrying freight in Washington. For example trucking companies carrying goods from Vancouver Washington to eastern Washington often use Interstate 84 in Oregon instead of the parallel route in Washington, Highway 14. Highway 1 in B.C. is the primary east-west truck corridor across Canada.

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<sup>16</sup> The US Energy Information Administration (EIA) uses Petroleum Administration for Defense (PAD) Districts to report energy information. District V or the West Coast District includes Washington, Oregon, California, Nevada, Arizona, Alaska, and Hawaii.

<sup>17</sup> British Petroleum (BP). *Cherry Point Refinery*. Available at: <http://www.bp.com/sectiongenericarticle.do?categoryId=9030277&contentId=7055883>

<sup>18</sup> McCormack, E., Ta, C., Bassok, A., and Fishkin, E., *Truck Trip Generation by Grocery Stores*. Research Project Agreement No. 61-7170. Report Prepared for Transportation Northwest and WSDOT, August 2010.

Exhibit 2.10 Washington Freight Systems Connect to the Pacific Northwest Region



VANCOUVER-PORTLAND AREA



**LEGEND**

**Washington State Freight Economic Corridors**

- T1 Truck Freight Economic Corridors:**  
Freight corridors carrying more than 10 million tons per year
- T2 Truck Freight Economic Corridors:**  
Freight corridors carrying 4 million to 10 million tons per year
- Alternative Freight Economic Corridors:**  
Corridors carrying 600,000 to 4 million tons per year and serve as alternatives to T1 freight routes

**High-volume Truck Corridors In Neighboring States/Province:**

- Major out-of-state truck corridors serving the Pacific Northwest region

- County line
- Other State Roads
- Major Marine Port
- Major Air Cargo Airport

# CHAPTER 3: STATE FREIGHT INSTITUTIONS, STATUTORY CONSTRAINTS & ROLES

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## Freight in Washington: Roles & Responsibilities

Many public and private sector organizations must both fulfill their roles and cooperate with each other to meet the state’s performance goals for freight systems. These organizations include state agencies, local jurisdictions, and private sector participants. Following is a description of the state, tribal, and regional freight players; this section contains a short summary of the limitations on what state revenue can be collected and how it can be expended to maintain and improve freight systems. State law defines transportation facilities of statewide significance, which includes a subset of the state-owned highway transportation system, interstate, freight railroad system, Columbia-Snake navigable river system, marine port facilities, and services related to marine activities affecting international and national trade, including key freight transportation corridors serving these marine port facilities.<sup>19</sup>

Washington State’s transportation budget pays for operating and the capital costs of maintaining, preserving, and improving the highway and ferry systems and enforcement on the state highway system. Revenues available for transportation purposes include state funds (including taxes and fees), bonds, federal funds, and local funds. A portion of the budget goes to local governments. State agencies supported by the state transportation budget include WSDOT, the Freight Mobility Strategic Investment Board (FMSIB), the Washington State Patrol (WSP), the County Road Administration Board (CRAB), the Transportation Commission, and the Transportation Improvement Board (TIB). Exhibit 3.1 summarizes the main roles and responsibilities of Washington’s freight-related institutions.

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<sup>19</sup> RCW 47.06.140

**Exhibit 3.1 Summary of Freight Roles and Responsibilities by Agency/Jurisdiction**

Agency/ Jurisdiction	Freight in Washington: Roles and Responsibilities			
	Infrastructure Owner/Operator	Grant Programs	Policy/ Regulatory	Enforcement
WSDOT	<b>X</b>	<b>X</b>	<b>X</b>	
FMSIB <sup>20</sup>		<b>X</b>	<b>X</b>	
TIB		<b>X</b>		
WSP			<b>X</b>	<b>X</b>
WA State Trans. Commission			<b>X</b>	
UTC <sup>21</sup>		<b>X</b>	<b>X</b>	<b>X</b>
CRAB		<b>X</b>		
Counties/Cities	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
Ports	<b>X</b>		<b>X</b>	<b>X</b>
Tribes	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
MPO/RTPO		<b>X</b>	<b>X</b>	

## State Agencies

### **Washington State Department of Transportation (WSDOT)**

#### Governance Structure and Responsibilities

WSDOT is a cabinet level state agency and the Secretary of Transportation is appointed directly by the Governor of Washington. WSDOT’s core mission is to keep people and business moving by operating and improving the state’s transportation systems (RCW 47.01). WSDOT’s newly adopted strategic plan goals include effectively managing strategic investments, optimizing modal integration, promoting environmental stewardship, strengthening community engagement, and improving smart technology; for more information on these goals, see chapter 10. WSDOT is responsible for maintaining, preserving and improving the statewide, multimodal transportation system which includes:

<b>Highways and Bridges</b> 18,600 state highway lane miles and 2,000 lane miles of ramps and special use lanes 310 lane miles of a planned 320-mile HOV	<b>Rail: Freight &amp; Passenger Program</b> Partner in Amtrak Cascades state passenger rail program Operator of Washington State Grain Train and
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<sup>20</sup> Many agencies have freight transportation responsibilities, which they balance with other priorities. The FMSIB is solely focused on funding freight projects.

<sup>21</sup> Washington Utilities and Transportation Commission

freeway system 3,700+ bridges and structures	Produce Rail Car Program Owner of the Palouse River and Coulee City (PCC) railroad system in Eastern Washington - 297 miles of short-line rail Freight Rail Grant & Loan Program
<b>Ferries</b>	<b>Aviation</b>
22 ferry vessels, 20 terminals, 450 daily departures	16 WSDOT-managed airports (nine state-owned, three operated by special use permit, three leased, one operated through a right of entry)
<b>Transit</b>	
Commuter and vanpool grant programs	

Within WSDOT, the Freight Systems Division is responsible for:

- Developing the Washington State Freight Mobility Plan and building regional participation and support for the Plan by working together with freight system partners.
- Providing counsel to WSDOT executives, the Governor’s office, and the Legislature on freight policies and programs.
- Managing the state's freight rail capital programs and operations.
- Pursuing implementation of recommendations in the Freight Mobility Plan.
- Developing cross-functional solutions to meet freight carriers’, shippers’, and goods receivers’ performance goals.

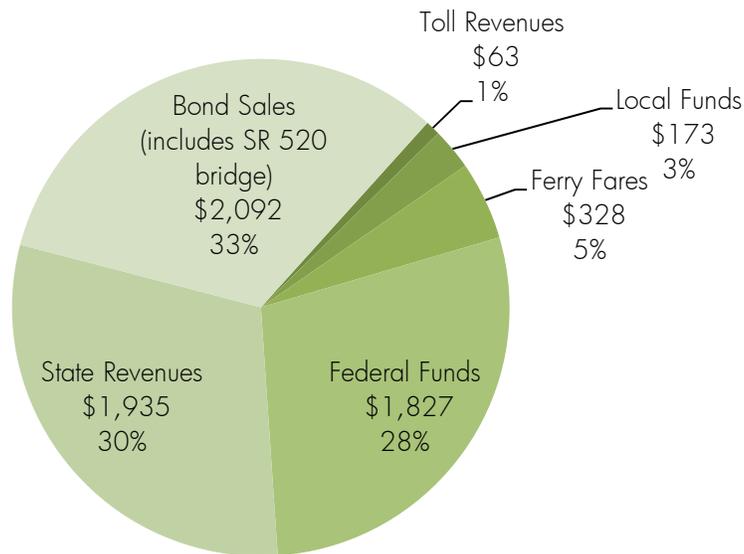
### Funding Mechanism

WSDOT receives state funds (including taxes and fees), bonds, federal funds, and local funds. WSDOT’s portion of the state transportation budget pays for operating expenses and capital costs, including maintaining, preserving, and improving the highway system, operating ferries, as well as debt service.

More than 80 percent of state transportation revenue is from the motor vehicle fuel tax and licenses, permits, fees and abstracts, all of which have set rates. While these revenue sources respond to changes in population, use of fuel, vehicle ownership, or other factors, they do not change with inflation. The state receives a little more than 80 percent of the total transportation revenues collected; the other 20 percent of the transportation tax revenues are distributed directly to cities, counties, and other agencies for roadway programs that are not part of the state highway system. WSDOT’s total operating and capital budget for the 2013-2015 biennium is \$6.418 billion.

2013-2015 Biennium Budget	
Operating	Capital
\$1,477 million	\$4,941 million

### Exhibit 3.2 WSDOT 2013-2015 Budget: Funding Sources (Dollars in Millions)



Source: WSDOT Budget Office, 2013.

Washington State has passed two gasoline tax increases over the past decade, the 5 cent Nickel Package in 2003 and the 9.5 cent Transportation Partnership Package in 2005. The total gasoline tax rate has been 37.5 cents per gallon since July 1, 2008.<sup>22</sup>

#### Freight Loan and Grant Programs

WSDOT administers the Freight Rail Investment Bank and Freight Rail Assistance Programs (ESHB 2878, Chapter 121, Laws of 2008), both of which support rail freight in the state. The Bank is a public sector loan program intended for small projects or parts of larger projects where state funds would enable project completion. The Governor and Legislature has provided \$8.58 million for this program during the 2013-2015 biennium. The Grant program is open to public and private sector applicants. This program is directed toward larger projects where the rail location or the project is of strategic importance to the local community and the state. The Legislature has allocated \$4 million for freight rail assistance projects during the 2013–2015 biennium and there are no restrictions on the size of awards.

#### **Freight Mobility Strategic Investment Board (FMSIB)**

##### Governance Structure and Responsibilities

FMSIB was created by the Legislature in 1998 (RCW 47.06A.030) to identify and recommend investments that improve freight movement and mitigate barriers on strategic state corridors, grow jobs and the economy, and bolster Washington as a leader in international trade. FMSIB is governed by a 12-member board that is appointed by the Governor. FMSIB's executive director reports to the board.

<sup>22</sup> See Exhibit 11.3 in Chapter 11.

WSDOT and FMSIB have agreed that FMSIB is responsible for creating the Washington State Freight Advisory Committee as directed by Section 1117 in MAP-21; this section recommends that the Advisory Committee include representatives from a cross-section of public and private sector freight stakeholders, including representatives of ports, shippers, carriers, freight-related associations, the freight industry workforce, WSDOT, Tribes, and local governments. FMSIB staffs the Advisory Committee as a standing committee, and as not all of these categories are represented by FMSIB’s board, additional members have been added. The role of the Advisory Committee is to advise WSDOT on the content of this State Freight Mobility Plan that WSDOT is responsible for developing.<sup>23</sup>

### Funding Mechanism

Funding for FMSIB is included in the State’s transportation budget. The capital funding supports the Freight Mobility Strategic Investment Program, a competitive grant program.

2013-2015 Biennium Budget	
Operating	Capital
\$904,000	\$28.6 million

### Grant Program

FMSIB issues a call for projects every two years to maintain a six-year list of active projects. These freight corridor projects are cross-jurisdictional and often serve cities, counties, port districts, and freight carriers, including railroads and trucking companies. FMSIB’s grant program can also help fund WSDOT projects.

### **Transportation Improvement Board (TIB)**

#### Governance Structure and Responsibilities

The Legislature created the TIB in 1988 (RCW 47.26.121), to foster state investment in quality local transportation projects. TIB provides both grant funding and technical assistance to local governments. TIB is a 21-member board composed of six city members, six county members (CRAB member is ex officio), two WSDOT officials, two transit representatives, a private sector representative, a member representing the ports, a Governor’s appointee, a member representing non-motorized transportation, and a member representing special needs transportation. Board members are appointed by the Secretary of Transportation, with the exception of the CRAB representative and the Governor's appointee.

### Funding Mechanism

Funding for TIB is included in the State’s transportation budget and comes from the revenue generated by three cents of the statewide gas tax, directed to cities and counties for transportation projects.

2013-2015 Biennium Budget	
Operating	Capital
\$3.8 million	\$187.8 million

<sup>23</sup> For complete information on the roles and responsibility of State Freight Advisory committees, see MAP-21 Section 1117.

## Grant Programs

TIB funds high priority transportation projects in communities throughout the state to enhance the movement of people and goods. Each grant program has its own set of criteria used to rate project applications. TIB administers the following programs:

Program	2013 Funding
Urban Arterial Program	\$84 million
Small City Arterial Program	\$10 million
Urban Sidewalk Program	\$5 million
Small City Sidewalk Program	\$3 million
Arterial Preservation Program	\$7 million
Small City Preservation Program	\$2.5 million

## ***Washington State Patrol (WSP)***

### Governance Structure

The Washington State Patrol is a cabinet-level state agency whose core mission is public safety on the highway system. The WSP Chief is appointed by the Governor. The WSP enforces state law on highways and investigates accidents. The Commercial Vehicle Division of the WSP is responsible for enforcement of truck safety regulations in the state. WSDOT works closely with the WSP on truck and passenger safety programs and policies.

### Funding Mechanism

The WSP is funded from the state transportation and general fund budgets.

2013-2015 Biennium Budget	
Operating	Capital
\$405.4 million	\$1.9 million

## ***Washington State Transportation Commission***

### Governance Structure and Responsibilities

The Washington State Transportation Commission is made up of seven members appointed by the Governor for six-year terms. The Secretary of Transportation and a representative from the Governor's Office are ex-officio members. The Commission provides a public forum for transportation policy development, reviews and assesses how the transportation system is working, and develops the 20-year Washington State Transportation Plan. The Commission also acts as the state tolling authority, responsible for adopting all state highway and bridge tolls and setting fares for Washington State Ferries.

### Funding

Funding for the Commission is included in the State's transportation budget. The Commission does not fund transportation projects or programs.

2013-2015 Biennium Budget

Operating	Capital
\$3.1 million	N/A

**Washington Utilities and Transportation Commission (UTC)**

**Governance Structure**

The Washington Utilities and Transportation Commission is a three-member commission appointed by the Governor and confirmed by the State Senate. The mission of the UTC is to protect consumers by ensuring that utility and transportation services are fairly priced, available, reliable and safe. The UTC’s freight-related responsibilities include regulation and safety issues related to railroads and pipelines.

**Funding Mechanism**

The UTC is primarily funded through the state public service revolving account, along with the pipeline safety account and state general funds. Funding for the Grade Crossing Protective Fund comes from the Transportation Budget and is funded at \$504,000 for the 2013-15 biennium.

**Grants**

The UTC administers the Grade Crossing Protective Fund to provide grants to railroad companies, local governments, and other agencies that propose to make safety improvements at a railroad crossing or along a railroad right-of-way.

**County Road Administration Board (CRAB)**

**Governance Structure and Responsibilities**

CRAB was created by the Legislature in 1965 to provide statutory oversight of Washington's 39 county road departments (RCW 36.78.030). CRAB’s oversight and distribution of motor fuel tax revenues ensures that these funds are used exclusively for highway purposes, per the State Constitution’s 18<sup>th</sup> Amendment.

The nine-member board meets quarterly and is comprised of six county commissioners/councilmembers and three county engineers all appointed by the Board of Directors of the Washington State Association of Counties. The board establishes and maintains "Standards of Good Practice" to guide and ensure consistency and professional management of county road departments.

**Funding Mechanism**

Funding for CRAB is included in the State’s transportation budget. CRAB distributes the county share of the motor vehicle fuel tax, which is about 5.96 cents per gallon or 16 percent of the net state fuel taxes collected.

2013-2015 Biennium Budget

Operating	Capital
\$4.6 million	\$76.6 million

## Grant Programs

CRAB administers the programs shown below:

Program	2013-15 Funding
Rural Arterial Program	\$35.9 million
County Arterial Preservation Program	\$30 million
-----	
County Ferry Capital Improvement Program (Pierce, Skagit, Wahkiakum, Whatcom)	Can be initiated every four years

## **Tribes**

### Governance Structure and Responsibilities

There are 29 federally recognized Tribes in Washington State. Of the 5,700 miles of road within or providing access to Indian Reservations and communities, 1,729 miles are under the jurisdiction of the Tribe or Bureau of Indian Affairs. Tribes are responsible for the planning, construction, maintenance and management of their transportation and transit facilities. Tribes also coordinate project development and construction in partnership with state and local jurisdictions for roads within or providing access to Reservation or Tribal communities.

### Funding Mechanism

A total of 23 Tribes have fuel tax agreements with the State of Washington. Through these agreements, the State refunds a portion of the fuel tax sold by tribally owned stations on the reservation or tribal trust lands. In accordance with their agreements, Tribes may only expend fuel tax proceeds on: planning, construction and maintenance of roads, bridges and boat ramps; transit services and facilities; transportation planning; public safety; or other highway-related purposes.

## Jurisdictions and Districts

### **Regional Transportation Planning Organizations (RTPOs)**

#### Governance Structure and Responsibilities

There are 14 Regional Transportation Planning Organizations (RTPOs) in Washington State authorized by the Washington State Legislature as part of the 1990 Growth Management Act to ensure local and regional coordination of transportation plans<sup>24</sup>. They are formed through the voluntary association of local governments within a county or within geographically contiguous counties.

RTPO duties include preparing and periodically updating a transportation strategy for the region addressing alternative transportation modes, and transportation demand management measures in regional corridors. Each RTPO prepares a regional transportation plan, and

<sup>24</sup> (<http://www.wsdot.wa.gov/planning/regional/com>).

develops a regional transportation improvement program that proposes regionally significant transportation projects and programs and transportation demand management measures.

### **Funding Mechanism**

RTPOs are partly funded through the State's transportation budget, with funding amounts allocated as follows:

- A base amount per county for each county within each RTPO, to be distributed by the lead planning agency;
- An amount to be distributed to each RTPO lead planning agency on a per capita basis; and,
- An amount to be administered by WSDOT as a discretionary grant program for special regional planning projects, including grants to allow counties with significant interests in common to participate in another region's planning efforts.

RTPOs receive federal Transportation Alternatives Program (TAP) funding allocated by WSDOT.

### **Metropolitan Planning Organizations**

#### **Governance Structure and Responsibilities**

Metropolitan Planning Organizations (MPOs) are federally mandated transportation planning organizations made up of representatives from local government and governmental transportation authorities in urbanized area (UZA) with 50,000 or more population. Washington State has twelve MPOs, six in Eastern Washington and six in Western Washington. Three of the MPOs are bi-state, one with Idaho, and two with Oregon.

Statewide and metropolitan transportation planning processes are governed by federal law (23 U.S.C. §§ 134–135). The metropolitan planning process includes development of a transportation plan, with at least a 20-year planning horizon, that includes both long- and short-range strategies leading to development of an integrated multimodal transportation system. MPOs are also required to develop regional Transportation Improvement Programs that must contain all projects utilizing federal transportation funds, as well as any regionally significant projects in the area covered by the MPO, regardless of funding source.

State law (RCW 47.80.020) requires that RTPOs be the same organization as that designated as the MPO. As a result, MPOs and RTPOs in serve the same basic transportation planning functions – develop a long-range plan, coordinate within a region, and prepare a transportation improvement program, and the lead agency for a RTPO is also the lead agency for the MPO within the region.

#### **Funding Mechanism**

MAP-21 provides funding to the MPOs through USDOT for transportation planning purposes. The funding is appropriated to states through Federal Highway Administration (metropolitan planning funding) and Federal Transit Administration (5303 funding) and is allocated by the state to the MPOs by formula. MPOs with UZA populations over 200,000 also receive federal Surface Transportation Program funding and federal Transportation Alternatives Program funding allocated by WSDOT as required by federal statute. Federal Congestion Mitigation and Air Quality Program (CMAQ) funds are also allocated by WSDOT as required by federal statute to five MPOs representing air quality non-attainment and maintenance areas for

transportation projects and programs that help meet the requirements of the Clean Air Act. MPOs are responsible for selecting projects to receive these federal funds and ensuring that transportation projects in each region are meeting regional policies and federal and state requirements such as those under the Clean Air Act.

## **Counties**

### **Governance Structure and Responsibilities**

There are 39 counties in Washington State responsible for managing 80,618 lane miles of roads and approximately 3,264 bridges in the unincorporated areas across the state. Counties may operate airports, ferries, rail districts and provide transit services.

### **Funding Mechanism**

Counties receive their share of the state motor vehicle fuel tax through CRAB. A large share of county transportation funding comes from local revenues, primarily the county road levy, which is a property tax.

## **Cities**

### **Governance Structure and Responsibilities**

Cities and towns are responsible for almost 38,000 lane miles of streets and approximately 676 bridges in the 281 incorporated municipalities of the state. Cities with populations of less than 5,000 often have very limited local resources and rely on state assistance to preserve their system. For cities with populations over 25,000 and have state highways serving as main streets, they are also responsible for signalization, general maintenance, and capacity improvements to the state highways. Freight policy for most cities is incorporated into the transportation planning goals and tied to level of service standards established by each city.

### **Funding Mechanism**

State gas tax revenues are distributed to cities on a per capita basis; the city share is 2.96 cents per gallon. Approximately 20 to 25 percent of city transportation funds come from state gas tax, state transportation grant funds, and federal grant funds. The remaining 75 to 80 percent of a city transportation budget comes from general purpose local revenue sources, such as property taxes, sales tax, and business and utility taxes. Transportation needs compete with other general fund priorities such as fire and police and for limited local resources.

## **Ports**

### **Governance Structure and Responsibilities**

Washington's 75 port districts are authorized by RCW 53.04 and each port is governed by three to five elected commissioners. Specific authorities granted by the Legislature make Washington's public ports the only public agencies whose primary purpose is economic development. Ports create jobs and economic growth by owning and operating or leasing shipping terminals, marinas and docks, airports, industrial sites, railroads, and parks and recreational facilities. The port districts operate 11 deep draft ports, seven inland marine ports on the Columbia-Snake waterway served by barge, and 32 airports. Three of the 32 airports

(Seattle-Tacoma International Airport, King County International Airport/Boeing Field, and Spokane International Airport) handle over 99 percent of freight cargo in the state.

### **Funding Mechanism**

Washington ports have the authority to levy property taxes on land within the port districts as well as issue revenue bonds that can be used to provide funds for carrying out all port district powers, including: acquisition, construction, reconstruction, maintenance, repair, additions and operation of port properties and facilities, engineering, inspection, accounting, fiscal, and legal expenses.

## **Private Sector Freight Transportation Owner-Operators**

### ***Railroads***

Washington has over 3,000 miles of railroad lines that provide mobility for goods moving into, out of, within, and through the state. About 80 percent of Washington’s rail infrastructure by mileage is privately owned. Nearly all rail operators in Washington State are privately owned. As for-profit entities, both Class I and short-line railroads typically make infrastructure investments to maintain and improve their own rail infrastructure. Washington has two Class I railroads, the BNSF Railway and the Union Pacific Railroad. A total of 25 short-line railroads operate through communities in Washington State. Short-line railroads often operate as first and last mile connectors, originating or terminating one out of every four carloads across the U.S. Where ample public benefit exists, public funding has been used to make improvements to the private rail system. An example of this is the nearly \$800 million in federal funds WSDOT is investing in BNSF’s north-south corridor linking Blaine, Washington to Seattle and on to Portland, Oregon. This corridor hosts WSDOT-sponsored passenger rail service but also provides benefit to freight rail movement.

### ***Terminals***

The majority of terminals in Washington are leased facilities on lands controlled by port districts and therefore are not privately owned. There are a few notable exceptions, including the proposed Gateway Pacific Terminal at Cherry Point, the proposed Millennium Bulk Terminal in Longview, and several of the grain exporting terminals located along the Columbia-Snake Waterway. These terminals are often responsible for making improvements to transportation infrastructure located directly onsite.

### ***Pipelines***

The three major pipelines in Washington are privately owned: the Olympic, Chevron, and Yellowstone pipelines. The Olympic pipeline runs north-south through western Washington from Portland, Oregon to Blaine, Washington. The Chevron pipeline runs from Salt Lake City, Utah to Pasco, Washington and connects to Spokane, Washington. The Yellowstone pipeline runs from Billings, Montana to Spokane and Moses Lake, Washington.

## **Regional Freight Organizations**

WSDOT actively participates in several regional organizations that are improving freight mobility.

**The FAST Corridor Partnership**, administered by the Puget Sound Regional Council (PSRC), is a partnership intent on solving freight mobility problems with coordinated solutions. Membership consists of: cities; counties; ports; federal; state, and regional transportation agencies; railroads; and trucking interests. Since 1998, the partners have leveraged more than \$333 million in federal funding, combined with approximately \$317 million in state, local, and private funds to complete twenty strategic infrastructure improvements valued at more than \$650 million. The partnership currently is working to complete the five remaining FAST Corridor projects.

**The Great Northern Corridor Coalition** was awarded funding from FHWA through the Multistate Corridor Operations and Management program in 2012. The goal is to develop a seamless multistate freight corridor consisting of road and rail networks that promote economic growth for neighboring communities and accommodate the demand for efficient and environmentally sound transportation services. The Montana Department of Transportation is the lead agency and Washington State Coalition members include The Washington State Department of Transportation, Washington Public Port Association, Port of Seattle, Port of Tacoma, Port of Everett, Port of Quincy, Port of Pasco, Port of Grays Harbor, Port of Vancouver USA, and the Port of Longview.

**The Inland Pacific Hub (IPH)** is a project to establish the Inland Pacific Region<sup>25</sup> as a multi-modal global gateway to increase domestic and international commerce, and is governed by civic, business, and transportation leaders from Idaho and Washington.

**The International Mobility and Trade Corridor Program (IMTC)** identifies and promotes improvements to mobility and security for the border crossings that connect Whatcom County, Washington and the Lower Mainland of British Columbia. Since 1997, IMTC has provided regional coordination on border issues and has helped assemble over \$38 million (USD) from U.S. and Canadian partners to pursue shared goals.

**The North/West Passage Coalition** is made up of state departments of transportation responsible for Interstates 90 and 94 between Wisconsin and Washington which function as major corridors for commercial and recreational travel. Extreme winter weather conditions, prevalent in the northern states, pose significant operational and travel-related challenges. The vision of the North/West Passage Corridor is to focus on developing effective methods for sharing, coordinating, and integrating traveler information and operational activities across state and provincial borders.

**The Western Association of State Highway Transportation Officials (WASHTO)** is made up of 18 member states located in the western United States. WASHTO contributes to national policies on transportation issues, advocating for legislation that supports efficient and effective transportation systems, economic competitiveness and the environmental integrity of member states, and providing a forum for exchanging ideas, exploring and adapting techniques, promoting quality, and best practices for implementation.

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<sup>25</sup> The Inland Pacific region includes ten counties in Eastern Washington (Pend Oreille, Stevens, Ferry, Lincoln, Spokane, Adams, Whitman, Garfield, Asotin, and Columbia) and nine counties in Northern Idaho (Boundary, Bonner, Kootenai, Benewah, Shoshone, Latah, Clearwater, Nez Perce, and Lewis).

## State Statutory and Constitutional Constraints

Several legal parameters control Washington State's ability to increase transportation revenues and direct transportation funds to non-highway purposes.

- **Legislative action is required to set taxes and fees.** Transportation tax and fee rates are set by state law and require legislative action, with the exception of tolls and ferry fares, which are set by the Washington State Transportation Commission, subject to legislative direction.
- **The use of funds is restricted by the 18th Amendment.** The 18th Amendment of the State Constitution requires motor vehicle fuel taxes collected for highway purposes to be used exclusively for highway purposes. The Washington State Ferry System is a part of the state highway system.
- Cities that contain the state's largest warehouse districts essential for distributing food and other consumer goods in urban areas have seen sales tax revenues decline, increasing the gap between funds needed and available to maintain heavily used truck routes. This was an unintended consequence of the **sales and use tax streamlining law** passed in 2008. Under this law, Washington retailers began collecting sales tax based on the point of sale of the shipment instead of the point of origin. The change has significantly decreased tax revenues collected by cities containing warehouse districts. For example, before this change, when a customer in Seattle bought a couch from a Seattle retailer that was shipped to the customer from a warehouse in Kent, the City of Kent received the local sales tax revenue. Now the tax on this transaction is collected by the City of Seattle. Some cities that have been negatively affected by the change are considering halting or slowing permitting of new warehouse facilities, which would push this essential function further from major population centers.
- There are no incentives to improve priority truck bottlenecks across multijurisdictional supply chains. Agencies seeking to optimize their system may not invest in improvements with statewide benefits.

# CHAPTER 4: STATE FREIGHT TRANSPORTATION ASSETS

## Freight Transportation Assets

Washington State has an integrated multimodal system of freight transportation assets, including highways and roads, railways, and waterways. Other freight assets include intermodal facilities, such as marine ports, airports, barge loaders, and truck-rail intermodal facilities. This section describes these assets in greater detail.

### Highways & Roads

Movement of goods in Washington relies on highways and roads for long-distance transport as well as for urban goods delivery (i.e., transport from warehouses or intermodal freight terminals to final destinations). Trucks move an estimated \$42 million of freight on Washington roadways every hour of every day.<sup>26</sup>

#### **Truck Freight Economic Corridors**

WSDOT, working with the Washington State Freight Plan Technical Teams, Tribes, FMSIB, every Metropolitan Planning Organization (MPO) and Regional Transportation Planning Organization (RTPO) technical committee in the state, and many cities, counties, and ports, has developed objective criteria and defined the State's Truck Freight Economic Corridors as:

- High volume, backbone highway infrastructure essential to Washington's economy.
- Critical alternative routes to the main highway freight system.
- Routes that have been identified as first or last mile connectors to freight intensive land uses.

WSDOT prepares the Washington Freight and Goods Transportation System (FGTS) report which classifies all highways, county roads, and city streets by annual gross truck tonnage, ranging from T-1 (the highest tonnage) to T-5 (the least tonnage). The biannual FGTS report serves as an inventory of the freight system and is used as a basis for FMSIB eligibility and other project grants, fulfill federal reporting requirements, and support planning for freight mobility improvements.

#### **Freight Plan Technical Teams**

WSDOT Freight Systems Division worked with three Technical Teams to help develop the content for the Freight Plan.

Each team was focused on one of Washington's three key freight objectives: urban goods movement, rural economies, and maintaining Washington's competitive positions as a global gateway.

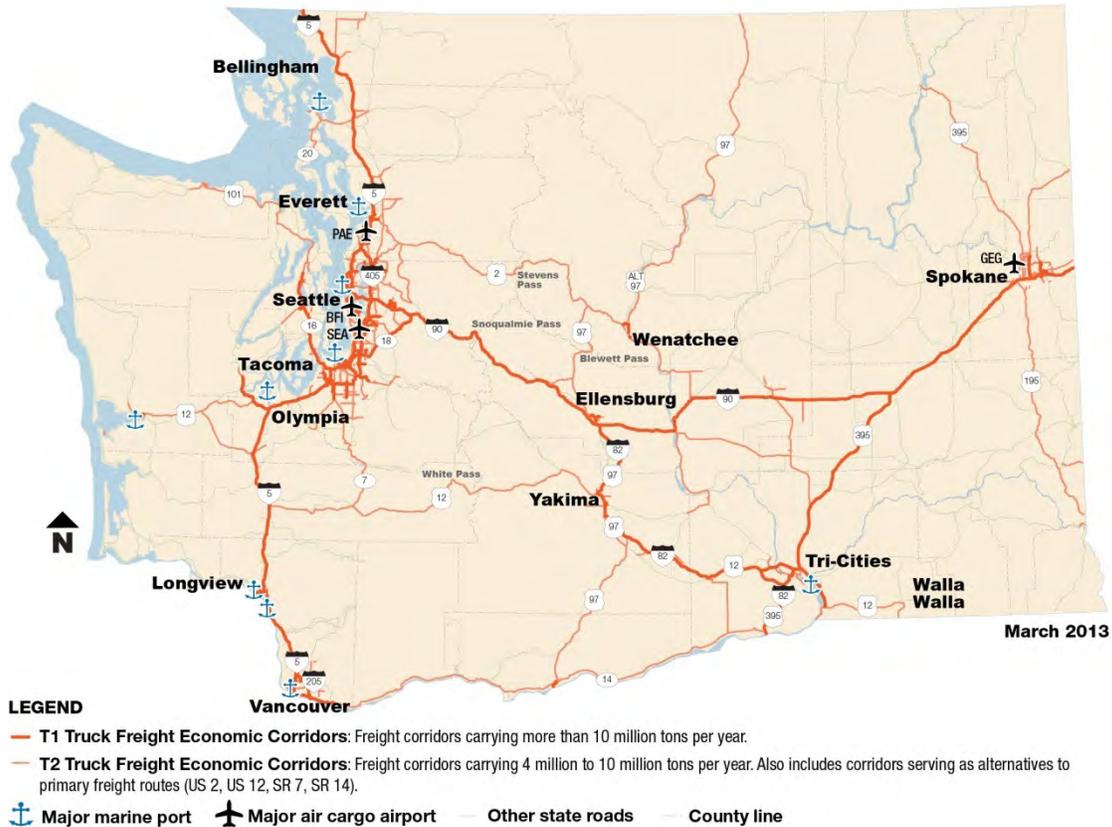
The three teams were made up of 60 representatives of the state's key freight-dependent industry sectors, freight carriers, local governments and ports, environmental organizations, labor, and other freight organizations.

<sup>26</sup> Based on 2011 FAF3 information from FHWA.

The main high volume truck freight economic corridors are defined by annual tonnage and include all T-1 (carrying more than 10 million tons per year) and T-2 (carrying 4 to 10 million tons per year) corridors in the state. Also classified as truck freight economic corridors, are routes that serve as alternatives to primary cross-state freight routes during severe weather or other disruptions. These routes include portions of US 2, US 12, SR 7, and SR 14.

As shown in Exhibit 4.1, I-5 is the state’s most important north-south interstate corridor. It supports Washington’s trade with the rest of the U.S., Canada, and Asia and links marine and air cargo port complexes with essential state warehouse districts, industrial lands, intermodal transportation hubs, and major population centers. A larger map can be viewed in Appendix A.

**Exhibit 4.1 Washington State Truck Freight Economic Corridors**



Source: WSDOT Freight and Goods Transportation System, 2011.

I-90 is the main highway for east-west commerce. This route connects eastern Washington agricultural businesses and other industries, as well as states farther east, with urban markets in northwest Washington and Puget Sound, along with global markets via the Ports of Seattle and Tacoma.

In total, Washington has over 82,000 centerline miles of roadway, including over 7,000 miles of state routes, nearly 40,000 miles of county roads, over 18,000 miles of city streets,

and over 17,000 miles within other jurisdictions.<sup>27</sup> In 2011, approximately 3,000 centerline miles of Washington roadways were designated as either T-1 or T-2, with nearly 2,600 of those miles along state routes.

WSDOT has also developed criteria to identify important connector routes, known as first-mile or last-mile connectors that link freight-intensive land use to the main truck freight economic corridors. Connector route designations have identified important freight linkages to strategic national defense facilities; significant intermodal facilities such as airports, marine terminals, and barge loaders; warehouse districts; other industrial/commercial lands; distribution centers; and agricultural processing centers. WSDOT's criteria to identify both these connector routes and the main truck freight economic corridors are detailed below.

The State Truck Freight Economic Corridors have four elements:

1. T-1 freight corridors that carry more than 10 million tons per year
2. T-2 freight corridors that carry 4 to 10 million tons per year
3. Alternative freight routes that serve as alternatives to T-1 truck routes that experience severe-weather closures, and carry 300,000 to four million tons per year
4. First/last mile connector routes between freight-intensive land uses and T-1 and T-2 freight corridors. These criteria were used to identify the connector routes:

Statewide:

- To-and-from T-1 and T-2 truck routes and strategic U.S. defense facilities
- Over-dimensional truck freight routes that connect the state's significant intermodal facilities to the T-1 and T-2 highway system

In urban areas:

- To-and-from the Interstate system and the (1) closest major airport with air freight service, (2) marine terminals, ports, barge loaders and other intermodal facilities, and (3) warehouse/industrial lands
- From high-volume urban freight intermodal facilities to other urban intermodal facilities, e.g. from the Port of Seattle to the BNSF rail yard in Seattle

In rural areas:

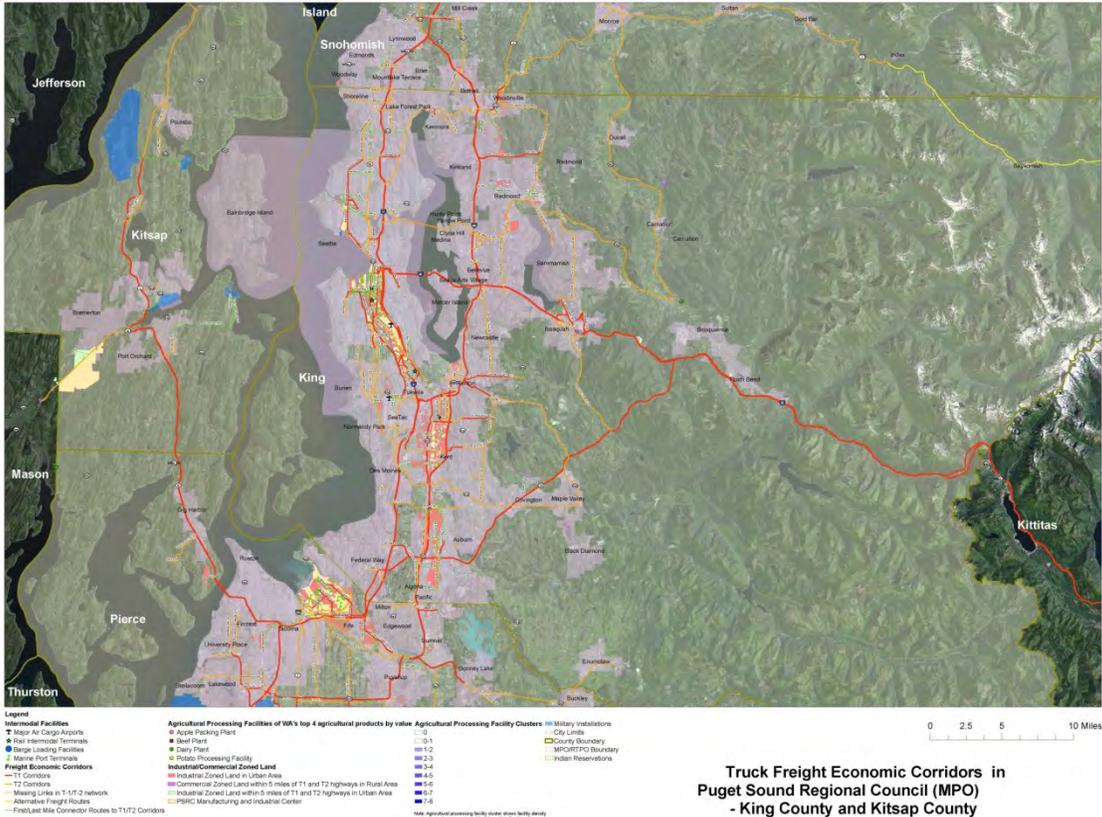
- To-and-from state freight hubs located within five miles of T-1 and T-2 highways; freight hubs are defined as: (1) agricultural processing centers, (2) distribution centers, (3) intermodal facilities, and (4) industrial/commercial zoned land
- Routes that carry one million tons during three months of the year (reflecting seasonality) of agricultural, timber or other resource industry sector goods

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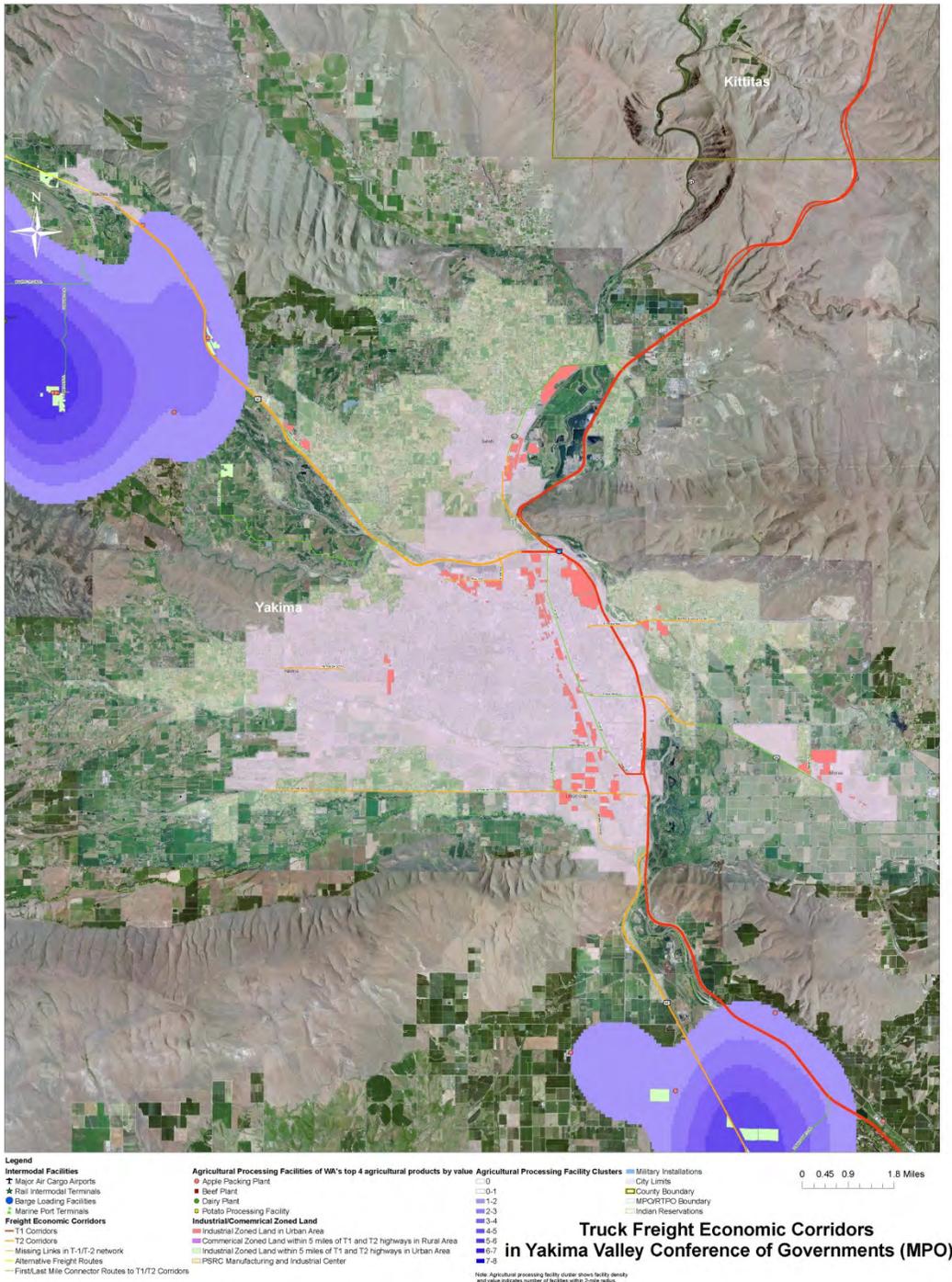
<sup>27</sup> Other jurisdictions include Indian Tribes, Washington State Agencies (i.e., Department of Fish and Wildlife, Department of Natural Resource, State Parks), and Federal agencies (e.g., Bureau of Indian Affairs, US Forest Service, US Army, US Navy).

Detailed first and last mile connector route maps can be viewed on WSDOT's website at: <http://www.wsdot.wa.gov/Freight/EconCorridors.htm>. Two examples of these maps (Exhibit 4.2 and Exhibit 4.3) are included on the following pages. Larger maps can be viewed in Appendix A.

### Exhibit 4.2 Truck Freight Economic Corridors in Puget Sound Regional Council (MPO) – King County and Kitsap County



**Exhibit 4.3 Truck Freight Economic Corridors in Yakima Valley  
Conference of Governments (MPO)**



## Freight Railways

Washington’s railways play a major role in the movement of a broad range of products and commodities ranging from consumer electronics to heavy bulk goods. By handling these products for import and export and local production and consumption, Washington’s rail system play a key role in moving these products to consumer markets in the U.S. and internationally. In 2011, Washington’s rail system moved over 105 million tons (worth \$20 billion) of freight over 3,300 miles of right-of-way.

WSDOT defines the state's Economic Rail Corridors as those classified as R-1 through R-4 that carry more than 100,000 tons per year. Exhibit 4.4 shows the state’s Rail Freight Economic Corridors. A larger map can be viewed in Appendix A.

**Exhibit 4.4 Washington State Rail Freight Economic Corridors**



The BNSF Railway is one of the two Class I railroads operating in Washington State. BNSF operates over 1,600 miles in Washington, which represents almost five percent of their total system route miles operated. Service is provided over seven major corridors, including three east-west corridors and a north-south corridor roughly parallel to I-5 and nine low-density corridors. The major corridors provide the primary conduits to the North American rail network, while the low-density corridors offer collection/distribution services.

The Union Pacific Railroad is the largest railroad in North America, and operates on 678 route miles in Washington State. The UP has operating rights on BNSF tracks between Portland, Oregon and Tacoma, Washington and between Tukwila, Washington and the Port of Seattle. It operates on its own right-of-way between Tacoma and Tukwila.

Over 20 short-line railroads operate about 40 percent of the total number of right-of-way miles in Washington State. These rail carriers connect communities to the national rail system. According to the American Shortline and Regional Railroad Association, regional and short-line railroads originate or terminate one out of every four carloads moved by rail in the U.S. Short-line railroads provide first and last mile connectivity to important multimodal terminals across Washington.

## Waterways

There are two primary economic waterways in the state: the Puget Sound; and the Columbia-Snake River System. The Puget Sound waterway system moved 51.7 million tons of freight in 2011, and corn and soybean agricultural products, manufacturing products, wood and crude petroleum accounted for 39 percent of the total shipment by weight. Exhibit 4.5 shows the state’s Rail Freight Economic Corridors. A larger map can be viewed in Appendix A.

**Exhibit 4.5 Washington State Waterway Economic Corridors**



Source: US Army Corps of Engineers, Navigation Data Center – 2011 Waterway Commodity Data.

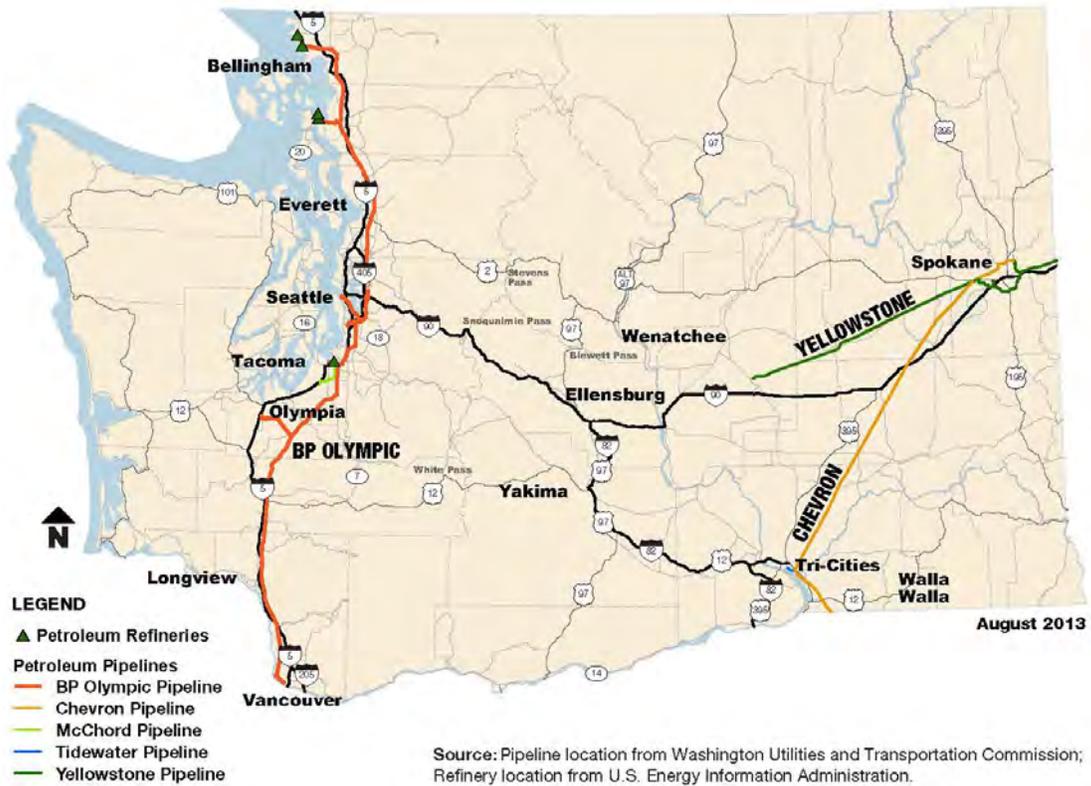
The Columbia-Snake System plays a critical role in transporting agricultural and other products between eastern Washington and the lower Columbia seaports, as well as between eastern Washington and the Midwest. More than 35 different commodities move up and down the river system, with about three times as much being moved downstream compared to upstream.

In 2010, 4.7 million tons of wheat was moved down the system by barges, accounting for 74 percent of the total downstream shipments. The two main economic waterways in the state are comprised of segments that are classified as W1 through W5 by the FGTS system, indicating waterways carrying over 0.9 million tons per year.

## Pipelines

Pipelines are the most cost efficient method of transporting petroleum products. Four of Washington’s refineries distribute 300,000 barrels per day of product from northwest Washington south via the Olympic Pipe Line, which extends along a 299-mile corridor that parallels I-5 from Blaine, Washington to Portland, Oregon. Smaller pipelines branch off the Olympic Pipeline, including spurs to Seattle-Tacoma International Airport, Olympia, and Vancouver. In total, the system includes 400 miles of pipe, 10 delivery sites, nine pumping stations, and 23 terminals.<sup>28</sup> Exhibit 4.6 shows the state’s major pipelines.

**Exhibit 4.6 Major Pipelines in Washington State**



The Chevron and Yellowstone Pipelines distribute oil and fuel products to eastern Washington. The Chevron Pipeline runs between Salt Lake City and Pasco, with an extension connecting Spokane to Pasco. Refined product is currently transported from a Utah refinery to Boise and Pasco. The Chevron Pipeline also delivers military jet fuel to Fairchild Air Base in Spokane. The Yellowstone Pipeline runs from Billings, Montana to Spokane and Moses Lake,

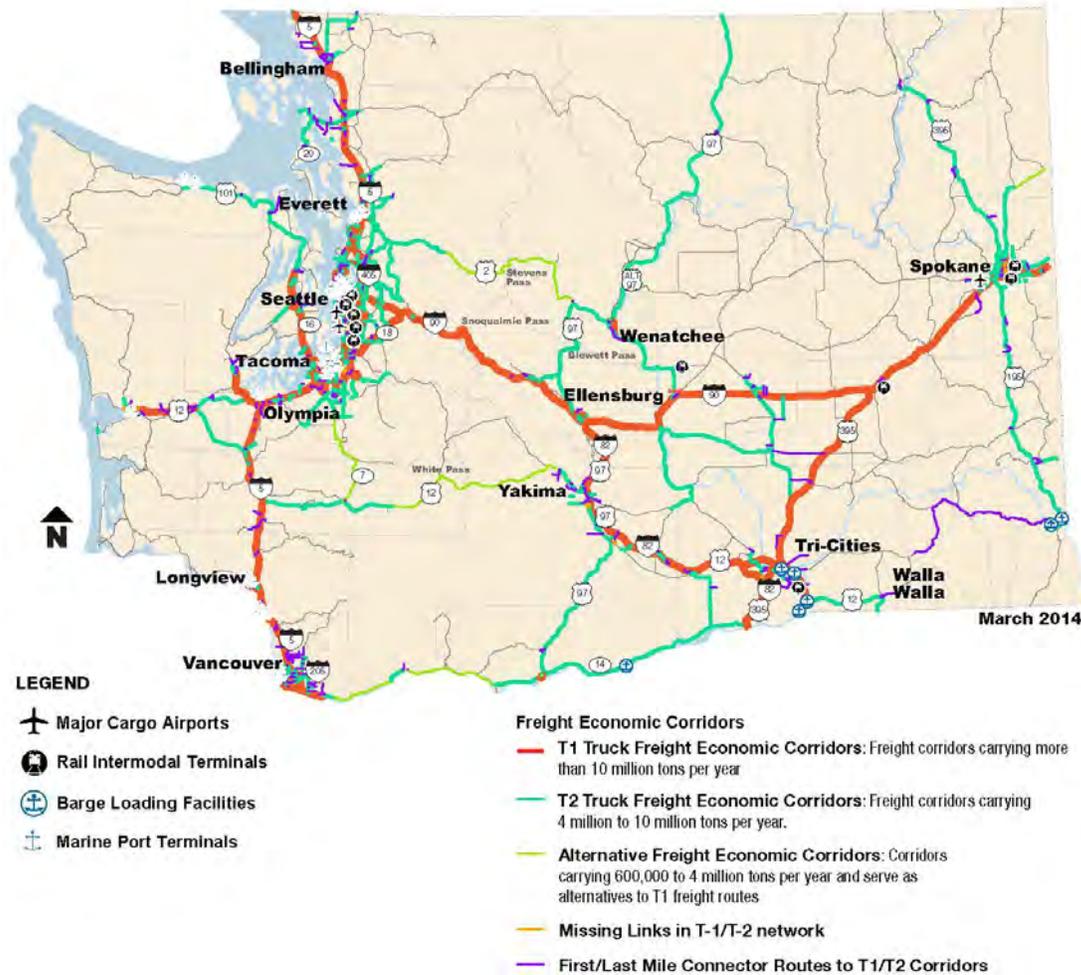
<sup>28</sup> British Petroleum Pipelines. Product Assets: Olympic Pipeline. Available at: [http://www.bppipelines.com/Asset\\_olympic.html](http://www.bppipelines.com/Asset_olympic.html).

Washington. This pipeline supplies about 34 percent of all consumer gasoline and diesel fuel to the Spokane market, roughly 42,000 barrels per day.

## Intermodal Facilities

Intermodal facilities are locations for the transfer of freight from one mode to another, either directly or through intermediate storage. Significant freight intermodal facilities were identified for Washington State to complete the designation of State Truck Freight Economic Corridors. First and last mile connector routes connect these intermodal facilities to T-1 and T-2 freight corridors. Exhibit 4.7 shows that those intermodal facilities are located along Truck Freight Economic Corridors. A larger map can be viewed in Appendix A.

**Exhibit 4.7 Intermodal Terminal Facilities within Washington State**



Washington’s intermodal facilities include four major types: 1) marine port terminals, 2) rail intermodal terminals; 3) cargo airports, and 4) barge loading facilities. National highway system intermodal facility criteria were used to identify marine port terminals, rail intermodal terminals, and cargo airports that:

- Handle more than 50,000 TEUs (a volumetric measure of containerized cargo which stands for twenty-foot equivalent units) per year.

- Or handle 500,000 tons of bulk commodities per year by highway.
- Or handle 100 trucks per day in each direction on the principal connecting route.

Barge loading facilities were identified using the Ports and Waterways Facility database maintained by the U.S. Army Corps of Engineers, Navigation Data Center.

## Marine Ports

Compared to many other ports in the U.S., Washington ports have several significant advantages, including natural deep water harbors on the coast, a West Coast location that is well-situated for trade with Asian markets, and strong connections to the state’s truck and rail economic freight corridors. Washington’s ports serve as important intermodal facilities for international and regional trade, and the Puget Sound ports function as gateways for containerized commerce between North America and the rest of the world. Washington’s waterborne freight activity, measured in total tonnage was 115.6 million tons in 2012, a small decrease from 2011 levels. The total container volumes through Washington’s main container ports (the ports of Seattle and Tacoma) grew by two percent between 2011 and 2012. Together, these ports handled a total of 3.58 million 20-foot equivalent unit containers in 2012.

Washington has a total of 75 ports, located in 33 of the state’s 39 counties. The two busiest ports are Seattle and Tacoma, which, along with other ports along the Puget Sound, handle over 89 percent of the value of international imports.<sup>29</sup> The largest volumes of waterborne commodities coming into Washington are petroleum from Alaska and manufactured goods mostly from Asia. Other seaports, including the Port of Grays Harbor, and several along the Columbia River, including the Ports of Kalama, Vancouver, and Longview, play a major role in the movement of exported agricultural products to foreign markets. The Port of Everett directly serves the Boeing Company assembly plant in Snohomish County.

Washington also has many inland ports, some of which facilitate the movement of freight by barge and rail. Washington State authorizes the creation of port districts in areas lacking navigable waters or traditional harbor facilities. These ports are typically involved in activities such as managing and operating airports, facilitating industrial development, and supporting economic development via promotion of trade and tourism. Exhibit 4.8 shows the top nine Washington Ports by value of trade.

**Exhibit 4.8 Washington State Ports: Top 9 Ports Vessel Trade 2012<sup>30</sup>**  
(Millions of Dollars)

Rank	Port	Import	Export	Total
1	Tacoma	\$35,936.26	\$10,046.96	\$45,983.22
2	Seattle	\$28,332.04	\$10,089.85	\$38,421.88
3	Kalama	\$279.62	\$3,563.60	\$3,843.22

<sup>29</sup> U.S. Department of Commerce, Census Bureau.

<sup>30</sup> 2012 Waterborne Foreign Trade Report, Port of Seattle, p. 5.

4	Bellingham	\$3,211.96	\$305.13	\$3,517.09
5	Anacortes	\$1,143.91	\$2,095.56	\$3,239.46
6	Vancouver	\$1,203.56	\$1,973.82	\$3,177.37
7	Longview	\$259.52	\$2,776.60	\$3,036.12
8	Aberdeen-Hoquiam	\$47.26	\$2,164.03	\$2,211.29
9	Everett	\$1,143.73	\$397.55	\$1,541.28

## Airports

Air cargo consists of both air freight, which includes all non-mail items shipped in the belly of passenger planes and on planes dedicated to freight, and air mail. Air freight makes up approximately 90 percent of total air cargo volume in Washington, while air mail composes the rest<sup>31</sup>.

Washington State has 134 public-use airports. The WSDOT 2009 Long-term Air Transportation Study identified 24 airports reporting air cargo activity (including both air freight and air mail). Many of these airports have small air cargo operations with freight being delivered plane-side by trucks rather than being processed by forwarders through sorting facilities. As such, demand is low for remain-overnight (RON) apron space for itinerant cargo aircraft.

High-value and time-sensitive goods move through Washington's airports, which play a key role in supporting the state's service sectors as well as the manufacturing and agricultural sectors. In 2011, Sea-Tac International Airport ranked 18th in the U.S. for tons of cargo handled. Washington's exporter and importer distribution facilities, logistics service providers, and freight forwarders and consolidators are concentrated in the south Puget Sound region and rely on this integrated network to deliver fast and reliable door-to-door service.

The service and distribution sectors rely on air freight infrastructure for the transport of perishable food products, important documents and mail, high-value, and fragile merchandise. In 2011, air cargo at Washington airports totaled 1.35 million tons, including both plane and cargo weight. Although 11 airports in Washington reported air freight activity<sup>32</sup> in 2011, nearly all of the activity is concentrated at three: Seattle-Tacoma International Airport (51 percent of air cargo in 2011), King County International Airport/Boeing Field (33 percent), and Spokane International Airport (16 percent).<sup>33</sup> About 65 percent of Sea-Tac International Airport's freight activity is domestic, and 35 percent is international, bound for or arriving from Europe or Asia in 2012.

<sup>31</sup> Washington State Department of Transportation, Aviation Economic Impact Study, March 2012. Air cargo includes air freight and air mail.

<sup>32</sup> These are the 10 Commercial Service Airports and 1 Reliever Airport (King County International) that handle and report air freight in Washington, and this number does not include those airports involved in air mail and express package only.

<sup>33</sup> Federal Aviation Administration, Passenger Boarding and All-Cargo Data, CY 2011. All-cargo landed weight is FAA's method of data collection.

## Barge System

Barge traffic in Washington State primarily travels the Columbia-Snake inland waterway system, a 14-foot-deep river channel between Portland, Oregon/Vancouver, Washington and Lewiston, Idaho. This river system carries 10 million tons of commercial cargo annually valued at \$3 billion.<sup>34</sup> In Washington, the Columbia-Snake has eight locks along 360 miles of inland waterway. The average barge carries 3,500 tons of freight, equivalent to 35 100-ton railcars or 134 29-ton trucks.<sup>35</sup> Nine barge loading facilities along the Columbia and Snake Rivers were identified as significant intermodal facilities. Barge traffic brings grain and other bulk goods downriver to lower Columbia River ports, and petroleum and containerized waste upriver to various terminals. In 2010, 4.7 million tons of wheat was moved down the Columbia-Snake River system by barges, accounting for 74 percent of the total downstream shipments.

Freight barge traffic also travels between Puget Sound ports and Alaska, making it one of the nation's most important routes for domestic waterborne commerce with Alaska. Crude oil is the most significant commodity carried to Washington from Alaska by weight, and nearly 295,000 barrels of crude oil was moved south from Alaska to Washington state refineries every day in 2011<sup>36</sup>. Two freight barge companies provide approximately 180 service runs each year from Seattle, sending consumer goods and supplies to Alaska.

## Freight Transportation Assets Supporting Agriculture and Lumber Production

Washington State is a major producer of agricultural and timber products. Washington's agricultural products were valued at over \$10 billion in 2012 making Washington a national leader in agricultural production.<sup>37</sup> These goods are typically transported in heavy truckloads that may shorten the pavement lifecycle on highways and roads in rural areas.

Agriculture in north central Washington and the Columbia Basin (a national center of apple, potato, onion, hay, wine, and lumber production) depends on the I-90 freight corridor to transport products by truck to urban markets in northwest Washington and Puget Sound, and to global markets via the ports of Seattle and Tacoma.

The forestry industry relies heavily on local roads to truck timber to highways and on to mills. About 800,000 truckloads of logs are transported by truck from harvest sites to mills and transfer sites annually.<sup>38</sup> Logging is concentrated in Thurston, Grays Harbor, Lewis, and Cowlitz counties in western Washington and in the northeastern corner of the state. Tribes own a portion of the forestland throughout the state. In 2006, the Bureau of Indian Affairs-owned forestland accounted for about 12 percent of the state total. As of 2011, 74 percent of

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<sup>34</sup> Pacific Northwest Waterways Association. <http://www.pnwa.net/new/Articles/CSRSFactSheet.pdf>

<sup>35</sup> Ibid.

<sup>36</sup> Washington Research Council. The Economic Contribution of Washington State's Petroleum Refining Industry in 2011.

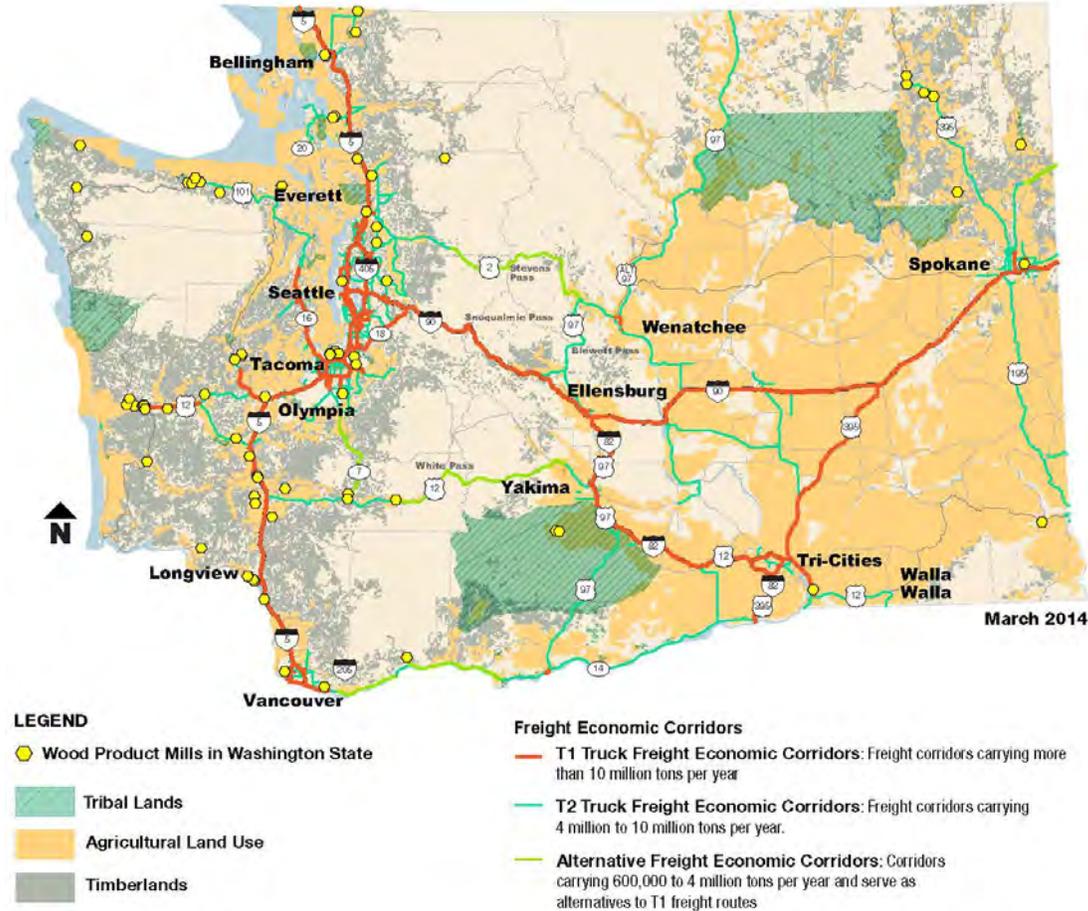
<sup>37</sup> USDA National Agricultural Statistical Service, Annual Statistical Bulletin 2013.

[http://www.nass.usda.gov/Statistics\\_by\\_State/Washington/Publications/Annual\\_Statistical\\_Bulletin/index.asp](http://www.nass.usda.gov/Statistics_by_State/Washington/Publications/Annual_Statistical_Bulletin/index.asp)

<sup>38</sup> Perez-Garcia, John. Forest Products Use of Roadways and Transload Facilities in Washington, October 3, 2007.

active timberlands were privately owned.<sup>39</sup> Exhibit 4.9 highlights Washington’s Freight Economic Corridors that serve areas with significant agricultural and timber industries in Washington State. A larger map can be viewed in Appendix A.

**Exhibit 4.9 Economic Corridors Important to Agricultural and Timber Industries in Washington State**



Source: Washington State Department of Natural Resources, Forest Practices Applications Washington State Department of Agriculture

## Freight Transportation Assets Serving Mining and Energy Sectors

Although mining is not a significant industry in Washington State, energy has grown as an emerging market in recent years. In 2010, Washington households and businesses consumed 16 million gallons of finished petroleum products per day, up 38 percent from 1980, making the state’s consumption fifteenth in the U.S. If built, several proposed projects in Washington would make the state an export gateway: for coal from the Powder River Basin in Montana and Wyoming to major Asian markets; and for crude oil from the Bakken oil fields to the West Coast.

<sup>39</sup> Zhou, Xiaoping and Warren, Debra D. USDA Production, Prices, Employment, and Trade in Northwest Forest Industries, All Quarters 2011. Resource Bulletin PNW-RB-264, December 2012.

Due to improved extraction capabilities and changing sourcing patterns, an increasing amount of crude oil from North Dakota’s Bakken shale and other regions will be shipped to refineries, at least in part, by rail. Crude oil, along with the materials and equipment needed to extract and store it, are increasing demand on the railroad system. Refineries in Washington State, along with terminal operators, have been investing in storage and transfer infrastructure to receive oil from Bakken and western Canada. Currently, there are 13 crude oil storage terminals or rail unloading facilities that are proposed to be built or expanded in Washington. Exhibit 4.10 illustrates operational and proposed crude-by-rail facilities and coal export facilities in Washington. A larger map can be viewed in Appendix A.

**Exhibit 4.10 Operational and Proposed Crude-by-Rail Facilities and Coal Export Facilities in Washington**



# CHAPTER 5: THE CONDITION & PERFORMANCE OF THE STATE'S FREIGHT TRANSPORTATION SYSTEM

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## State of Washington's Assets

Washington's economy depends on a strong freight transportation system and the efficient movement of goods, both of which rely on many of the state's transportation assets – roads, rail, waterways, and intermodal facilities. So how are we doing? This section discusses the conditions of these assets and outlines the performance measures that will be used to prioritize investment in freight assets.

## State Highways & Bridges

### ***State of Repair: Highways***

WSDOT is responsible for more than 18,600 lane miles of state highways and 2,000 lane miles of ramps and special use lanes. WSDOT has succeeded in maintaining 90.5 percent of pavement in Fair or better condition despite reduced paving budgets over the last decade. However, with the recent economic downturn there has been a loss of momentum to improve roadways. Current maintenance, preservation, and operations funding will not take care of the estimated 10-year \$3.1 billion unmet need. Risks to the system include:

- Declining roadway conditions. In 15 years pavement could deteriorate to less than 60 percent of total pavements in Good/Fair condition.
- Preservation will have to be limited to the highest-priority needs on the most heavily-traveled corridors.
- Maintenance service levels will be reduced, meaning critical roadway maintenance may have to be deferred into the future allowing smaller problems to become more extensive and more expensive.
- Truck travel reliability and safety may deteriorate due to road closures from flooding and slides and reduced incident response coverage.

WSDOT measures three main factors: cracking, rutting, and roughness to classify pavements into the following five categories: Very Good, Good, Fair, Poor, and Very Poor. Cracking occurs when pavements are noticeably broken-up due to use by heavy vehicles or freeze/thaw weather conditions. Cracks can occur in different patterns (alligator, longitudinal, transverse) both parallel and perpendicular to the roadway surface. Rutting is defined as a depression in the road surface and commonly occurs due to wear within the wheel path after repeated use.

Roughness is defined as a measure of the ride quality and smoothness of the roadway surface. The map below illustrates the specific places on state highway Truck Freight Economic Corridors where pavements are in a poor “state of good repair”, meaning that the pavement condition has been rated Poor or Very Poor in the 2012 pavement survey<sup>40</sup>. Exhibit 5.1 illustrates pavement condition on key truck routes in Washington. A larger map can be viewed in Appendix A.

### Exhibit 5.1 Poor and Very Poor Pavement on T-1 and T-2 Truck Freight Economic Corridors



Pavement in Good condition is smooth with few defects while Poor condition pavement is characterized by cracking, patching, rutting, and roughness. Pavement segments are prioritized for rehabilitation based on data collect from WSDOT’s condition survey. Freight mobility on the state’s truck freight network is dependent on the condition of Washington’s Truck Freight Economic Corridors. Pavement deterioration will result in:

- More damage to trucks and goods
- Poor truck access to damaged routes

This will directly lead to higher consumer costs for goods and a poor environment for business in Washington State.

<sup>40</sup> WSDOT collects pavement condition data on at least one lane (normally the outside lane) for every mainline state route. For routes that are divided or have more than three lanes, data for one lane is collected in each direction (if more than three lanes, data for the second most outside lane is collected).

## Exhibit 5.2 Good / Fair / Poor Pavement Condition Examples



Asphalt pavement in good condition. Asphalt pavement in Fair condition: wear in wheelpath and transverse crack across the road. Asphalt pavement in very poor condition: past due for rehabilitation.

### **State of Repair: Bridges**

WSDOT's state-owned bridge inventory consists of over 3,800 bridges and structures statewide. WSDOT classifies bridges as being in Good, Fair, or Poor condition based on the National Bridge Inspection Standards (NBIS) bridge superstructure, substructure, and deck codes. In 2012, approximately five percent of state-owned bridges and structures were rated in Poor condition, meaning advanced deficiencies were observed such as section loss, deterioration, scour, or seriously affected primary structural components. Bridges in Poor condition may have truck weight restrictions. In 2012, the remaining 95 percent of state-owned bridges were rated in Good (86 percent) or Fair (9 percent) condition. Additionally, functionally obsolete (FO) bridges<sup>41</sup> are a particular problem on State Truck Freight Economic Corridors when they prevent legal truck loads from passing.

## Exhibit 5.3 Examples of Bridge Deck Conditions



A bridge deck in Good condition. A bridge deck with extensive patching. A bridge deck that shows spalling, or a "pothole."

WSDOT has identified 108 priority state-owned bridges and structures on Washington's T-1 and T-2 Truck Freight Economic Corridors that are in a poor state of good repair. The bridges identified on the map in Exhibit 5.4 have been prioritized and scoped through WSDOT's bridge management and capital program delivery processes. The bridges that have been identified on the map all suffer from problems such as issues with the deck or roadway surface on the bridge, painting of the steel super structure, or scour<sup>42</sup> problems. A larger map can be viewed in Appendix A.

<sup>41</sup> A functionally obsolete bridge is one that was built to standards that are not used today, such as lack of adequate lane widths, shoulder widths, or vertical clearance to serve current traffic demand.

<sup>42</sup> Scour is erosion of the supporting soils beneath a bridge's footing due to flowing water that contains abrasive particles which can cause bridge failure.

## Exhibit 5.4 State-owned Bridges in a Poor State of Repair on T-1 and T-2 Truck Freight Economic Corridors



August 2013

### LEGEND

- Structures on T1 and T2 FGTS Routes
- T1 Truck Freight Economic Corridors: Freight corridors carrying more than 10 million tons per year.
- T2 Truck Freight Economic Corridors: Freight corridors carrying 4 million to 10 million tons per year. Also includes corridors serving as alternatives to primary freight routes (US 2, US 12, SR 7, SR 14).
- ⚓ Major marine port   ✈ Major air cargo airport   — Other state roads   — County line

Source: 2011 Freight and Goods Transportation System.

Data includes those structures for the listed PINs within the Flexible Group list "2012 Prioritization 6-Yr Outlk" and the Flexible Groups "Bridge Deck", "Bridge Painting", "Bridge Replacement", "Bridge Scour", "Bridge Seismic", "Bridge Special Repair" and "Bridge Misc Structures" in TEIS.

Structures do not include any Sign Structures.

## City, County, and Tribal Roads and Bridges

Cities, counties, and tribes are responsible for maintaining Washington's regional road and bridge infrastructure.

### State of Repair: Roads

City and county agencies collectively manage a network of more than 117,000 lane miles of roadway, about 75 percent of which are paved with concrete, asphalt, or chip seal.<sup>43</sup> Cities and counties have struggled to fund basic maintenance over the past decade. The following table shows the percentages of local agency pavement in Fair or better condition:

<sup>43</sup> WSDOT reports the overall condition of the state's local agency pavement network to the state Legislature, using condition data that is mostly provided by cities and counties and by assisting smaller cities with data collection. County road pavement data on the collector and arterial system is gathered and reported by the County Road Administration Board and updated by the counties every two years.

Year	City		County	
	Arterial	Collector	Arterial	Collector
2010	81%	76%	--	--
2012	Incomplete Data <sup>44</sup>		89%	92%

Source: WSDOT Highways & Local Programs.

An arterial is defined as a road that connects a city or county to a state route or freeway, and can include the freeway system and state routes. A collector is a road that provides direct access to local roads and driveway access to abutting properties or distributes trips to and from the arterial system.

### **Examples of Poor Pavement Conditions on Washington City Streets that are classified as Truck Freight Economic Corridors**

#### **Port of Tacoma Road: I-5 to E 11<sup>th</sup> Street**

#### **Exhibit 5.5 Examples of Port of Tacoma Road Pavement Condition**



Pavement deterioration is visible on this road segment. The pictures illustrate a failing transverse joint (left) and failing patches (right).

One example of a T-1 city road that has been identified as having pavement in Poor condition is the Port of Tacoma Road between I-5 and E 11<sup>th</sup> Street in the City of Tacoma. Many trucks serving the Port of Tacoma travel on this route. The segment shown above has been rated in Poor condition in the 2011 pavement survey for having high levels of rough and cracked pavement.

<sup>44</sup> In the 2011-13 biennium the Legislature modified reporting requirements to allow cities with populations over 25,000 to forego pavement condition data collection and reporting, therefore 2012 city pavement condition data is incomplete.

University Street: N. Cora Street to Wenas Street

**Exhibit 5.6 Examples of University Street Pavement Condition**



Pavement deterioration is visible on this road segment. The pictures illustrate a flushing pavement (left) and failing patches in the wheel path (right).

Another example of a T-1 city road that has pavement in Poor condition is University Street between N. Cora Street and Wenas Street in the city of Ellensburg. University Street connects the city of Ellensburg to the major truck freight corridors of I-90 and US 97. This segment was rated in Poor condition in the 2012 pavement survey for having high levels of rutting and crack sealed pavement.

**State of Repair: Local Bridges**

Ninety-five percent of local agency-owned bridges were in Good or Fair structural condition and five percent were in Poor condition as of July 2012. An average of 10 million vehicles cross more than 3,900 locally owned and maintained bridges every day throughout the state.

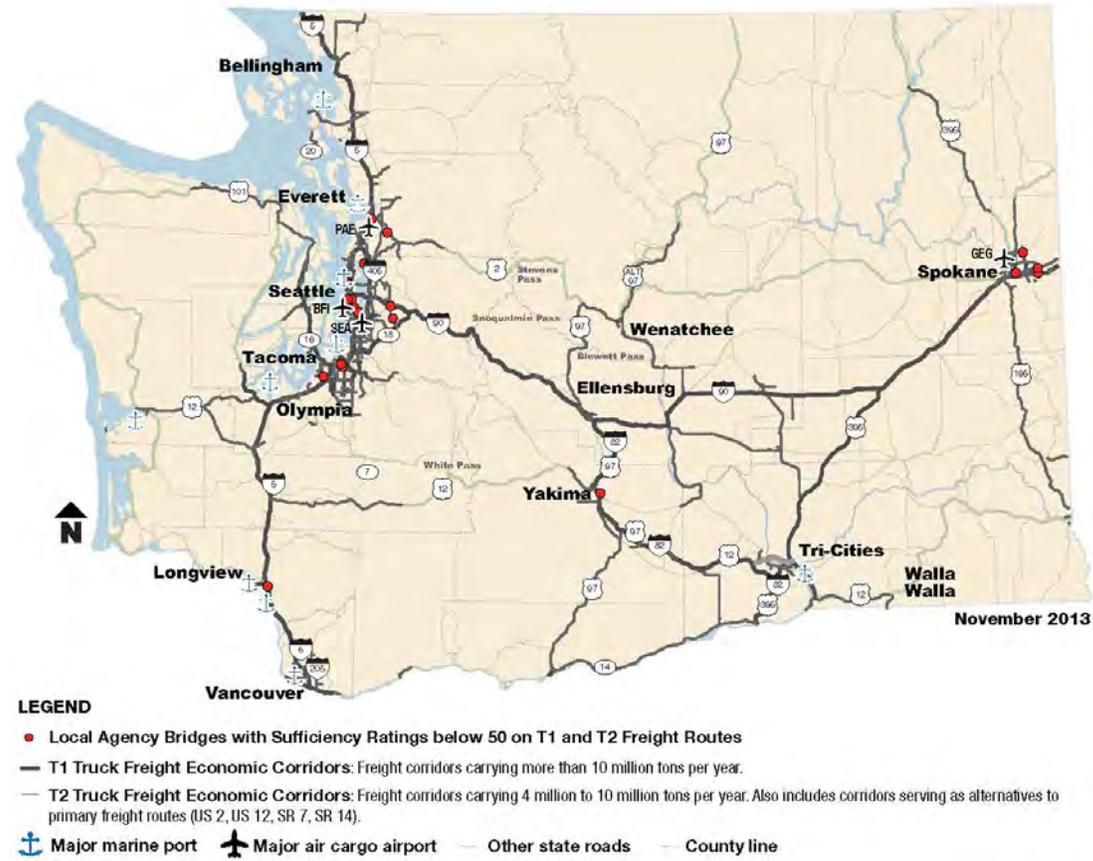
FHWA requires states to report annual state, city, and county data concerning the structural condition and adequacy of all bridges. A structurally deficient bridge is safe as long as all restrictions are obeyed, but it may need costly repairs or replacement in order to carry legal truck loads. Following a thorough review, bridges are assigned a sufficiency rating between zero and 100. The rating takes into account 75 factors reviewed during an inspection and considers a bridge’s age, length and width, and the average traffic the bridge handles. The table below shows the percentage of county- and city-owned bridges by condition rating for 2012.

Rating	County Owned: Percent of Bridges	City Owned: Percent of Bridges	Total
Good	84%	77%	82%
Fair	12%	16%	13%
Poor	4%	7%	5%

Source: WSDOT Highways & Local Programs

WSDOT has identified 166 local bridges on Washington’s T-1 and T-2 truck freight economic corridors of which 25 are in a poor state of good repair. The locations of these bridges are displayed in Exhibit 5.7. A larger map can be viewed in Appendix A.

**Exhibit 5.7 Local Bridges in a Poor State of Repair on T-1 and T-2 Truck Freight Economic Corridors**



**Tribal Pavements and Bridges**

The state’s Truck Freight Economic Corridors may include some Tribal-owned pavement and bridges. Although drawing pavement condition data from the Federal Bureau of Indian Affairs proved difficult, in the future WSDOT plans to look at this data along with additional bridge data to better identify pavement and bridge condition issues that may impact the Washington’s identified Truck Freight Economic Corridor network.

**Core All-Weather County Road System**

For up to two months per year, Washington State agricultural growers and processors, manufacturers, and timber/lumber businesses cannot ship their products to market due to weight restrictions on county roads. In a global marketplace, the inability to meet demand will reduce the state’s competitive advantage. The 2007 Washington State Freight Transportation Report called for identifying, establishing, and funding a statewide core all-weather county road system to minimize the economic impacts of freeze- and thaw-related road closures. This recommendation was not fully funded and the accelerating decline in county pavement

condition has increased the likelihood that existing all-weather roadways on the state’s Truck Freight Economic Corridors could be weight-restricted for trucks.

**Exhibit 5.8 Grandview Pavement Road in Yakima County**



The photo on the left is Grandview Pavement Road in Yakima County before the County Road Administration Board was able to provide funding from the Rural Arterial Program to address weather related pavement issues. The photo on the right is the same road after the construction was complete.

**Identification of Bottlenecks on Washington’s Truck Freight Economic Corridors**

From 2008 to June 2013 WSDOT lead the national practice by collecting GPS speed and location data from over 7,000 trucks on Washington’s truck freight corridors every day and systematically analyzed the truck freight highway network and quantitatively identified truck freight bottlenecks. This quantitative analysis allowed WSDOT to identify slow speed bottlenecks and develop strategies to address them. WSDOT now has access to FHWA’s larger data sets and will continue refining the analysis of truck bottlenecks in 2014-15. WSDOT’s longer term objective is to use this data to identify truck freight bottlenecks on the entire truck freight economic corridor network.

WSDOT has developed and is refining criteria to identify five types of truck freight bottlenecks. Exhibit 5.9 and Exhibit 5.10 summarize the types of bottlenecks and Exhibit 5.11 through Exhibit 5.15 illustrate the various types of truck bottlenecks.

**Exhibit 5.9 Categories of Truck Bottlenecks**

Bottleneck Type	Criteria Threshold	Implications for Freight
<b>Slow Speed</b>	<ul style="list-style-type: none"> <li>More than 50 percent of sampled trucks traveling below 60 percent of the posted speed (35 mph on urban freeways)</li> </ul>	<ul style="list-style-type: none"> <li>Travel time increases</li> </ul>
<b>Reliability</b>	<ul style="list-style-type: none"> <li>80<sup>th</sup> percentile</li> </ul>	<ul style="list-style-type: none"> <li>Travel times are hard to estimate, leading to poor on-time performance</li> </ul>
<b>Resiliency</b>	<ul style="list-style-type: none"> <li>Disruptions caused by severe weather, natural disasters (earthquakes), or other causes</li> <li>Minimum average of at least 5,000 trucks per</li> </ul>	<ul style="list-style-type: none"> <li>Facility failure causes large statewide economic impacts for</li> </ul>

	<p>day on the freight corridor</p> <ul style="list-style-type: none"> <li>Truck corridor has had at least one full closure lasting longer than 24 hours in a rolling 20-year period</li> </ul>	<p>shippers, goods receivers, and carriers</p>
<b>Restricted Access for Legal Loads</b>	<ul style="list-style-type: none"> <li>Facility has a posted weight limit below the legal gross vehicle weight of 105,500 pounds or the facility has a posted height limit below 14 feet, the legal height limit for trucks</li> </ul>	<ul style="list-style-type: none"> <li>Legal truck loads cannot travel on the state truck freight economic corridors</li> </ul>
<b>Clearance restriction for over-height loads</b>	<ul style="list-style-type: none"> <li>Facility has a height clearance less than 17 feet</li> </ul>	<ul style="list-style-type: none"> <li>Over-height loads have to take detour routes adding too many additional miles to the trip</li> </ul>

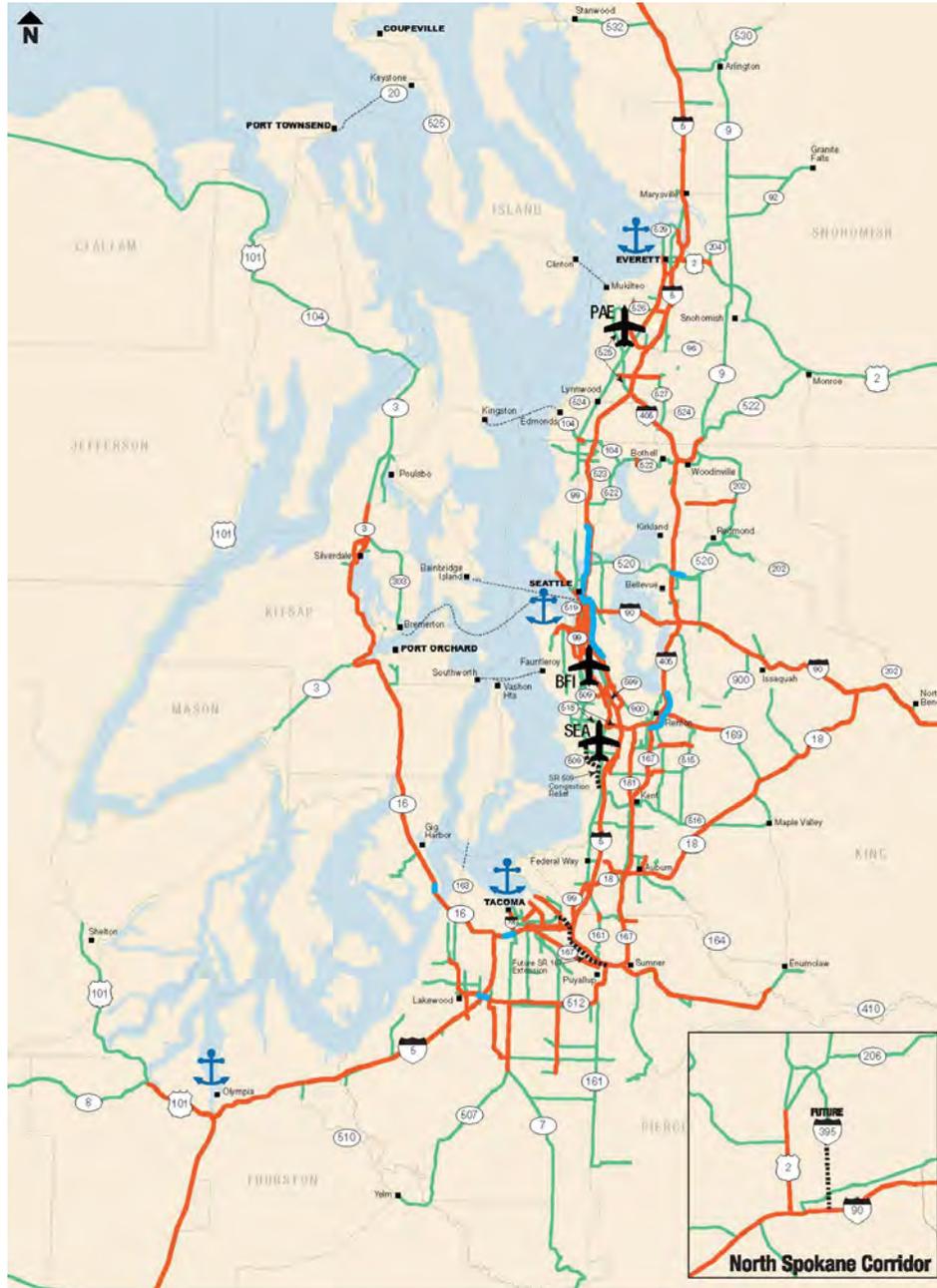
WSDOT’s analysis has shown that slow speed bottlenecks fall into two subcategories that may require different solutions.

### Exhibit 5.10 Truck Slow Speed Bottleneck Categories

Category	Potential Solutions
<b>Congested freeway bottlenecks in urban areas</b>	<ul style="list-style-type: none"> <li>Provide traveler information</li> <li>Improve viability of alternate modes for passenger traffic</li> <li>Manage demand through variable rate tolling or other strategies</li> <li>Add strategic capacity</li> </ul>
<b>Truck bottlenecks on traffic-controlled state highways in urban areas</b>	<ul style="list-style-type: none"> <li>Optimize traffic signal timing to reduce delays</li> <li>Improve geometrics for large trucks</li> <li>Add strategic capacity</li> </ul>

The following maps illustrate the specific locations of the types of bottlenecks on the state’s Truck Freight Economic Corridors. A larger version of each map can be viewed in Appendix A.

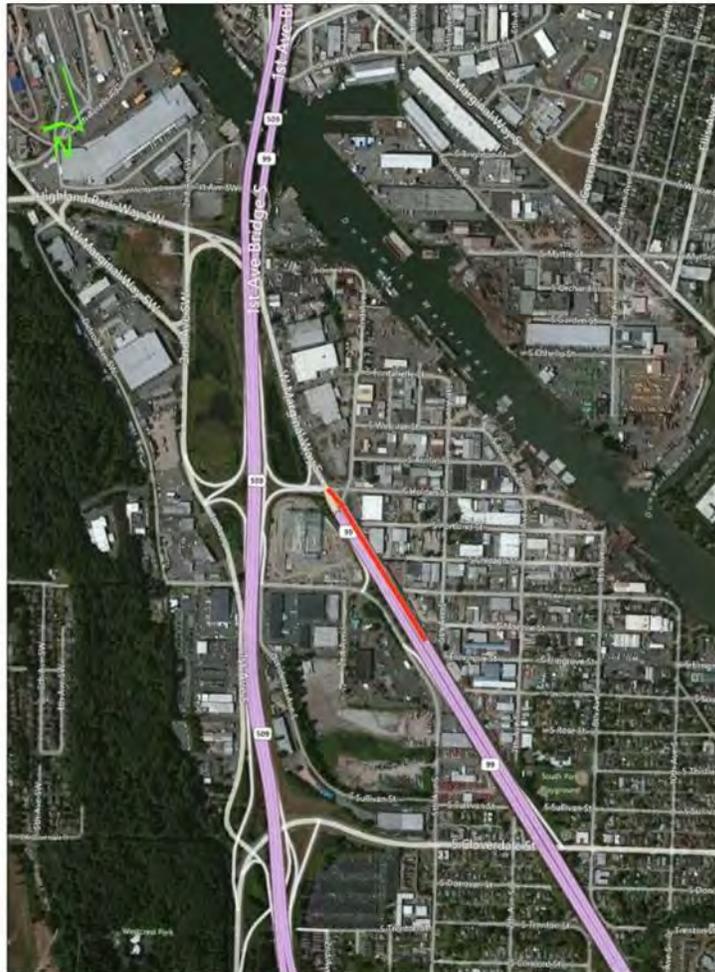
**Exhibit 5.11 Truck Freight Highway Slow Speed Bottlenecks on Freight Economic Corridors: Congested freeway bottlenecks in urban areas**



**LEGEND**

- ..... Missing Links on Freeways
  - Truck Slow Speed Bottlenecks on Freeways
  - Primary freight corridors: Freight corridors carrying more than 10 million tons per year.
  - Connector freight corridors: Freight corridors carrying 4 million to 10 million tons per year. Also includes corridors serving as alternatives to primary freight routes (US 2, SR 7).
- February 2014**
- Other state roads
  - Ferry route
  - County line
  - ⚓ Major marine port
  - ✈ Major air cargo airport

**Exhibit 5.12 Truck Freight Highway Slow Speed Bottlenecks on Freight Economic Corridors: An example truck bottleneck on a traffic-controlled state highway in an urban area**



This is one example of where WSDOT has identified a location with a truck bottleneck on a traffic-controlled state highway in an urban area.

- Location: SR 99 northbound, south of 1st Avenue S. Bridge, Seattle, Washington
- Length: 0.26 miles
- Daily truck volume: 3,900; T-1 corridor
- Truck percentage of total traffic: 13 percent
- Average truck travel speed: 22 mph
- Posted speed: 40 mph
- Percentage of sample trucks traveling below 60 percent of posted speed limit: 63 percent

### Exhibit 5.13 Resiliency Bottlenecks on Freight Economic Corridors



February 2014

**LEGEND**

— Resiliency Bottlenecks

**Resiliency bottleneck criteria:**

1. Located on T-1 or T-2 highways, and an average of at least 5,000 trucks per day
2. Caused by severe weather (flooding, avalanche control)
3. Corridor has had at least one full closure lasting longer than 24 hours in a rolling 20-year period

**Freight Economic Corridors**

- **T1 Truck Freight Economic Corridors:** Freight corridors carrying more than 10 million tons per year
- **T2 Truck Freight Economic Corridors:** Freight corridors carrying 4 million to 10 million tons per year.
- **Alternative Freight Economic Corridors:** Corridors carrying 600,000 to 4 million tons per year and serve as alternatives to T1 freight routes

### Exhibit 5.14 Legal Load Bottlenecks on Freight Economic Corridors



February 2014

**LEGEND**

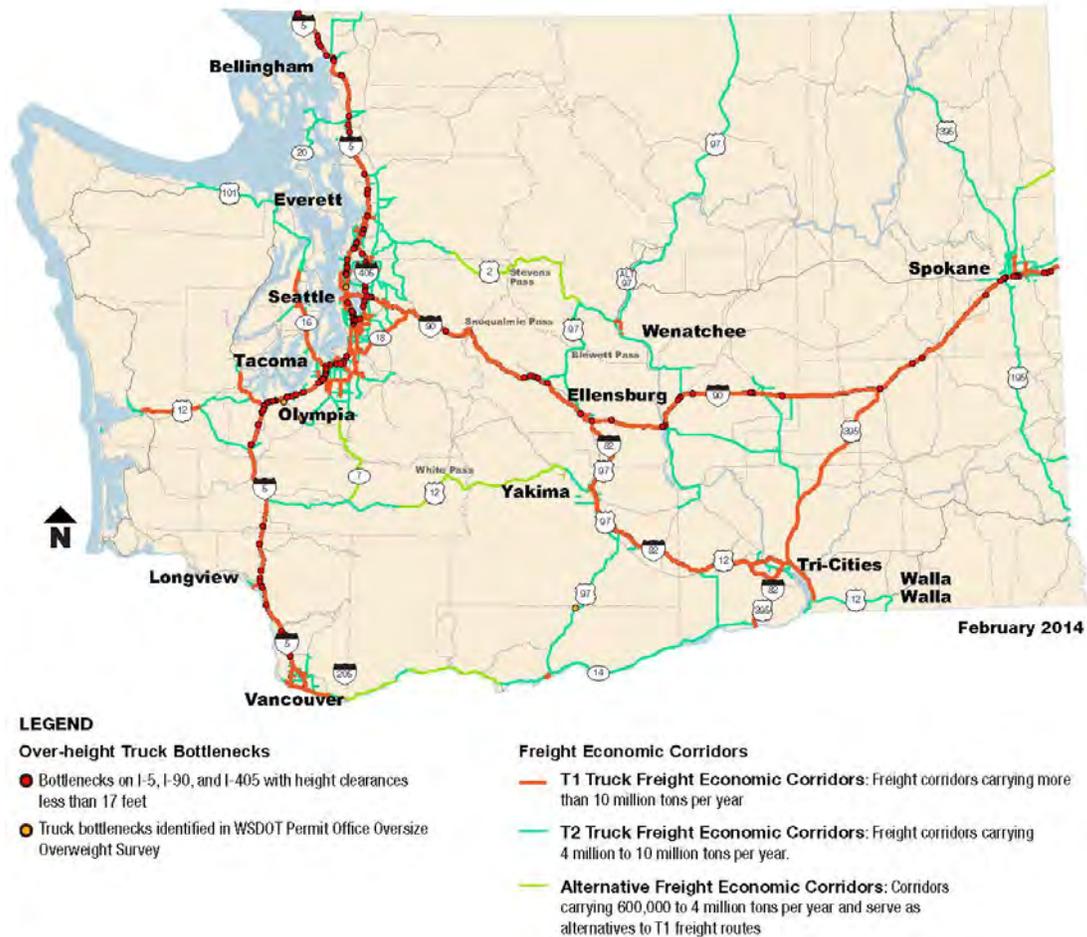
**Legal Load Restricted Bottlenecks**

- Height clearance less than 14 feet
- Weight restricted equal to or below 105,500 lbs

**Freight Economic Corridors**

- T1 Truck Freight Economic Corridors: Freight corridors carrying more than 10 million tons per year
- T2 Truck Freight Economic Corridors: Freight corridors carrying 4 million to 10 million tons per year.
- Alternative Freight Economic Corridors: Corridors carrying 600,000 to 4 million tons per year and serve as alternatives to T1 freight routes

**Exhibit 5.15 Over-Height Bottlenecks on Freight Economic Corridors**



## Safety

Washington’s “Target Zero” strategy<sup>45</sup> focuses on reducing traffic fatalities and serious injuries on Washington’s roads. WSDOT identifies safety projects to reduce fatal and serious injury collisions involving trucks in the same manner as those that involve passenger vehicles. WSDOT funds individual safety projects to reduce fatal and serious injury collisions within highway segments that have a high collision frequency. Project solutions to address the infrastructure-related contributing factors of collisions, thereby reducing the potential for fatal and serious injury collisions.

WSDOT prioritizes investments in improvements that are relatively low cost per site/mile and provide significant reductions in the risk of serious collisions. The Washington State Patrol’s Commercial Vehicle Division enforces commercial motor vehicle regulations to lower the risks associated with unsafe operations.

In the future WSDOT will work toward identifying safety hazards on the State’s Truck Freight Economic Corridors.

<sup>45</sup> <http://wsdot.wa.gov/planning/SHSP.htm>

## Truck Parking

The shortage of truck parking can contribute to fatigued driving and illegal parking by truck drivers, creating a safety hazard on highways and greater community impacts. The WSDOT [Truck Parking Study](#) evaluated the adequacy of truck parking along three long haul truck corridors in the state: I-5, I-90, and I-82.

Looking at existing conditions in 2005 and projections for 2030, the study concluded that:

- Without added truck parking capacity, all study corridor segments and the majority of public rest areas are forecasted to substantially exceed capacity by the year 2030 – meaning that the demand for parking spaces is expected to be much higher than the number of available spaces.
- The south segment of northbound I-5 (Vancouver, Washington to Olympia) and west segment of westbound I-90 (Seattle to Vantage) do not have enough truck parking capacity during the peak period (nighttime). The central segment of northbound and southbound I-5 (Olympia to Marysville) does not have any legal truck parking at public facilities.
- Five public rest area facilities had average truck parking demands that consistently were greater than available capacity. (Scatter Creek, Maytown, Gee Creek and Smokey Point – all on I-5; and Sprague Lake on I-90)

A [2008 survey](#) of truck drivers and trucking companies found that the highest priority locations for new or expanded truck parking are along the I-5 corridor within the Seattle, Tacoma, and Federal Way areas, in that order. Fourth in priority is the need for improved and expanded truck parking facilities at the chain-up locations on both sides of Snoqualmie Pass. Both the 2005 and 2008 studies are still relevant as no new public truck parking has been added to the high-demand Truck Freight Economic Corridors.

The lack of truck parking capacity not only causes safety problems, it has a negative impact on communities in high demand areas. For example, the city of North Bend is inundated with trucks parking on local roads when Snoqualmie Pass is closed in the winter.

The Federal Hours of Service rule changed effective July 1, 2013, exacerbating the state's truck parking problem as it shortened the number of hours truck drivers may work. This rule change means that drivers must stop for rest more frequently and need increased access to safe, secure, and legal truck parking facilities.

## Railways

### ***Rail System Capacity and Access***

The rail system in Washington State has adequate capacity to meet its current demands today. The highest utilized corridor is BNSF's Spokane to Pasco segment which operates at 87 percent of practical capacity. Future freight rail tonnage is expected to double by 2035; if rail engines and cars are not available, this also causes capacity issues. These projections suggest capacity improvements that will be needed on nearly all Rail Economic Corridors (R-1 line segments) across Washington in order to ensure the system continues to function efficiently.

Capacity improvements can be attained through capital improvements and/or operational changes. It is anticipated that Class I railroads will likely address key capacity issues as they emerge. Typical capacity improvements may include:

- Construction of additional main track, and new and/or lengthened passing sidings.
- Expansion of industry, yard, and terminal facilities.

An example of an operational change occurred in 2012, when BNSF began directional running of their Auburn to Pasco corridor which increased rail capacity on that corridor by about 300 percent over bidirectional operations. Other potential operational changes include:

- Operation of longer trains.
- Schedule and train speed adjustments.
- Application of advanced operational management systems and signaling systems.

The Washington State Rail Plan identified a persistent east-west capacity constraint. While BNSF's three existing east-west corridors have seen diminished volumes over the past few years, ensuring the availability of adequate east-west capacity is vital to meeting the future needs of rail service in the Puget Sound region. Previous studies of this issue have identified a range of solutions with significant cost variations that may be considered.

As private businesses, railroads seek a Return on Investment (ROI) on their capital investments that exceeds a threshold, which varies based on the cost and availability of capital. Often, the risks associated with a new investment exceed likely benefits, and the railroads will choose to make adjustments to business instead. Most commonly, these take the form of pricing actions and changes in service frequency. The impacts of these decisions can negatively affect shippers and short-line connections by increasing their costs. These decisions are often seen as limiting shipper's access to the rail system. During development of the Washington State Rail Plan, stakeholders voiced concern about how growth in rail volumes affected pricing in the past; based on future rail volume projections, this continues to be an issue into the future.

### ***Community Impact – Highway-Rail At-Grade Crossings***

Anticipated increases in freight along Economic Freight Rail Corridors will result in increased delays and impacts to non-motorized mobility at highway-rail grade crossings and increase noise through communities across Washington. These impacts can be addressed through a variety of potential operational measures and capital investments that could involve state participation. Communities in Washington located next to mainline railroad tracks have expressed concern about trains blocking roads, highways, or access to those facilities as rail traffic grows.

### ***Challenges of Deferred Maintenance and Modernization on Short-line Railroads***

Many short-line railroads were created from lines that were determined as no longer being viable by their previous mainline owners. Some short-line railroads continue to struggle to overcome decades of deferred maintenance along their right of way. Maintenance needs often compound over time, making deferred repairs more costly than if they had been addressed in a timely manner. In addition, substandard or nonexistent maintenance programs do little to instill confidence in attracting new businesses or encouraging past shippers to return to rail transportation.

Class I railroads encourage efficiency and modernization by providing shippers with incentives to ship larger quantities of product. While increasing efficiency is a long-term benefit, it requires short-line railroads to make costly improvements to bridges and track in order to handle the increased tonnage. This can be seen in the adoption of 286,000-pound capacity rail equipment. Only a portion of the state's short-line rail infrastructure can handle these heavier cars. It will be critical for the future success of short-line railroads to make these improvements. In addition, Class I railroads often influence the rates that short-line railroads can charge to customers. Class I railroads also often supply equipment and control the condition or quantity of rail equipment available to short-line railroads. Bottlenecks can form when Class I railroads change or place limitations on the interchange or connection between the short-line railroad and the Class I. Class I railroads often require short-lines, or the shippers located on them, to have an ability to originate or terminate bulk trains up to 110 railcars in length.

The future of Washington's short-line railroads is very much tied to the success of the state's Class I railroads and the entire national rail network. Successful short-line railroads will align with Class I railroads in implementing new technology, increasing efficiency, and streamlined marketing. This can only be achieved if short-line railroads are able to overcome the deferred maintenance of their infrastructure and succeed in profitably by growing their businesses.

### ***Preservation of Rail-Served Industrial Sites***

State law now requires Seattle and Tacoma to include a *Container Ports Element* in their respective comprehensive plans to address transportation and land use near rail and other port infrastructure. The law was passed under the Governor's Ports Initiative in 2007 and requires cities with a qualifying marine container port in their jurisdiction to include a container port element in their comprehensive plans. One example of this change occurred in Clark County, which designated *industrial railroad base zones* near some rail lines. The designation is appropriate for land uses that require and take advantage of rail access for industrial and manufacturing purposes such as manufacturing, assembly, fabrication, processing, bulk handling, and bulk storage (warehousing).

## Waterways

Conditions and challenges for Washington's Waterway Economic Corridors include:

**Degradation of jetties at the mouth of the Columbia.** The U.S. Army Corps maintains three rubble-mound jetties at the Mouth of the Columbia River. The north jetty (2.5 miles long) is on the Washington side of the Mouth, the south jetty on the Oregon side (6.6 miles long), and "JettyA" is just inland of the Mouth (0.9 miles long), on the Washington side as shown in [Exhibit 5.16](#).

## Exhibit 5.16 Map of the Jetties at the Mouth of the Columbia River



Source: Pacific Northwest Waterways Association, 2013.

These structures help maintain the depth and orientation of the navigation channel and protect ships of all sizes (both commercial and recreational) entering and leaving the estuary, ensuring safe passage for mariners. Recent intense and frequent storms have accelerated degradation of the jetties.

**Columbia River navigation channel maintenance.** The Columbia River Channel Improvement Project deepened the channel to 43 feet. However, high sustained river flows in 2011 and 2012 have made maintaining the 43-foot depth a challenge.

**Lack of Columbia River anchorages.** With additional cargo movement and a deeper channel, larger vessels are more frequently transiting the lower Columbia River. This has increased the need for safe places to anchor ships. Three new stern buoys were installed on the lower Columbia River in October 2012. Stakeholders continue their work with the Coast Guard, Corps and ports on the lower river to identify and designate additional anchorage locations and areas where stern buoys would be most beneficial.

**Columbia-Snake River inland locks.** The eight navigation locks on the Columbia-Snake River System need funding for critical repairs ranging from replacement of mechanical gear to new gates. Stakeholders are partnering with the U.S. Army Corps of Engineers' Districts of Portland and Walla Walla to plan for an extended lock maintenance closure sometime during the FY2016-2018 time frame, depending on the availability of federal funding.

**Columbia-Snake dolphins.** Refurbishment and/or replacement of dolphins (man-made structures used to cushion ship impacts) located on the inland system is needed. Priority locations included Ft. Rains just above Bonneville Dam and the Hard Rock Dolphins above Ice Harbor Dam. These vital pieces of infrastructure ensure the most efficient movement of cargo through the dams on the Columbia-Snake River System.

**Snake River navigation.** Priority projects along the Snake River include maintenance dredging for the 14-foot of federal navigation channel to maintain safe and efficient navigation and completion of the Lower Snake River Programmatic Sediment Management Plan.

## Intermodal

### **Marine Ports**

The Washington State Container Ports Initiative identified policy and land use issues facing the Ports of Seattle and Tacoma. The Container Ports Initiative calls for collaborative strategies that include increasing mainline rail capacity in Washington, improving truck freight movement, and working to resolve land use compatibility and protection issues.

The west coast ports are facing increased competition as new capacity is added to supply chains stretching from Asia to the U.S. In 2016, the expanded Panama Canal will open providing additional capacity to the all water route to the East Coast. The Canadian Federal Government has funded and implemented a national freight strategy that has added capacity to the port-freight rail routes to the Midwestern and East Coast U.S. The major shipping lines are moving to larger container ships to lower their total costs. To serve these ships the Port of Seattle and the Port of Tacoma must improve channel depths.

### **Airports**

Ninety-nine percent of all air freight cargo in the state is handled at three airports, Sea-Tac International Airport, Spokane International Airport, and King County International Airport/Boeing Field. These airports are recognized by the Federal Aviation Administration (FAA) as Cargo Service Airports and receive additional funding (cargo apportionment funding). To qualify for these funds, airports must annually document a total cargo-only landed weight of more than 100 million pounds<sup>46</sup>. Serviceable runways and taxiways at airports are critical to air cargo operations and can affect air cargo operator decisions to establish or continue operations at airports. Pavement condition affects usability of these airside surfaces.

Sea-Tac International Airport, located in a large urbanized area, has limited space available to expand its air cargo facilities. Boeing Field/King County International Airport has similar space constraints for larger planes.

## Freight Diesel Emissions in Washington State

### ***What are diesel emissions and how do they impact health?***

Diesel exhaust contains several regulated air pollutants such as oxides of nitrogen and volatile organic carbons (ozone precursors), and unregulated pollutants such as carbon dioxide (a greenhouse gas) and toxic microscopic particles that are less than 2.5 microns in diameter (also known as PM<sub>2.5</sub>). Diesel PM<sub>2.5</sub> poses the most serious risk from diesel exhaust because of its toxicity and they can be breathed deeply into the lungs and sometimes pass directly into the bloodstream – potentially affecting lungs, hearts, and other organs.

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<sup>46</sup> Federal Aviation Administration Advisory Circular 5100.38C.

Diesel exhaust puts healthy people at risk for respiratory disease and worsens the symptoms of people with health problems such as asthma, heart disease, and lung disease. Washington State Department of Ecology estimates that over four million people in Washington live or work very near highways and other major roads where they may be exposed to diesel exhaust.<sup>47</sup> Freight diesel emissions can create more problems for urban areas where diesel emissions are more concentrated and a higher density of population live nearer freight traffic.<sup>48</sup>

### ***Inventory of Diesel Emissions in Washington***

In Washington State, legacy diesel engines emitted 6,474 tons of PM<sub>2.5</sub> in 2011.<sup>49</sup> A variety of sources contribute to the total amount of PM<sub>2.5</sub> from diesels. The key sources are:

- On-Road Vehicles
- Marine Vessels
- Construction Equipment
- Agricultural Equipment
- Locomotives

These sources can be found in both urban and rural areas. On a statewide basis, on-road vehicles, marine vessels, and construction equipment dominate the contribution to diesel PM<sub>2.5</sub>, accounting for 76 percent of the total. Agricultural equipment and locomotives are also fairly substantial contributors to total diesel PM<sub>2.5</sub> (9 percent and 6 percent respectively).

The relative amount that different sources contribute to diesel PM<sub>2.5</sub> emissions varies across the state. For example, 42 percent of the total statewide diesel PM<sub>2.5</sub> emissions are in the central Puget Sound region (Snohomish, King, Pierce, and Kitsap counties), that also contain the majority of the State's population. Diesel PM<sub>2.5</sub> emissions in central Puget Sound are dominated by on-road vehicles, construction equipment, and marine vessels; 89 percent of the total in 2011. Exhibit 5.17 shows the relative source contribution to diesel PM<sub>2.5</sub> emissions on a state wide basis.

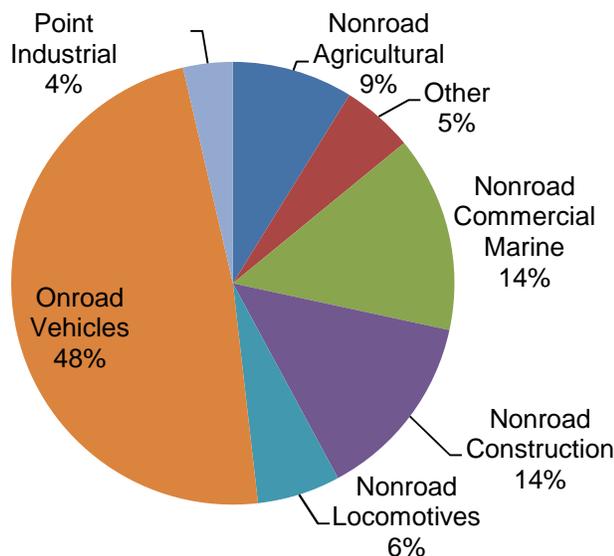
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<sup>47</sup> The Washington State Department of Ecology GIS services conducted an analysis of population within 300 meter zone either side of centerline of major highways and 200 meters of the centerline of major arterials based on 2000 census data.

<sup>48</sup> Washington State Department of Ecology. Diesel Particulate Emission Reduction Strategy for Washington State.

<sup>49</sup> Based on 2011 preliminary inventory data summarized by Washington State Department of Ecology. The preliminary inventory data is missing commercial, institutional, and small (nonpoint) industrial fuel use data.

**Exhibit 5.17 Sources of Diesel PM<sub>2.5</sub> in Washington State (2011)**



The diesel emission inventory shown above only reflects the current level of emissions; conditions are not static. Natural gas is becoming more attractive for commercial trucks due to its lower cost and that it is viewed as the industry's next generation of fuel source. Meanwhile, the industry is also migrating to cleaner diesel technology. These factors will have significant influence on the trend of truck diesel emissions in the future.

### ***Federal Efforts to Reduce Diesel Emissions***

New engine standards and cleaner fuels requirements from the U.S. Environmental Protection Agency (EPA) have dramatically reduced diesel emissions and will continue to decrease emissions from diesel engines in the future.

- Annual PM<sub>2.5</sub> emissions decreased 24 percent from 2001 to 2010.<sup>50</sup>
- Engine manufacturers were required to meet the 2007 emission standards through a phase-in approach between 2007 and 2010.
- In 2006, EPA required ultra-low sulfur diesel across the country, which reduces sulfur content of highway diesel fuel by 97 percent.
- EPA estimates that these new standards will reduce pollutants from new diesel engines by 90 percent.<sup>51</sup>

While national standards will significantly lower emissions from future diesel engines, local efforts are underway to reduce emissions even before the current heavy-duty vehicle fleet is replaced with newer vehicles.

EPA has also supported local diesel emission reduction efforts through grants from the Diesel Emissions Reduction Act (DERA). For example, Port of Tacoma received \$1.4 million in 2009

<sup>50</sup> Our Nation's Air – Status and Trends through 2010. EPA. <http://epa.gov/airtrends/2011/>

<sup>51</sup> Heavy-Duty Highway Diesel Program. EPA. <http://www.epa.gov/oms/highway-diesel/>

from DERA grants to retrofit two ships with shore power and Puget Sound Clean Air Agency received \$200,000 in 2013 to replace diesel short haul trucks with liquefied natural gas trucks.<sup>52</sup>

### ***State Efforts to Reduce Diesel Emissions***

The Washington State Department of Ecology developed a Diesel Particulate Emission Reduction Strategy to guide its work on reducing diesel exhaust. Their strategic goals are to decrease diesel pollution and the negative health effects from exposure to diesel emissions. Ecology uses a phased approach to reduce diesel emissions from existing vehicles and equipment (pre-2007 model year). The approach first focuses on reducing diesel exhaust from existing sources, including heavy duty on-road vehicles in areas where the most people are located, and prioritizes areas with sensitive populations<sup>53</sup> and economically disadvantaged communities<sup>54</sup>.

The Department of Ecology first focused on programs putting new technologies on old engines and recommended implementing the following technologies:

- Installing pollution reducing technologies such as particulate filters or oxidation catalysts on existing engine exhausts
- Reducing vehicle idling through technologies such as engine pre-heaters, auxiliary power units, electrified truck parking, and operational changes
- Installing add-on technologies, such as aerodynamic fairings and single wide tires, that increase fuel efficiency, thereby decreasing diesel emissions
- Replacing older engines and vehicles

Other emission reducing technologies and programs will be evaluated and used where appropriate. In addition, the Washington State Department of Ecology has an ongoing Clean Diesel Grant Program that provides about \$2.5 million annually to fund projects that reduce emissions from heavy-duty diesel vehicles and equipment.

### ***Regional Efforts to Reduce Diesel Emissions***

The Puget Sound Clean Air Agency<sup>55</sup> has an ongoing Diesel Solution Program to reduce diesel emissions in the Puget Sound region. This program has enlisted both public and private sectors – including cities and counties, ports, private businesses, and others – to work to voluntarily reduce diesel emissions from off-road equipment, on-road vehicles, maritime vessels, and rail locomotives. Eligible activities include using retrofit technologies, cleaner or alternative fuel, replacing vehicles, repowering locomotives, and upgrading engines.

### ***Port Efforts to Reduce Diesel Emissions***

#### **Northwest Port Clean Air Strategy**

In 2007, Port Metro Vancouver B.C., the Port of Seattle, and the Port of Tacoma partnered with regulatory agencies to establish short- and long-term performance measures to reduce

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<sup>52</sup> <http://yosemite.epa.gov/opa/admpress.nsf/0/BADC34126C3F0D8085257C4600714E71>

<sup>53</sup> Children, the elderly and people whose existing health problems put them at risk

<sup>54</sup> Environmental justice communities that are exposed to a higher amount of air pollution than the general population

<sup>55</sup> <http://www.pscleanair.org/programs/dieselsolutions/default.aspx>

emissions from shipping and port operations as part of the Northwest Port Clean Air Strategy<sup>56</sup>. Regulatory partners included Environment Canada, the Puget Sound Clean Air Agency, the Washington State Department of Ecology, and the U.S. Environmental Protection Agency. The strategy was updated in 2013. The updated goals are to reduce diesel particulate matter emissions per ton of cargo by 75 percent by 2015 and 80 percent by 2020, and greenhouse gas emissions per ton of cargo by 10 percent by 2015 and 15 percent by 2020, relative to a 2005 baseline. The strategy partners updated the previous 2015 performance targets and set new targets for 2020 for following six maritime industry sectors to achieve the emission reduction goals: ocean-going vessels, harbor vessels, cargo-handling equipment, trucks, locomotives and rail transport, and port administration. The specific performance targets for truck and rail sectors are as follows:

**Exhibit 5.18 NW Ports Clean Air Strategy - Performance Targets for Truck and Rail Sectors**

Sectors and Actions	2015 Targets	2020 Targets
<b>Trucks</b>		
Meet or surpass U.S. EPA emission standards or equivalent for model year 2007	100% of trucks by the end of 2017	
Have fuel efficiency plans in place that promote continuous improvement	Ports	Ports, terminals, and 50% of trucks
<b>Rail</b>		
Switcher locomotive owners/operators participate in a fuel efficiency program	100% of owners/operators institute a program	100% of owners/operators achieve performance objectives of chosen program
Switcher locomotive owners/operators upgrade or replace unregulated engines	10% of unregulated engines	20% of unregulated engines

Strategy partners will publish an implementation report tracking progress on performance targets each year, and ports will update air emission inventories and report progress towards emission reduction goals every five years.

**Port of Tacoma Clean Truck Program**

The Port of Tacoma's Clean Truck Program<sup>57</sup> takes a market-based approach to help drayage trucks reduce emissions to meet the Northwest Ports Clean Air Strategy's goals. This program includes the following elements:

- **Promote companies who operate clean fleets.** Implemented a clean truck sticker program to identify trucks that comply with the clean truck program standards.
- **Work with terminal operators to improve terminal and gate efficiency.** Promoted truck operation efficiencies, such as terminal gate technology and congestion management methodologies. Investigated the feasibility of a common chassis pool to increase truck movement efficiencies.

<sup>56</sup> <http://www.portoftacoma.com/nwpcas>

<sup>57</sup> <http://www.portoftacoma.com/truck-program>

- **Assist the trucking community to improve their truck fleet.** Partnered with the City of Tacoma and Cascade Sierra Solutions on the Tacoma ScRAPs program that provides truckers with funding to purchase newer lower-emission trucks and scrap the older trucks. Replacement trucks may be retrofitted to further reduce emissions.
- **Communicate with the local trucking community to share best practices.**

#### Port of Tacoma Freight Rail Emissions Reduction Program

Tacoma Rail, primary short-line rail carrier for the Port of Tacoma partnered with Puget Sound Clean Air Agency in 2011 and received a \$2.5 million grant from the Environmental Protection Agency (EPA) to retrofit and repower three locomotives used by Tacoma Rail in switching operations at or near the port. The project repowered the two of the locomotives, which were Tier 0 with Tier 2 diesel engines and the third locomotive received a Tier 3 engine. The project resulted in a 27 percent reduction in CO<sub>2</sub> emission and an 80 percent reduction in particulate matter emission.

#### Port of Seattle Clean Truck Program

The Port of Seattle’s Clean Truck Program<sup>58</sup> aims to keep trucking partners in business and support clean air for local communities. This program includes two elements:

- **Truck Model-Year Requirements:** Restrict container terminal access to trucks with model year 1994 and newer engines or equivalent PM emission levels. By 2018, restrict access to 2007 model year or newer engines.
- **New Drayage Truck Scrapping and Replacement Program.** The Port of Seattle launched a new truck scrapping and replacement program in May 2014 to scrap and replace old drayage trucks with model-year 2007 or newer engines. The project, partially funded by federal and state grants, will provide incentives to replace at least 220 older drayage trucks. It is expected to run through mid-2015 or until funds are depleted.

## Freight System Performance Measures

### Background

Performance measures will help the State to measure and track progress toward goods shippers and receivers, freight carrier performance requirements, and state and national freight policy goals. To ensure that the state freight measures drive performance improvement, they are:

- Focused on a short list of performance goals that matter most to freight customers.
- Specific, measurable – limited to areas where data exists.
- Applied to freight systems the state can control or strongly influence.

Beginning in 2011, the Washington State Freight Plan Technical Teams (see Chapter 9) considered a broad array of potential measures, and prioritized six that are strongly aligned with both state and federal freight policies, and are the most important to freight system

<sup>58</sup> <http://www.portseattle.org/Environmental/Air/Seaport-Air-Quality/Pages/Clean-Trucks.aspx>

customers and residents. These performance measures were then vetted by the Washington State Freight Plan Oversight Committee. WSDOT then developed the technical tools and methods to evaluate the prioritized performance measures.

## Truck Freight Performance Measures

WSDOT will use six measures to track performance of the Truck Freight Economic Corridors.

### Reducing:

1. **Truck travel time** – To track truck performance on the interstate as required by MAP-21, WSDOT will use the AASHTO recommended performance measure, annual hours of delay. This is defined as travel time above the congestion threshold in units of vehicle hours for commercial vehicles on the Interstate Highway System. In the future, WSDOT will use this measure to track speed performance on Washington’s Truck Freight Economic Corridors. To evaluate project proposals, WSDOT uses regional travel demand models to estimate the reduction or change in truck travel time.
2. **Direct truck operating cost** – WSDOT bases the value of time on the information collected from national truck carrier surveys<sup>59</sup>, and uses this formula: *change in commercial vehicle hours traveled X truck operating cost per hour = change in direct truck operating cost.*
3. **Truck engine emissions** – The U.S. Environmental Protection Agency’s Motor Vehicle Emission Simulator (MOVES) modeling system estimates emissions for mobile sources covering a broad range of pollutants and allows multiple scale analysis. WSDOT uses regional factors derived from MOVES for our analysis.

### Improving:

4. **Economic output** – This is defined as employment, and regional and state economic output. As part of the Freight Plan, WSDOT developed and tested a transparent and robust methodology to account for the economic output of highway projects with truck freight benefits (See Chapter 9, Evaluation of Project Proposals).
5. **Network resiliency** – This is defined as the ability to reduce closures of the state’s designated Truck Freight Economic Corridors that are due to severe weather or natural disasters and last 24 hours or more (See Exhibit 5.9 for full resiliency bottleneck definition).
6. **Reliability** – This uses spot speed collected as part of the TPM program, the formula for the 80<sup>th</sup> percentile reliability index is:  $Freight RI_{80} = \frac{80th\ Percentile\ Travel\ Time}{Agency\ Travel\ Time}$ .

## Waterway Performance Measures

Performance goals for the state’s coastal deep-draft and shallow harbors and waterways, and the Columbia-Snake River waterway include improving the state of good repair by:

- **Maintaining the federally authorized navigation channel depths.**
- **Blocking the spread of invasive species.**

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<sup>59</sup> See the 2013 *An Analysis of the Operational Costs of Trucking: A 2013 Update* from ATRI for more information: <http://truckexec.typepad.com/files/atri-operational-costs-of-trucking-2013-final.pdf>.

## Potential Freight Rail Performance Measures

As recommended by the Washington State Rail Plan, in the future WSDOT should partner with other state agencies, stakeholders and shippers to identify key performance measures that will help to inform the condition of the system to users and provide guidance on any public funding for infrastructure improvements. WSDOT should look at planning goals and consider important industries in the state when identifying the measures. Data availability will also be key.

Examples of potential performance measures:

- **Benchmark container freight rates to Chicago from Canada, Los Angeles/Long Beach and the Pacific Northwest.**
- **Monitor train on-time performance on key corridors.**

## Potential Air Cargo Performance Measures

Potential performance measure for Washington's air cargo facilities include:

### **Improving:**

- **Airport Ground Access** – Coordinate with airports and modal planners to identify needed ground access improvements to enhance truck access.

# CHAPTER 6: WASHINGTON STATE FREIGHT FORECAST

Will the investment decisions made in freight systems in this decade serve Washington State residents, workers and businesses 30 years in the future? Decision makers considering public investments in freight transportation projects know that these projects will be used for 30, 50 or 100 years. How can today's investments prepare the state to meet macro-economic forces and new technologies that are impossible to predict but will have tremendous impacts on supply chains in the future?

## Washington State Freight Forecast by Mode

### FHWA Freight Analysis Framework

WSDOT has chosen to use the Federal Highway Administration's Freight Analysis Framework 3 (FAF3),<sup>1</sup> unless otherwise noted, as the basis for the 20-year modal freight forecasts discussed in this section. FAF3 is a compilation of national data that provides estimates of the tonnage and value of freight shipped to, from, and within the U.S. Data is available at the state level for different modes of freight transportation (truck, rail, water, air, etc.) and the most current data available is for 2011, based on 2007 survey data. FAF3 forecasts are a reasonable exploration of current trends, but do not reflect major shifts in the national economy, future capacity limitations, or changes in transportation costs and technology. The forecasts in this section compare 2011 to a forecast year of 2030 unless otherwise noted. It is important to remember that the forecasts in this section rely on the best available data sources (as of 2007 survey data) and growth rates derived from this analysis assume straight lined projections. To the extent possible, the most prevalent future trends have been examined for each of the modes, to attempt to adjust for the multitude of factors that may not have been taken into account in the 2007 base survey. Future trends, needs, and issues are discussed more thoroughly in the next chapter. The discussion of individual trends and how they are expected to impact the forecasts for each mode have been examined as a whole to determine an overall impact to each modal forecast as represented by the symbols used in the tables that are presented for each mode.

The straight-line modal forecasts show that between 2011 and 2030 Washington State can anticipate a substantial increase in freight transportation demands for some modes, while demand for other modes is expected to remain relatively flat. Substantial growth is anticipated for freight moving by truck with an estimated tonnage increase of 80 percent over this time period. Freight Rail demand through 2035 is expected to double. The demands placed on the state's waterway (both inland and marine) are expected to increase, especially for transporting bulk cargo. Multimodal freight demand is expected to see significant increases through 2030, due to increases in population and domestic manufacturing. Freight moving by pipelines is expected to remain relatively stable as the pipeline system is near capacity and no

new lines are expected to be built before 2030. Air freight in Washington is expected to see small increases over this time frame.

## Truck Freight Forecast

According to the FAF3 forecast, Washington State’s highway system moved a total of 335.6 million tons of freight worth \$365.2 billion in 2011. The weight and value of truck freight shipments in Washington is expected to see a significant increase between 2011 and 2030, with tonnage expected to grow by 80 percent (at an average annual growth rate of 4 percent), up to 602.7 million tons by 2030 (Exhibit 6.1). The total value of truck freight shipments is forecast to increase by 125 percent between 2011 and 2030 (at an average annual growth rate of 6.3 percent), rising to \$821.5 billion by 2030.

Mode	Weight (Millions of Tons)			Value (Billions of Dollars)		
	2011	2030	% Change	2011	2030	% Change
Truck	335.6	602.7	80%	\$365	\$822	125%

Source: FHWA FAF3 Origin-Destination Data, 2011.

**Exhibit 6.1 Washington State Truck Freight Volume and Value Expected to Increase by 2030**



Source: FHWA FAF3 Origin-Destination Data, 2011.

Intrastate truck tonnage is projected to grow by 72 percent during 2011-2030; inbound tonnage is expected to grow by 100 percent; and outbound tonnage is expected to grow by 87 percent. Gravel, waste/scrap, other agricultural products, nonmetallic minerals, logs, wood products, and cereal grains are the most significant commodities moved within, from, and to Washington on the highway system by weight. The large growth in total truck volume in the next 20 years is driven by growth in gravel (77 percent), waste/scrap (86 percent),

nonmetal mineral products (106 percent), other agricultural products (89 percent), logs (87 percent), and wood products (87 percent).

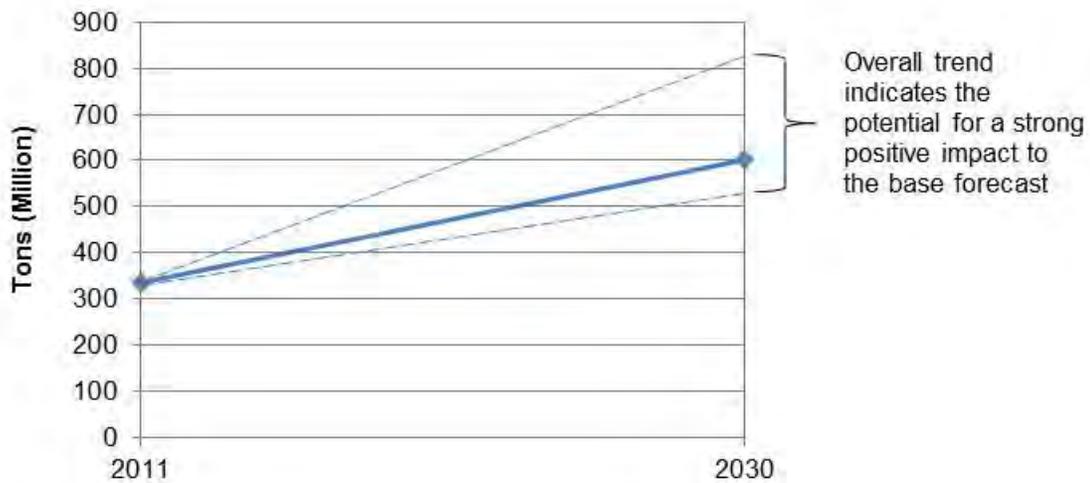
### Truck Freight Trends

After consulting industry experts, WSDOT has identified several future truck trends for Washington State that may influence the base forecast. A positive impact to the base truck forecast means that the trend is expected to put positive pressure on the average annual growth rate and a negative impact to the base truck forecast means the trend is expected to put negative pressure on the average annual growth rate. The table below illustrates several trends that have been identified as likely to influence the base truck forecast through 2030.

Identified Truck Freight Trend	Trend Impact on Base Forecast
Continued growth of e-commerce	Positive
Coordinated truck technologies	Positive
Shortage of qualified truck drivers	Negative
Population growth along the I-5 corridor without an expansion in highway capacity	Positive
<b>Overall Truck Trend = ●</b>	Overall, the identified trends are expected to have a <u>very large</u> positive impact on the base forecast.

Continued growth of e-commerce is expected to result in an increased need for and reliance on trucks to transport goods. Coordinated truck technologies will increase the use of automation, resulting in increased efficiency and reduced costs, making trucks more competitive with other modes (see Chapter 8 for more information). Population growth concentrated along the I-5 corridor is expected to result in higher overall demand for the transport of goods, especially by truck. The trend of a continuing shortage of qualified truck drivers in all sectors is expected to negatively impact the truck forecast by potentially making transport by truck less competitive compared to other modes. Exhibit 6.2 shows the base truck forecast (solid line) and the potential “very large” positive impact the associated trend analysis (dotted lines) is expected to have in relation to the base forecast.

**Exhibit 6.2 Base Truck Forecast with Trend Analysis Applied<sup>60</sup>**



Source: Point forecast is from FHWA FAF3 Origin-Destination Data, and source for the trend range is WSDOT FSD trend analysis.

## Rail Freight Forecast

### ***Meeting Current Demands***

The rail system is working well today by providing sufficient capacity to meet demand for rail transportation. The highest utilization of the Class I freight rail network occurred on BNSF's Pasco-Spokane subdivision at approximately 87 percent of the practical line capacity. BNSF's Portland-Vancouver, Washington to Pasco subdivision follows at 71 percent of practical line capacity. Since 2012, BNSF's directional running of empty bulk trains on the Stampede Pass route (Auburn-Pasco via Yakima) has vastly enhanced rail capacity over the previous bidirectional rail operation — by almost 300 percent — from about 10 trains per day to 39 trains per day on this route. At present, this Stampede Pass route handles approximately four to six trains per day.

### ***Future Demands***

Class I railroads (BNSF and UP) and other infrastructure owners will likely address key capacity issues as they emerge. Therefore, the 2035 capacity assessment is included here to illustrate the magnitude of growth anticipated for Washington's rail system. This underscores the need for continued planning and action to address capacity and mobility concerns throughout the system.

Washington's rail system is expected to handle more than 260 million tons of cargo by 2035 — more than double the volume carried on the system in 2010<sup>61</sup>. This represents a compound

<sup>60</sup> For all of the applied trend analysis graphs in this chapter, the solid trend lines are based on FHWA FAF3 modeled data and the dashed lines are based on qualitative trend analysis conducted by WSDOT. The dashed lines only indicate how the identified trends are expected to impact the base forecasts in a relative sense. The exact tonnage increase/decreases have not been forecast, as WSDOT does not currently have this forecast capability.

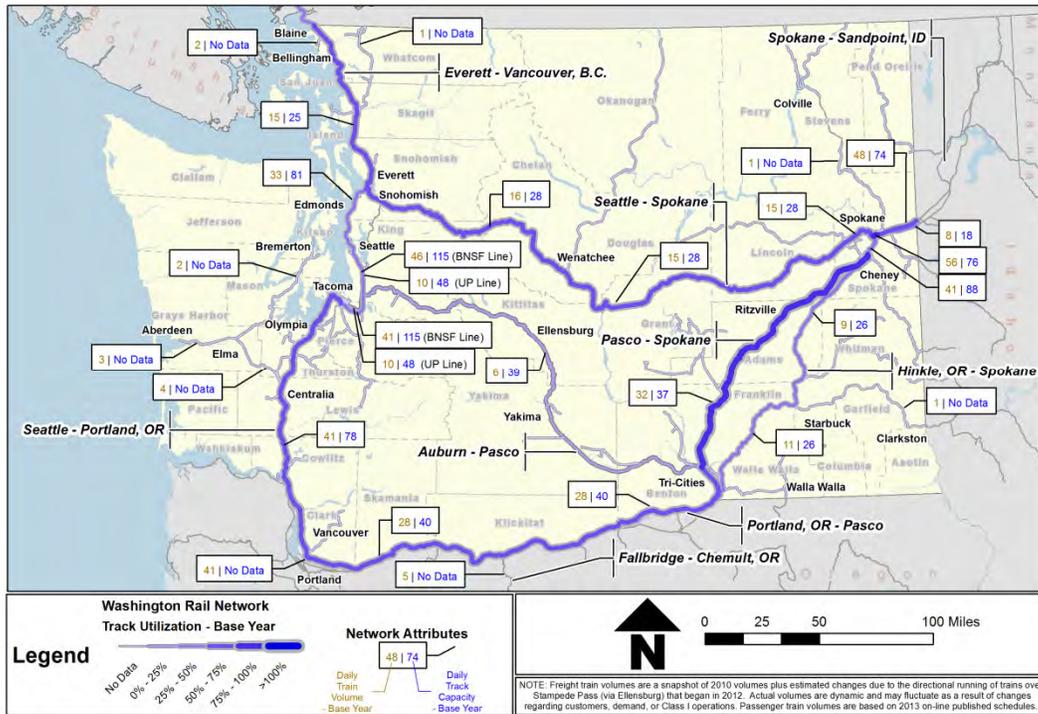
<sup>61</sup> This rail forecast is from WSDOT State Rail Plan (<http://www.wsdot.wa.gov/rail/staterailplan.htm>), which was done independently of State Freight Plan. The primary data sources include Surface Transportation Board's 2010

annual growth rate of 3.4 percent for all commodities carried on the rail system. As a result, and as shown in Exhibit 6.4, several rail segments are expected to require operational changes and/or capital improvements to manage anticipated freight rail volumes.

This analysis of the BNSF lines suggests the following conditions by 2035:

- Pasco-Spokane at 170 percent utilization.
- Seattle-Spokane via Wenatchee at 150 percent utilization.
- Spokane-Hauser Junction, Idaho at 150 percent utilization.
- Vancouver-Pasco at 140 percent utilization.
- Seattle-Portland and Everett-Burlington are projected to be near the 100 percent utilization mark, which would make it difficult to handle variations or additional traffic without adding excessive delays.

**Exhibit 6.3 2010: Daily Train Capacity Utilization**

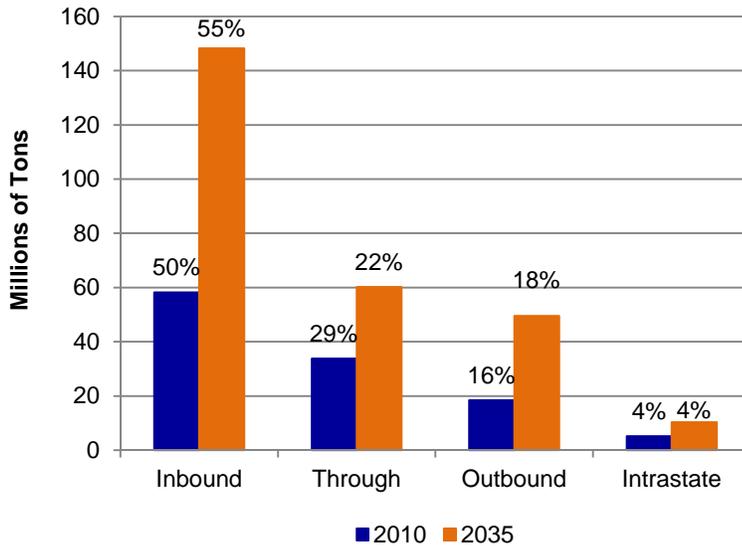


Carload Waybill Sample and FHWA's FAF 3.3. It contains analysis of rail volumes using 2010 as a base year, with forecasts to 2035.



By 2035, volumes are projected to remain small, but nevertheless doubling to 8 million tons. Perhaps the outcomes in this category may be the most variable, given that this market is most sensitive to relative shifts in modal competitiveness, regional economic development, and state transportation policy.

**Exhibit 6.5 Rail Volumes by Direction of Travel 2010 to 2035**



Washington State Rail Plan 2013, Cambridge Systematics' 2035 Freight Rail Flows Forecasting (rounded).<sup>62</sup>

### **Rail Freight Trends**

WSDOT has identified several future rail freight trends for Washington State that may influence the base forecast. A positive impact to the base rail forecast means that the trend is expected to put positive pressure on the average annual growth rate. A negative impact to the base rail forecast means the trend is expected to put negative pressure on the average annual growth rate. The table below illustrates several trends that have been identified as likely to influence the base rail freight forecast through 2035.

Identified Truck Freight Trend	Trend Impact on Base Forecast
Growth in new bulk exports	Positive
Volatility in global sourcing resulting in rail freight growth under most scenarios	Positive
Adoption of larger container ships and expanded capacity on the Panama Canal	Relatively small impact in the near term
Modal shift between rail and truck	Relatively small impact in the near term
Fluctuating fuel costs and potential conversion to	Relatively small impact in the near term

<sup>62</sup> It reflects macroeconomic and demographic trends as of 2010 and does not take into account specific known or potential developments, such as construction of new terminals for shipping coal and crude oil.

alternative sources of energy	
<b>Overall Truck Trend = ①</b>	Overall, the identified trends are expected to have a <u>medium</u> positive impact on the base forecast.

The most significant near-term developments facing Washington’s rail system are the introduction of additional coal traffic from the Powder River Basin that would ultimately be exported from the Pacific Northwest to Asia and oil train shipments from the Bakken oil field to west coast refineries. Currently, several proposals are under consideration to enhance port capacity, including two potential sites in Washington: Cherry Point and Longview. The development of these terminals, or similar facilities in Oregon and British Columbia, will increase train volumes in Washington. For a complete discussion of Washington State freight rail trends please refer to pages 37-60 in the Washington State Rail Plan.

## Waterway Freight Forecast

The Washington State Freight Plan considered two different data sources providing waterborne freight demand forecasts for Washington State: the FAF3 Forecast and the 2011 Marine Cargo Forecast Update prepared by the Washington Public Ports Association. The two forecasts are widely different because FAF3 waterborne data only covers domestic portions of waterborne activity and does not include the international import/export tonnage or values. Forecast results from both data sources are summarized below.

### FAF3 Forecast

According to the FAF3 forecast, Washington’s waterway<sup>63</sup> system moved a total of 34.3 million tons of freight worth \$15 billion in 2011. The weight and value of marine freight shipments is expected to see some increase between 2011 and 2030. Total tonnage growth of 26 percent (at an average annual growth rate of 1.3 percent) is forecast, up to 43.1 million tons by 2030 (Exhibit 6.6). The total value of marine freight shipments is forecasted to increase by 27 percent between 2011 and 2030 (at an average annual growth rate of 1.3 percent), rising to \$19 billion by 2030.

Mode	Weight (Millions of Tons)			Value (Billions of Dollars)		
	2011	2030	% Change	2011	2030	% Change
Waterborne	34.3	43.1	26%	\$15	\$19	27%

Source: FHWA FAF3 Origin-Destination Data, 2011.

<sup>63</sup> In this section the term “waterway” refers to both marine and inland waterways.

## Exhibit 6.6 Moderate Growth Expected for Waterway Freight Weight and Value



Source: FHWA FAF3 Origin-Destination Data, 2011.

Intrastate waterborne tonnage is projected to grow by 62 percent during 2011-2030; there is projected to be no inbound tonnage growth, and outbound tonnage is projected to grow by eight percent. Crude petroleum, nonmetal mineral products, fuel oils, gasoline, cereal grains, and meat/seafood are the primary commodities moved within, from, and to Washington by water. Nonmetal mineral product volume will grow by 105 percent, gasoline by 24 percent, and meat/seafood by 155 percent during the same time period.

### **Marine Cargo Forecast**

The Marine Cargo forecast produced by the Washington Public Ports Association projects the volume of cargo moving through both public and private facilities and includes forecasts for cargo volumes on the deep draft portion of the Columbia River. Additionally, this analysis assumes an unconstrained growth environment, meaning the necessary marine terminals and rail capacity would be in place to meet market demand. This forecast is different than the FAF3 forecast in that it has incorporated more detailed sub-regional information about individual port potential market opportunities, assumes unconstrained growth, and volumes were estimated based upon data from individual ports, the Pacific Maritime Association, U.S. Department of Agriculture, and other industry and government sources.

According to the Marine Cargo forecast, in 2010 Washington's waterway system moved a total of 112 million tons. This total includes a number of different commodity groups: containers, neobulk/breakbulk cargos, grain and related products, dry bulk cargos, and liquid cargos. Of the 112 million tons, 63 million were outbound shipments, 41 million were inbound waterborne shipments, and 8 million were intrastate shipments.

Marine Cargo forecast considered the potential new market opportunities being evaluated by individual ports, including ores, minerals, grain, containers and liquid bulks. For each commodity group, two growth scenarios were projected. The high-growth forecast included all

the market opportunities currently under consideration. The moderate-growth forecast included approximately half of the market opportunities. In total, the moderate forecast projects that the waterway system will move a total of 197 million tons annually in 2030 (a 75 percent increase), while the high-growth forecast projects the system will move a total of 285 million tons annually in 2030 (a 154 percent increase). Overall, dry bulk cargos are projected to account for a vast majority of the growth between 2010 and 2030.

Commodity Group	2010	2030 (Moderate)		2030 (High)	
	Weight	Weight	% Change	Weight	% Change
Container	3.7	8.3	124%	12.3	232%
Breakbulk/NeoBulk	8.2	10.5	28%	12.7	55%
Grain and Related	34.1	39.1	15%	53.3	56%
Dry Bulk Cargos	26.0	97.1	273%	155.3	497%
Liquid Cargos	40.7	42.4	4%	51.6	27%
All commodities	112.7	197.4	28%	285.2	48%

Source: WA State Marine Cargo Forecast, 2011.

### **Waterway Freight Trends**

WSDOT has identified several future waterway freight trends for Washington State that may influence the base forecast. A positive impact to the base waterway forecast means that the trend is expected to put positive pressure on the average annual growth rate and a negative impact to the base waterway forecast means the trend is expected to put negative pressure on the average annual growth rate. The table below illustrates several trends that have been identified as likely to influence the base waterway forecast through 2030.

Identified Waterway Freight Trend	Trend Impact on Base Forecast
More bulk commodities such as coal and agricultural products will be exported through Washington marine ports	Positive if proposed export facilities permitted
Manufactured goods from Asia and trade with China will continue	Positive
<b>Overall Waterway Trend = 1</b>	Overall, the identified trends are expected to have a medium positive impact on the base forecast.

Both of these trends are expected to positively impact the marine forecast, meaning that they are expected to put positive pressure on the average annual growth rate. Increased export of bulk goods and more imports of manufactured goods from China are expected to result in an increase in the use of marine freight transportation.

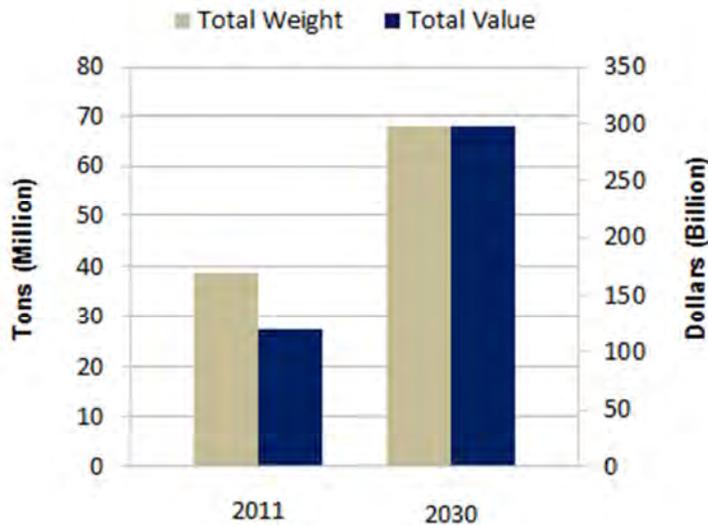
## Multimodal Freight Forecast

According to the FAF3 forecast, Washington State’s multi-modal<sup>64</sup> system moved a total of 38.5 million tons of freight worth \$119.3 billion in 2011. The weight and value of multimodal freight shipments in Washington is expected to see a very large increase between 2011 and 2030, with tonnage expected to grow by 77 percent (at an average annual growth rate of 3 percent), up to 68.1 million tons by 2030 (Exhibit 6.7). The total value of multimodal freight shipments in Washington State is forecast to increase by 150 percent between 2011 and 2030 (at an average annual growth rate of 4.9 percent), rising to \$297 billion by 2030.

Mode	Weight (Millions of Tons)			Value (Billions of Dollars)		
	2011	2030	% Change	2011	2030	% Change
Multi-modal	38.5	68.1	77%	\$119	\$297	150%

Source: FHWA FAF3 Origin-Destination Data, 2011.

**Exhibit 6.7 Multimodal Cargo System Expected to Move 68 Million Tons by 2030**



Source: FHWA FAF3 Origin-Destination Data, 2011.

Intrastate multimodal freight tonnage is projected to grow by 77 percent during 2011-2030, inbound traffic is expected to grow by 68 percent and outbound to grow by 84 percent. Cereal grains, other agricultural products, fuel oils, gasoline, wood products, and animal feed are the primary commodities moved within, from, and to Washington by multiple modes by weight. The large growth in total multimodal freight in the next twenty years is driven by growth in other agricultural products (77 percent), waste/scrap (217 percent), news print/paper (127 percent), wood products (79 percent), and fuel oils (51 percent).

<sup>64</sup> In FAF3 the “multimodal” category includes shipments by multiple modes and by parcel delivery services, U.S. Postal Service, or couriers and is not limited to containerized or trailer-on-flatcar shipments.

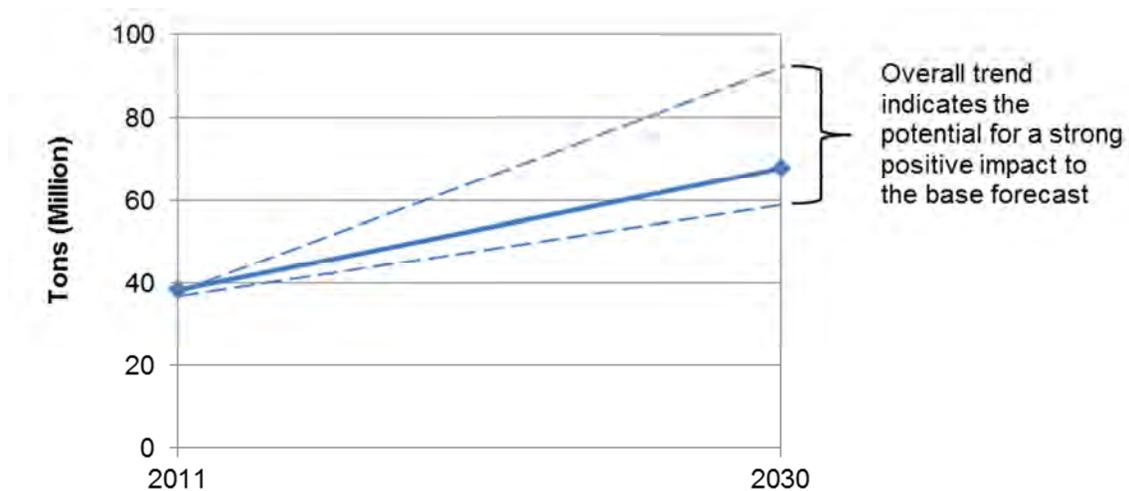
### Multimodal Freight Trends

WSDOT has identified several future multimodal freight trends for Washington State that may influence the base forecast. A positive impact to the base multimodal forecast means that the trend is expected to put positive pressure on the average annual growth rate and a negative impact to the base multimodal forecast means the trend is expected to put negative pressure on the average annual growth rate. The table below illustrates several trends that have been identified as likely to influence the base multimodal freight forecast through 2030.

Identified Multimodal Freight Trend	Trend Impact on Base Forecast
Population growth along the I-5 corridor without an expansion in highway capacity	Positive
Re-shoring of advanced and other manufacturing to the U.S.	Positive
Modal competition	Positive
<b>Overall Multimodal Trend = ●</b>	Overall, the identified trends are expected to have a <u>very large</u> positive impact on the base forecast.

Population growth along the I-5 corridor is expected to increase demand for the transport of goods by multimodal shipping practices. The trend of re-shoring of advanced and other manufacturing to the U.S. is also expected to increase demand for multimodal shipping, especially truck-rail, as more goods are produced domestically. Modal competition is anticipated to lead to increased demand for multimodal freight transport as shippers and carriers seek to optimize transportation costs. Exhibit 6.8 shows the base multimodal forecast (solid line) and the potential “very large” positive impact the associated trend analysis (dotted lines) is expected to have in relation to the base forecast.

**Exhibit 6.8 Multimodal Forecast with Trend Analysis Applied**



Source: FHWA FAF3 Origin-Destination Data 2011, WSDOT Freight Systems Division.

## Pipeline Freight Forecast

According to the FAF3 forecast, Washington State’s pipeline<sup>65</sup> system moved a total of 37.5 million tons of freight worth \$17 billion in 2011. The weight and value of pipeline freight shipments in Washington is expected to increase somewhat between 2011 and 2030, with tonnage expected to grow by 31 percent (at an average annual growth rate of 1.5 percent), up to 49.1 million tons by 2030. The total value of pipeline freight shipments in Washington State is forecast to increase by 29 percent between 2011 and 2030 (at an average annual growth rate of 1.5 percent), rising to \$22 billion by 2030.

Mode	Weight (Millions of Tons)			Value (Billions of Dollars)		
	2011	2030	% Change	2011	2030	% Change
Pipeline	37.5	49.1	31%	\$17	\$22	29%

Source: FHWA FAF3 Origin-Destination Data, 2011.

Intrastate pipeline tonnage is projected to grow by 50 percent during 2011-2030, inbound by 12 percent, and outbound pipeline tonnage by 23 percent. Gasoline, crude petroleum, and fuel oil are the primary commodities moved within, from, and to Washington State by pipeline. The growth in total pipeline freight in the next twenty years is driven by growth in gasoline (38 percent), crude petroleum (20 percent), and fuel oils (30 percent). However, based on WSDOT analysis, this growth prediction is unlikely to occur due to fully utilized pipeline capacity.

### **Pipeline Freight Trends**

WSDOT has identified several future pipeline freight trends for Washington State that may influence the base forecast. A positive impact to the base pipeline forecast means that the trend is expected to put positive pressure on the average annual growth rate and a negative impact to the base pipeline forecast means the trend is expected to put negative pressure on the average annual growth rate. The table below illustrates several trends that have been identified as likely to influence the base pipeline freight forecast through 2030.

Identified Pipeline Freight Trend	Trend Impact on Base Forecast
No new transcontinental east-west pipelines will be built in the U.S.	Neutral
Proposed expanded pipeline system in British Columbia may increase east-west capacity	Uncertain

<sup>65</sup> In FAF3 the “pipeline” category includes crude petroleum, natural gas, and product pipelines.

**Overall Pipeline Trend = ○**

Overall, the identified trends are expected to have little to no impact on the base forecast.

Both of these trends are expected to have little to no impact on the pipeline forecast. The pipeline network in Washington State is currently at or near capacity and it is unlikely that any new pipelines will be built in either the short-term or the long-term. The proposed new pipeline in British Columbia is not expected to connect directly to the U.S. at this time.

### Air Cargo Forecast

According to the FAF3 forecast, Washington State’s air freight system moved a total of 172.8 thousand tons of air cargo (include air freight and air express) worth \$21.1 billion in 2011. The FHWA FAF model predicts that air cargo weight in Washington will increase by 153 percent (at an average annual growth rate of 7.7 percent) between 2011 and 2030 up to 429 thousand tons<sup>66</sup> (Exhibit 6.9). The total value of air cargo shipments in Washington State is forecast to increase by 271 percent between 2011 and 2030 (at an average annual growth rate of 13.6 percent), rising to \$76 billion by 2030.

Mode	Weight (Millions of Tons)			Value (Billions of Dollars)		
	2011	2030	% Change	2011	2030	% Change
Air	0.17	0.43	153%	\$21	\$76	271%

Source: FHWA FAF3 Origin-Destination Data, 2012.

**Exhibit 6.9 Air Cargo Value Expected to Reach over \$75 Billion**



<sup>66</sup> Air freight tonnage and value for year 2011 and future year forecast is from FAF3, the best available information during the development of state freight mobility plan. WSDOT Aviation System Plan will be completed by the end of 2016 to provide more accurate and detailed information about air cargo forecast.

Source: FHWA FAF3 Origin-Destination Data, 2012.

Inbound air cargo tonnage is projected to grow by 168 percent during 2011-2030, and outbound tonnage by 140 percent. The large growth in total air cargo in the next twenty years is driven by growth in electronics (167 percent), machinery (197 percent), precision instruments (507 percent), miscellaneous manufacturing products (141 percent), transport equipment (191 percent), and pharmaceuticals (363 percent).

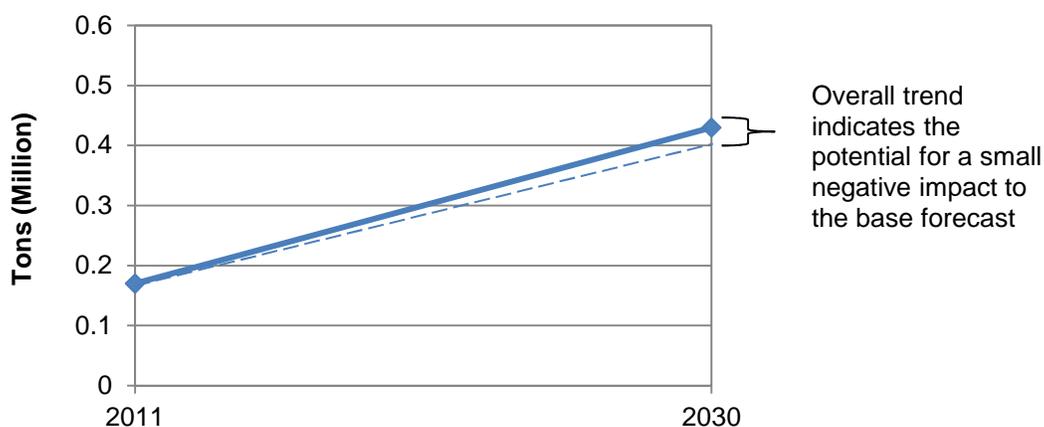
### Air Cargo Trends

WSDOT has identified several future air cargo trends for Washington State that may influence the base forecast. A positive impact to the base air cargo forecast means that the trend is expected to put positive pressure on the average annual growth rate and a negative impact to the base air cargo forecast means the trend is expected to put negative pressure on the average annual growth rate. The table below illustrates near-term outlook that has been identified as likely to influence the base air cargo forecast through 2030.

Identified Trend	Trend Impact on Base Forecast
The domestic market for air cargo is flat	Small Negative
<b>Overall Air Trend = ○</b>	Overall, the identified trends are expected to have a <u>small</u> negative impact on the base forecast.

Air cargo in Washington State is expected to remain relatively stable with the potential for modest growth over time. Overall, it is expected that the identified air cargo trend will have a small negative impact on the air cargo forecast. Exhibit 6.10 shows the base air cargo forecast (solid line) and the potential “small” negative impact the associated trend analysis (dotted lines) is expected to have in relation to the base forecast.

**Exhibit 6.10 Air Cargo Forecast with Trend Analysis Applied**



Source: FHWA FAF3 Origin-Destination Data 2011, WSDOT Freight Systems Division.

WSDOT air cargo trend analysis took two air cargo forecasts into account, the FAF3 forecast and Boeing World Cargo Forecast. FAF3 projects an annual growth of 7.7 percent for the air cargo weight; however, according to the Boeing World Air Cargo Forecast 2012-2013, the U.S. domestic market for air traffic is forecast to grow at an average annual rate of 2.2 percent over the next 10 years and to sustain that rate over the full 20-year period from 2011 to 2031. This alternative forecast assumes that Washington State is expected to experience similar growth. Port of Seattle's 2011 air cargo data also indicated that FAF3 base year data for air cargo is much lower than actual volume because POS handled 279.9 thousand metric tons of air cargo alone in 2011. WSDOT Aviation System Plan, expected to be completed by the end of 2016, will address this issue and provide more accurate air cargo forecast information.

## Additional Freight Forecasting

In a volatile economy, forecasts based on a fixed growth rate are not able to accurately predict future demand for the state's freight systems. Preparing for the potential effects of varying events is more effective than predicting future events. Therefore WSDOT took two additional steps while developing the Freight Plan to supplement and test the FAF3 modal forecasts shown in the previous section.

### Long-Range Freight Scenario Analysis

#### Future Freight Demand

The future rarely moves in predictable, incremental ways. Changes in technology, demographics, regulations and economics have dramatic impacts on how companies source, manufacture and distribute goods. These non-linear impacts are very difficult to predict using traditional forecasting methods since they do not follow any historical patterns.

Infrastructure projects of any magnitude typically take decades to go from inception to actual use. Because freight moves in corridors from production to consumption, the infrastructure projects also usually involve multiple modes and cross numerous jurisdictions. Most importantly, as a derived demand, freight patterns and infrastructure needs are subject to numerous uncontrollable factors ranging from fuel costs to trade agreements to consumer choice.

Abridged from "Future Freight Flows" by Dr. Chris Caplice, Director of the MIT CTL regarding the "Using Scenario Planning to Assist in Long-Term Transportation Infrastructure Planning" project.

As a supplement to the FAF3 analysis, future freight demand was analyzed using non-linear analysis. WSDOT, in coordination with the MIT Center for Transportation and Logistics (CTL), held the first statewide "Future of Freight" scenario planning symposium<sup>67</sup> at the SeaTac Airport Conference Center. Fifty five content experts representing freight carriers, shippers, industry associations, universities, and state, federal, and local governments were present.

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<sup>67</sup> For more information about the MIT CTL Future Freight Symposium, see <http://ctl.mit.edu/futurefreightflows>

Scenario planning was used to provide a critical analysis of the driving forces behind high-impact economic changes and business sourcing patterns that may affect the freight transportation system in the year 2030 and beyond.

Attendees were divided into groups and immersed in one of four future scenarios, then asked to vote on investment priorities that would be needed under those future conditions. Rather than trying to predict what the world will be like thirty or more years in the future, the symposium allowed WSDOT to prepare for a range of plausible futures. The scenarios are:

- Global Marketplace, a world of free trade and open markets, similar to today.
- Naftástique, where the world has divided into trading blocks and North America primarily trades within its borders.
- One World Order, where resources are scarce, and energy costs and environmental sensitivity and regulations are high.
- Millions of Markets where new manufacturing technologies produce material abundance and production and population is disbursed, not centralized.



The results of the symposium indicated that in every scenario there will be increased demand on the east-west transcontinental rail system and the State Freight Waterway Economic Corridors. Demand for truck services along the I-5 corridor and in urban centers is also likely to grow more rapidly than indicated in the FAF3 forecast. The full symposium report may be found in Appendix B.

## Near-Term Trend Analysis

In addition to long-range scenario analysis, WSDOT conducted near-term analysis to learn how different industry sectors are likely to react to foreseeable market and policy changes in the next five years. For this effort, WSDOT interviewed over 150 freight shippers, goods receivers and carriers. The state Freight Advisory Committee also provided information about system trends. Knowledge gained about key near-term trends were used to produce a probable qualitative 'range' around the FAF3 forecasts. The information will also serve as 'sensors in the ground' to help WSDOT understand and track which freight trends are coalescing and moving towards a particular long-term scenario; please see Chapter 7 for further discussion of five key trends.

# CHAPTER 7: OVERVIEW OF TRENDS, NEEDS, & ISSUES

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WSDOT FSD interviewed over 150 firms at their places of business and has identified five major trends that will change freight flow volume, routing, and the economic value of the commodities shipped on the State Freight Economic Corridors in the next six years. Washington State Freight Advisory Committee also provided knowledgeable inputs into the near-term freight trends.

While economic and population growth have the greatest impact on total freight demand, several industry-specific trends are also interacting to change the types of commodities shipped, and the routes and modes used along the state's trade lanes. To better understand how Washington State companies are preparing to meet anticipated changes in their industry sectors, the WSDOT Freight Systems Division interviewed over 110 shippers, goods receivers, and carriers across the state. Freight trends were also identified in policy discussions held by the State Freight Advisory Committee.

## Population growth

Most demand on the State's Freight Economic Corridors is driven by population and business growth. Population and job growth and household formation are the primary drivers of demand for consumer goods which accounts for much of the freight shipped within the state. Washington's population was 6.7 million in 2010 and is expected to climb to over 8.1 million by 2030 according to the Washington State Office of Financial Management.<sup>68</sup>

Population growth will be highest in cities, particularly in the central Puget Sound region, adding to existing urban congestion. Eighty-four percent of Washington residents – almost 5.7 million of the total 6.7 million – lived in urban areas in 2010.<sup>69</sup> By 2030 the central Puget Sound region alone will add another 760,000 residents. This trend follows current growth patterns; the Seattle-Tacoma-Bellevue census area population grew by 13 percent to over 3.4 million from 2000 to 2010. The City of Seattle is the most densely populated city in the state with over 7,250 persons per square mile. Clark County is expected to add over 110,000 and Spokane over 87,000 residents by 2030.

As more people live and work in our cities, there will be much more stress on the highways and local roads in the urban truck delivery system. On average, trucks delivered 43 tons of goods per person in Washington State in 2011.<sup>70</sup> This includes consumer goods, products needed in the workplace, and exports.

Household formation is the strongest driver of growth in the construction and hard goods sectors. When new homes are built, residents buy appliances and furniture to fill them. There

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<sup>68</sup> <http://www.ofm.wa.gov/pop/gma/projections12/projections12.asp>

<sup>69</sup> 2010 U.S. Census

<sup>70</sup> FHWA Freight Analysis Framework FAF3

were 2.6 million households in Washington in 2012. Although household formation dropped dramatically in the Great Recession, it's now expected to closely track future job growth.

As population rises, there will be more pressure on the public and private sectors to lower freight emissions near workers and residents. This may lead to stricter emissions requirements, especially in cities along the state's freight economic corridors and port cities.

Business growth will drive demand to move goods at the right cost and right time on the state's freight economic corridors. WSDOT's interviews with agribusiness, manufacturing firms, and carriers show how their supply chains will likely react as they respond to cost pressures and market opportunities.

In the near term, worldwide demand for Washington agricultural products will grow, increasing the importance of the I-90 corridor, marine and air ports, inland transload centers, waterways, and the rail system to the state's economy.

The first beneficiary of an increased rate of household formation will be the construction sector, leading to a jump in demand for wood products. However, trucking carriers serving the paper industry recognize that there will be less demand for paper as consumers shift to electronic communications, which will result in fewer heavy truckloads traveling from timber mills to paper mills in the state.

Regional manufacturers report that re-shoring of advanced and other manufacturing to the U.S. in the next six years is likely as labor costs are on the rise in China and there are quality issues with Chinese-made goods. However, the labor cost differential between China and the US is still very large and there are other Southeast Asian countries which have picked up increased manufacturing production in recent years because their wages are still very low. Managing transit time for supply chains originating from Mexico is also less complex than from Asia. One large retailer distributing hard goods from the Yakima River Valley said that many companies are looking for

## Agribusiness Trends

### Tree Fruit

Tree fruit farmers in the Columbia Basin interviewed by WSDOT report that they are adding production acreage and are also developing new apple and cherry varieties to grow consumer demand for their products. One mid-size fruit firm said that "Our owners are planting and have five-, 10- and 15-year plans to add capacity in the Columbia Basin." Regional freight transport firms tracking this trend have expansion plans for warehousing and will add refrigerated truck and rail carload capacity.

### Dairy

Dairy farmers facing rising property values along the I-5 corridor are continuing to move farming operations to eastern Washington, so the volume of milk and dairy products shipped on I-90 from eastern to western Washington will grow.

### Wheat

Washington wheat and corn farmers predict that demand will grow rapidly in Asia and India as consumer income there increases. The outlook for Asian demand is so strong that resistance to Genetically Modified crops and food products in the European Union is unlikely to have an effect on total Washington grain sales.

### Seafood Production

Seafood, in particular salmon production and overall trade with Alaska is stable. Washington's seafood industry is concentrated in central Puget Sound, home of the North Pacific fleet.

U.S. or North American made products, and more time-sensitive freight services will be needed to move goods manufactured domestically. As manufacturers shift production to Mexico and South America, traffic on north-south freight lanes such as I-5 will grow.

E-commerce continues to grow more rapidly across the country than overall retail growth. U.S. e-commerce sales increased by 17 percent from 2012 to 2013, while total retail sales only increased by 4.2 percent.<sup>71</sup> This trend is shifting freight distribution towards more point-to-point shipments from warehouses to homes, and will create more short trips in urban areas via parcel trucks.

## Energy

A structural shift in U.S. crude oil production is underway, led by the development of the Bakken oil fields in North Dakota, Montana, and Canada. This change, combined with the emergence of low-cost natural gas fuels for freight carriers and industrial use, makes energy the second important trend affecting the state's freight systems.

In March 2014, the price of diesel fuel was \$3.90 to \$4.50 per gallon while liquefied natural gas (LNG) ranged from \$2.20 to \$2.60 per gasoline gallon equivalent (gge) in the central Puget Sound region. In the near term, this price differential will influence trucking, rail and marine carriers to consider switching from diesel to plentiful, low-cost LNG and/or compressed natural gas (CNG). However there is a high total cost to change in the near term, as companies would need to retrofit or replace existing equipment. Long-haul trucking companies will also need public LNG fuel stations every 400 miles on major truck corridors before adopting alternative fuels for their fleets. LNG market penetration will advance slowly in the near term due to these hurdles.

U.S. natural gas prices were between one-third and one-fifth of prices in other countries in 2014, which provides enormous competitive advantage to the nation's energy-intensive industries. This is driving new investment in plants that use natural gas as energy source, such as the \$1.8 billion methanol plant at the Port of Kalama proposed in 2014. As companies invest to capitalize on lower energy costs, heavy manufacturing is likely to grow, and outbound rail and waterway freight transportation access is a key to siting these plants.

If global conditions do not change, the price of diesel fuel is likely to remain stable or increase as the cost of hydraulic fracturing, or fracking, to extract oil and natural gas from shale rock formations in the Bakken oil field sets a price floor for diesel. WSDOT forecasts that the price of retail gasoline will increase to \$5.79 per gallon, and the price of retail diesel will increase to \$6.43 per gallon by 2030 in Washington State<sup>72</sup>. The outlook for natural gas is similar, as low natural gas prices lead to a corresponding drop in shale gas drilling that reduces supply, and less supply tends to raise prices.

The rapid expansion of Bakken oil production will continue, causing challenges in transporting crude efficiently and safely to state refineries. As a quicker, more flexible alternative to new pipeline projects, crude oil producers are increasingly turning to rail to transport oil. Although current state-level information reflecting this change is not available, national data shows how

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<sup>71</sup> [http://www.census.gov/retail/mrts/www/data/pdf/ec\\_current.pdf](http://www.census.gov/retail/mrts/www/data/pdf/ec_current.pdf)

<sup>72</sup> WSDOT Economic Analysis, Annual Fuel Price Forecast, September 2014.

rapidly crude-by-rail traffic has grown. According to the Congressional Research Service<sup>73</sup>, U.S. freight railroads are estimated to have carried more than 400,000 carloads of crude oil in 2013 compared to 9,500 carloads in 2008. Crude imports by rail from Canada to the U.S. increased more than twenty-fold since 2011. Crude oil from the Bakken may be railed directly to refineries in northwest Washington, or to the lower Columbia River and then barged to in-state or other west coast refineries. This dramatic change in crude oil routing in Washington State will have significant effects on the freight rail system as well as at locations where highways and roads cross mainline rail lines.

If new large coal-export facilities are permitted in the state and international demand persists there will be significantly more coal train traffic on the mainline railroad system. BNSF Railway plans to transport additional coal from the Powder River Basin in Wyoming to proposed and existing terminals at Washington State ports, as well as ports in Canada. Growth in U.S. coal exports are driven by two factors: less coal is being used in the United States due to more stringent U.S. EPA standards, resulting in lower domestic coal prices, and strong demand in China tends to increase international prices.

## Competition facing Washington State Ports

In the next six years, global shipping lines will deploy larger ships and reduce the number of ports called in the efforts to reduce costs. The Panama Canal will be expanded, potentially increasing all water services through the canal at the expense of West Coast ports. The Canadian government will continue to invest in the Ports of Prince Rupert and Vancouver. All of these trends will increase competition for west coast ports, especially those in the Pacific Northwest.

Two thirds of the U.S. population lives east of the Mississippi River, and up to 70 percent of containers imported through the Ports of Seattle and Tacoma in the past decade were destined for the Midwest and eastern seaboard. In addition to supporting jobs in trade and logistics sectors, container imports benefit Washington State farmers and manufacturers that export through the ports by spreading total port capital and operations costs across a wider basis.

In the near term, there will be substantial changes as international shipping lines try to manage their excess capacity, which is causing enormous losses. Three global carrier alliances, CKYHE, G6, and the P2 Network were recently formed to compete more effectively in scale and service offerings, while lowering unit costs through vessel sharing. These alliances carry about 80 percent of all ocean trade, and as they deploy larger ships it will change the competitive landscape for Washington ports. In 2014, the largest vessel passing through the Panama Canal carried 4,800 TEUs (twenty foot equivalent unit, a measurement of container capacity). Larger ships operate much more efficiently per TEU:

- 8,000-TEU vessels cost 47 percent less to operate than a 4,800-TEU ship.
- 14,000-TEU ships cost 60 percent less to operate than a 4,800 ship.

As they are deployed, the largest ships will primarily operate between Europe and Asia. This will cause thousands of 8,000 to 10,000-TEU ships previously used in Asia-Europe service to

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<sup>73</sup> <http://execbrief.cq.com/energyclimate/wp-content/themes/cqeb/images/pdfs/2021003.pdf>

cascade into Asia-to-West-Coast trade lanes. The Alliances will use these ships to lower the number of port calls on the west coast, maintain total shipping capacity, and reduce costs. Both ports and the landside freight transportation system must be ready to handle these large surges of containers.

The Panama Canal expansion project will open in 2015 or 2016, enabling vessels carrying up to 13,000 TEUs to transit the Canal. Although the amount of trade shifting from west coast ports to the all-water route through the Panama Canal is uncertain, it will increase competition for market share between the west coast ports. Manufacturing and agricultural companies interviewed by WSDOT anticipate that no more than five percent of goods will shift between the west coast ports and the Panama Canal. They also noted that shipping lines have a strong financial incentive to turn their vessels quickly, so they will call on fewer west coast ports in the mid-term. In the retail sector, high value and time-sensitive goods destined for the east coast will likely continue to ship via the west coast as the all-water route is much slower than the transcontinental port-railroad route.

Excess port terminal capacity exists up and down the west coast, putting pressure on both landlord ports' and terminal operators' pricing power. Terminal operators will continue to lose money if they're unable to increase productivity to lower their operating costs and to attract shipping line calls.

The Port of Prince Rupert, B.C., developed as part of the Canadian government's national trade strategy, competes with highly efficient rail connections; 99 percent of cargo processed via Prince Rupert moves by rail. According to the Journal of Commerce, it cost much less to ship a container from Asia to Chicago through Prince Rupert versus other west coast ports in 2014.

## New equipment technology

Although media reports on autonomous vehicles have captured people's attention, driverless trucks will not be operating on highways in the U.S. in the next six years. But cooperative trucks, making use of sensors that communicate with other vehicles and roadway infrastructure, will gain ground in the mid-term. Fuel savings, increases in lane capacity, and enhanced traffic flow stability benefits will attract trucking companies and drivers, equipment manufacturers, and public sector highway and road operators to systems that provide vehicle-to-vehicle and vehicle-to-infrastructure communication and cooperation.

Intelligent cruise control will greatly reduce congestion-related shock waves and rear-end incidents, thereby reducing non-recurring congestion and improving system reliability and safety. This can be especially effective for trucks since they take longer to accelerate on a highway after slowing down in traffic.

More and more truck fleets will include sensory devices that assist truck drivers to operate safely and reduce fuel consumption. The largest motivating factor for truck operators to adopt cooperative trucks is the drag reduction found when trucks can safely and closely cluster together. Researchers at the California Partners for Advanced Transportation Technology at UC Berkeley have measured energy savings ranging from five percent for the front truck to 15 percent for the following trucks, which has huge economic implications for long-haul truck operations. Cooperative trucks may help mitigate the truck driver shortage in the longer term, but there are many legal and regulatory issues to resolve.

Government regulations will also accelerate innovative technologies. In 2014 President Obama announced new greenhouse gas and fuel efficiency standards for post-2018 year model trucks. He directed the Environmental Protection Agency and the U.S. Department of Transportation to produce a rule by March 2015 to tighten fuel efficiency standards and greenhouse gas emissions standards. The rule will go into effect March 2016. As the means to achieve greater fuel efficiency, the White House hopes the plan will “spur manufacturing innovation and lead to the adoption of new fuel-efficient technologies on trucks and semi-trailers,” and the EPA and USDOT will hope to push improvements in engine and powertrain efficiency, aerodynamics, weight reduction, tire rolling resistance, hybridization, automatic engine shutdown, and other parts.

The Rail Safety Improvement Act of 2008 mandates that Positive Train Control (PTC) be implemented across a significant portion of the nation's rail industry by December 31, 2015. PTC is required on Class I railroad main lines that handle poisonous-inhalation-hazardous materials, and any railroad main lines over which regularly scheduled intercity passenger or commuter rail services are provided. PTC is advanced technology designed to automatically stop or slow a train before certain accidents occur. In particular, PTC is designed to prevent train-to-train collisions, derailments caused by excessive speed, and unauthorized movement of trains onto sections of track where repairs are being made or as a result of a misaligned track switch. There are many unresolved technical and regulatory issues and the American Association of Railroads has said that the 2015 deadline for full implementation of PTC mandated by Congress will not be met. One of the biggest obstacles to implementing positive train control is the lack of available spectrum for two-way data.

## Freight operational changes and constraints

The persistent shortage of qualified long-haul truck drivers will cause more firms shipping cross-country to choose freight rail combined with last-mile urban delivery by truck, according to trucking firms interviewed by WSDOT. Long-haul truck routes are getting shorter; this is partly caused by regionalization of distribution centers, as retailers find it easier to provide the right products at the right time to their stores from regional, not national, warehouses. The exceptions to this rule are shippers sending smaller amounts via Less-than-Truckload (LTL) carriers and high-value goods requiring truck team drivers for security. The shortage of qualified truck drivers in all sectors will lead to higher prices for trucking services and consumer goods.

Both private fleets owned by shippers and for-hire trucking companies are using the latest technology to deliver goods in a more environmentally sustainable way, and this trend will continue. Freight carriers will adopt more sophisticated routing optimization software to maximize truck capacity, increase efficiency, and minimize trucks on the road. Fueling companies are building out a LNG and CNG fueling network on the highest-volume national truck corridors.

There will continue to be significant pressure on shippers and goods receivers to lower inventory costs. Retailers and manufacturers will continue to streamline their processes, dropping smaller amounts at more frequent intervals at stores and factories. This will drive ever-increasing demand for on-time truck deliveries in very short appointment windows (to the

minute). This level of service depends on much more reliable truck freight corridors in congested urban areas.

Urban truck deliveries will grow, in quantity, faster than other modes. Land-use regulations preventing large trucks from entering cities will put many more smaller straight trucks<sup>74</sup> into operation in urban areas. Shippers will implement operational strategies to improve reliability. For example, retail distributors' delivery hours to urban centers will continue to shift to off-peak (midnight to 5:00 am) hours. This is unlikely to decrease congestion in the peak morning delivery hours as the total number of truck trips will grow.

Trucking companies interviewed by WSDOT expect that there will be increased federal regulation that will add operational costs.

Improvements in mainline rail service may result in higher rail prices as well as increased market share in the mid-term. In the longer term, however, freight rail capacity limitations in the western states do not support a large scale modal shift.

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<sup>74</sup> A straight truck is the truck type that carries cargo on the same chassis as the power unit and cab.

# CHAPTER 8: STRENGTHS & CHALLENGES OF THE STATE'S FREIGHT TRANSPORTATION SYSTEM

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What are the comparative advantages of Washington State freight systems for key state supply chains relative to other states?

## ***Agribusiness***

Washington state freight systems provide many options for farmers, agricultural co-ops, and timber and wood products companies that must continually balance the cost of transportation and the need to ship at the right time. Washington's short-line railroads and intermodal loading facilities connect to cross-continental mainline railroads. The Columbia - Snake River waterway offers farmers modal flexibility not found in many other states. Ports on the lower Columbia River and the Port of Grays Harbor offer specialized high-volume grain export services to provide reliable and cost-competitive services. Trucking and air freight services are readily available. Farmers in Washington State are also much closer to the west coast ports compared to other growing regions in the U.S., thereby lowering the cost of shipping products to international markets.

## ***Manufacturing***

Freight system on-time performance is essential to control manufacturers' inventory and labor costs. Washington State trucking companies are currently able to meet manufacturers' demands for reliable, on-time delivery services. Trucking firms interviewed by WSDOT in 2013 reported that they delivered goods on-time from 95 to 97 percent of the time; although this comes at a cost to trucking companies that absorb congestion-related delay into their schedules<sup>75</sup>. This compares favorably to other manufacturing centers in major U.S. and international cities. The proximity to west coast marine and air ports is a strong attraction for companies with global supply chains.

## ***Retail and wholesale distribution***

The Green River Valley in the south Puget Sound region is an enormous retail and wholesale distribution hub with over 154,000,000<sup>76</sup> square feet in industrial and wholesale space. Subsections include the Kent Valley, the main distribution district for the Seattle and Tacoma region with 116,000,000 square feet that flows down into the Port of Tacoma/Pierce County

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<sup>75</sup> "The Impact of Truck Congestion on Washington State's Economy" WSDOT, 2013

<sup>76</sup> CBRE | Brokerage Services, 2014

market, which contains 38,000,000 square feet. When compared to a west coast benchmark, the complex serving the Cities and Ports of Los Angeles and Long Beach, the state's largest warehouse district offers several advantages. The Valley is closer to its adjacent container ports, and although highway and road congestion is difficult in peak hours, it is better than in southern California. There are quick and reliable transit times for ocean and air cargo. All major shipping lines call at the Ports of Seattle and Tacoma, and most major airlines carrying cargo have direct or connecting flights from Sea-Tac International Airport. Lift to international markets is increasing at Sea-Tac International Airport. Mainline rail, highway, and road connectors exist and there are plans to complete major State Truck Freight Economic Corridors on Highways 167 and 509.

"We're a pretty well-oiled machine. It's a large enough market to have customer base here and be able to ship anywhere in the world," said Luke Duvall, OHL International, when interviewed by WSDOT. "Importers choose routing end-to-end based on their perception of gateways. They're confident that they won't have an unexpected delay here."

In 2014 Amazon Inc. announced plans to open a nearly 1 million-square-foot fulfillment center in Kent. This is where Amazon sellers send to and store products, and Amazon packs, ships, and provide customer service. Amazon's other Washington fulfillment centers are located in Sumner and Bellevue, and a DuPont site will be completed in 2014.



The Valley freight hub is not just important to the ports. Over four million people in the Puget Sound region are served daily from Valley food distribution centers that deliver to grocery stores, restaurants, hospitals and schools; the state's major pharmaceutical and medicine distribution centers that deliver to hospitals and health care facilities; and warehouses containing every other type of retail good found on store shelves.

Warehouse districts in other state logistics hubs provide similar benefits. There is 37,500,000 square feet of industrial and wholesale space in the Spokane area, and 21,000,000 square feet in Vancouver<sup>77</sup>. Warehousing hubs across the state have connectivity to freight rail lines,

<sup>77</sup> CBRE | Brokerage Services, 2014

highways and roads. There are opportunities to expand air cargo services at the Spokane International Airport.

The state's first and last mile highway and road connectivity and on-time truck delivery service also serves the construction sector, which delivers building materials from distribution centers directly to job sites.

### ***International logistics clusters***

There is a large and highly experienced international trade and logistics cluster in the central Puget Sound region that leverages all the benefits of the state's freight systems to help regional and national clients move goods through the state. Washington State ports on the west coast have a natural deep water advantage. Because they are close to ports, companies located in Washington State have lower global freight transport costs than those in inland states. The container ports have proven their ability to provide high level service at a reasonable cost and have captured discretionary trips headed for the Ohio Valley and east coast, and thereby spread their capital costs over a larger base.

### ***Washington State freight systems have an important role in national security***

As national security preparedness pivots to Asia, Washington State freight systems play a significant role in national defense. Heavy Army subdivisions such as the Stryker Brigades stationed at JBLM are prepared to stage and ship large rolling equipment through the Port of Tacoma. Replenishment goods would ship through the Port of Seattle and other ports in the event of an emergency. There are very few locations where the military can load ammunition onto ships on the west coast; short-line rail-to-road connections serve the Indian Island munitions facility at Port Hadlock.

## What challenges do we face?

### ***Preservation of freight infrastructure***

WSDOT is working with partners across the state to find the balance between statewide transportation priorities and funding challenges. With the current funding outlook, there will be a 52 percent decrease in highway maintenance and preservation over the next two biennia. Over 3,700 highway lane miles are due or past due for preservation projects, but WSDOT will only be able to repave about 1,100 in 2013-15, and the cumulative effect is that more and more become past due. There are approximately 3,800 state owned bridges in Washington, including 158 steel bridges; without new revenue only 23 will be painted in the next 10 years. Up to 71 bridges could become structurally deficient, including the I-5 Ship Canal Bridge.<sup>78</sup>

There is continual pressure to infill commercial, residential, and school land uses next to railroads and ports in urban areas. The Port of Seattle marine port, Sea-Tac International Airport and King County International Airport/Boeing Field, in particular, have limited or no space for expansion, and face gentrification and increased competition for use of access routes. There is a need to preserve these critical freight-intensive land uses at both marine and air cargo ports, and in the state's major warehouse district in the Green River Valley.

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<sup>78</sup> Please see Chapter 5.

The state's freight rail system plays an important role in transporting agricultural and other products to world markets. But deferral of freight rail maintenance can lead to equipment and track deterioration that requires substantial investment to repair. Short-line operators named bridge repairs as one of their highest priorities in the State Rail Plan. Failure to update track to handle modern rolling stock hurts connectivity by limiting shippers' ability to access newer, heavier cars (more efficient and cost effective cars), which have become an industry standard.

### ***Congestion impacts freight-dependent businesses in real, measurable ways***

Highway and road congestion is a significant problem in Washington State metropolitan centers. If congestion increases by 20 percent, over \$3.6 billion in regional economic output and over 21,700 jobs will be lost in the central Puget Sound region alone (about one percent of the regional total).<sup>79</sup> Congestion also adds cost to goods made in rural areas, as most of these goods must be shipped to or through urban centers. WSDOT's study on "The Impact of Truck Congestion on Washington State's Economy" found that 20 percent more truck congestion across the state would result in over \$14 billion of increased operating costs to Washington's freight-dependent industries.

There is not enough highway capacity to handle population and business growth along the State Truck Freight Economic Corridors, in particular in the greater I-5 corridor. There is significant congestion along I-5, I-405 and Highways 167, 509, 99 and throughout the day in central Puget Sound. I-5 segments near the Joint Base Lewis-McChord complex are congested during peak hours, as are I-5 and I-205 in southwest Washington. Additionally, the I-90 corridor in the Spokane area experiences moderate peak hour commute congestion on a daily basis. There is no funding to complete missing links in the states high-volume truck corridors, such as Highways 509 and 167 in the central Puget Sound region, and the North Spokane Corridor in Spokane.

The state's freight rail system also faces capacity issues in the future. The capacity assessment performed for the State Rail Plan shows that unless rail system infrastructure is enhanced, future freight growth could overwhelm rail system capacity, due to shortcomings such as passenger and freight conflicts, height limitations on rail tunnels and bridges, inadequate siding lengths or bridge capacity. In order to stay nationally and internationally competitive, Washington State and its freight rail stakeholders must ensure that its rail service is comparable or better than other regions. Maintaining and improving reliable rail service could increase the attractiveness of Washington ports for discretionary cargo, and contribute to increased competitiveness for Washington State ports. Additionally, the increased movement of manufactured and retail products by rail helps to minimize congestion on the state's highways, providing additional positive benefits to the state's economy. However according to Marv Frey at Inland Empire Paper Company "freight rail in the west isn't a dense network as it is in the east. So it can't support more modal shift. Communities located along the mainline railroads are not equipped to mitigate the rapid growth of train traffic."

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<sup>79</sup> The Economic Impact of Increased Congestion for Freight Dependent Businesses in Washington State – Technical Report, WSDOT 2012.

***Trucking companies face numerous challenges to provide safe, reliable and cost-competitive services***

The federal Hours of Service Rule changes made in 2013 have resulted in an industry-wide need for more truck drivers and potentially more equipment to transport the same amount of goods. Truck drivers are required to rest more frequently and for longer periods at night, which has increased the demand for safe and secure truck parking along the state’s Truck Freight Economic Corridors.

The price of diesel has a huge impact on the trucking sector and on consumer prices as it is ultimately passed on in the form of fuel surcharges. Diesel prices are volatile and current forecasts suggest LNG prices will remain low in the near term, but over a longer time frame low LNG prices may bring down the price of diesel.

Terry Reid from Peninsula Truck Lines, Inc. said that the number one problem facing trucking companies is the increasing price of fuel. “We can’t pass it all on. This is directly related to the cost of congestion. We’re blowing fuel up in exhaust fumes while idling in congestion, and that costs more when fuel prices are higher.”



Current federal and state regulations do not allow trucking firms to move the greatest amount of goods possible per mile in Washington. The Intermodal Surface Transportation Efficiency Act prohibits states from increasing the size and weight of combination vehicles beyond that allowed in 1991. When optimizing trucking operations, Washington State’s 105,500 pound gross vehicle weight (GVW) compares favorably with Midwest states that limit GVW to 80,000 pounds. However, under the federal law, commercial vehicles are limited to two trailers in Washington State, while triple-trailer combinations are allowed in Idaho and Oregon. Trucks legally carrying three trailers in neighboring states must stop and recombine loads when they enter Washington, which increases costs and reduces overall efficiency.

The state is a long way from the largest population centers in the U.S. Washington’s freight systems are particularly important to the state’s economy as products made in the state must travel long distances to reach markets in California, on the east coast, and in the Ohio Valley.

As discussed in “Trends” Section 7, the Ports of Seattle and Tacoma are facing increasing competitive pressure. Global shipping lines and terminal operators are reducing excess

capacity, the Panama Canal will open soon, and the Canadian government will continue to invest in the Port of Prince Rupert logistics center. If national retailers shift goods to the all-water route or through Prince Rupert to the east coast, it will result in additional pricing pressure, increased equipment imbalance as well as less congestion at the state's container ports. The ports' ability to accommodate larger vessels and compete for container volume will require investments in deeper draft channels, berths and ship-to-shore cranes. The Ports of Seattle and Tacoma have engaged in regional cooperative efforts for some time, for example, in the Clean Truck Program. They are seeking additional opportunities to cooperate under current conditions. As of 2014, their total container market share was down; the Ports of Seattle and Tacoma handled 3.46 million TEUs during 2013 — slightly fewer than the 3.56 million they handled in 2008, just before the recession, and down from the 3.60 million they handled in 2012. Drayage trucks routinely wait in long queues on local roads to deliver and pick up containers at the Ports of Seattle and Tacoma, and increased gate processing capabilities may be needed to reduce wait times.

Companies served by the ports face additional constraints. The state's container ports handle more imports than U.S. exports; about 70 percent of imported containers are destined for the east coast. These containers must be repositioned to the west coast at an additional cost to be available for the state's exporters. The ongoing imbalance of containers particularly affects Washington State agribusiness. Farmers exporting high-volume, lower-value goods such as hay, find it difficult to compete with growers in southern California as outbound container prices at the Ports of Seattle and Tacoma averaged over \$1,000 more than at the Ports of Los Angeles and Long Beach in 2014. Mark Anderson CEO/President at Anderson Hay & Grain Company said that "the world demand for forage for the feeding of livestock continues to increase throughout the world as populations grow and standard of living increases in many regions. This demand is providing a great opportunity for growers and exporters throughout the Western United States. However, the Northwest producers are facing a very real challenge due to the imbalance of volumes between the Ports of LA/Long Beach and the Pacific Northwest Ports. The large volume of containers being imported into the Los Angeles area has created an oversupply situation that has provided exporters from that region a dramatic advantage in freight rate over those doing business in the Pacific Northwest. Increasing efficiencies in the Pacific Northwest transportation infrastructure is of utmost importance to reduce costs and attract importers to our region." Due to higher shipping line costs, Washington State alfalfa cannot compete with alfalfa shipped via California ports on price. This is not as significant an issue for companies exporting high-value manufactured goods, as the ratio of freight transport cost to the cost of goods sold is much higher.

### ***Will the state's freight systems be able to meet national defense priorities?***

The U.S. Department of Defense (DOD) Quadrennial Defense Review, published in 2014, focused on preparing for the future by rebalancing defense efforts in a period of increasing fiscal constraint. DOD's priorities include rebalancing to the Asia-Pacific region to preserve peace and stability in the region. The review states that "As nations in the region continue to develop their military and security capabilities, there is greater risk that tensions over long-standing sovereignty disputes or claims to natural resources will spur disruptive competition or erupt into conflict, reversing the trends of rising regional peace, stability, and prosperity. The rapid pace and comprehensive scope of China's military modernization continues."

Although the state has plans to complete the Highway 167 and Highway 509 State Truck Economic Corridors that are needed to support the JBLM Power Projection Platform and to support economic development, there is no funding to construct these projects. The short-line rail connection does not fully extend to the Indian Island munitions facility, so ammunition must travel part of the distance by road.

# CHAPTER 9: THE STATE'S DECISION-MAKING PROCESS

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This section describes several key inputs into the State's decision-making process for freight investments. It starts with a summary of the stakeholder and public outreach conducted in support of the State Freight Plan. The second half of this chapter describes WSDOT pilot truck freight highway project evaluation method to objectively prioritize investments by the value of their direct benefits and economic output.

## Stakeholder and Public Outreach

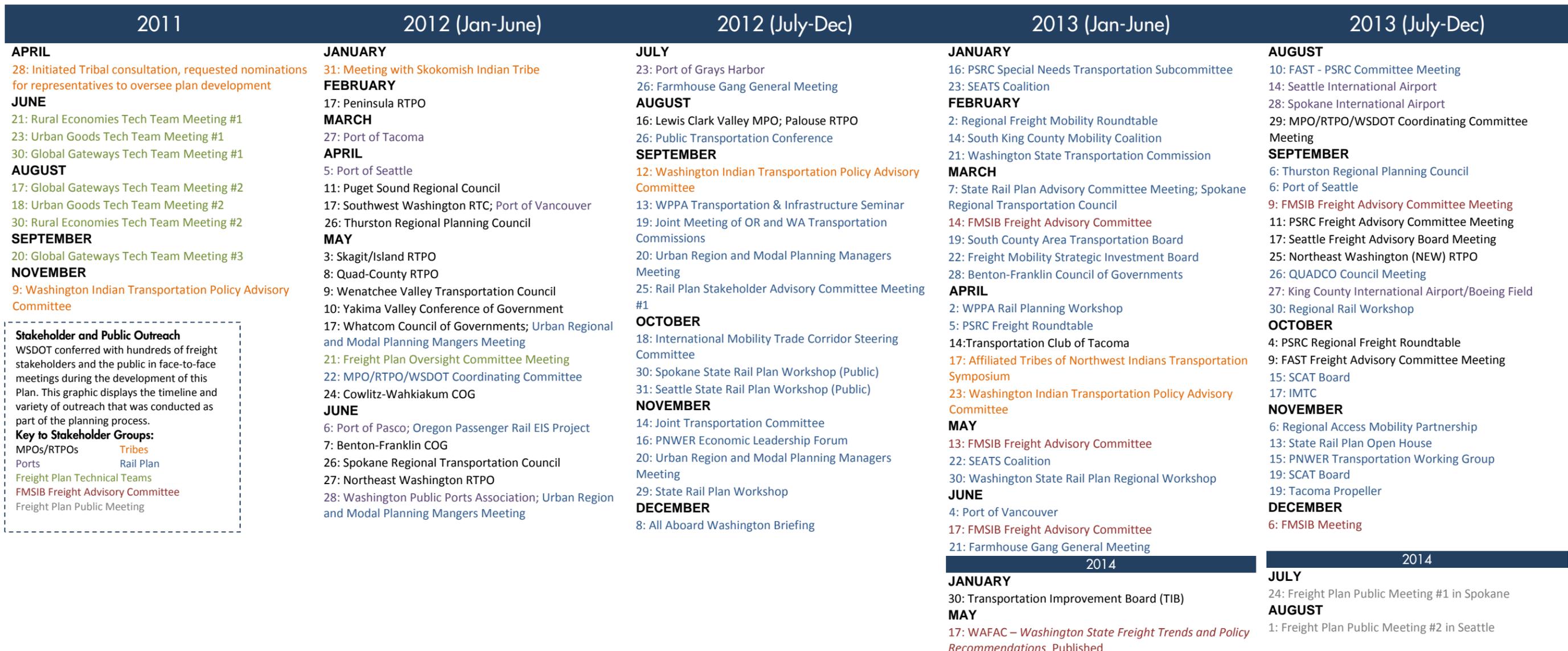
### Overview

Development of the State Freight Plan involved an extensive outreach process, in which hundreds of individuals and organizations were invited to provide input and help shape the content and priorities.

To develop the scope of work for the Plan, the WSDOT Freight Systems Division worked closely with the Washington State Transportation Commission, and the WSDOT/Metropolitan Planning Organization (MPO)/Regional Transportation Planning Organization (RTPO) Coordinating Committee. In addition, a formal request for input on the scope was sent to all 12 MPOs and 14 RTPOs, five ports and the Washington Public Ports Association (WPPA), all 29 Tribes, the Freight Mobility Strategic Investment Board (FMSIB), and the Washington Trucking Association (WTA).

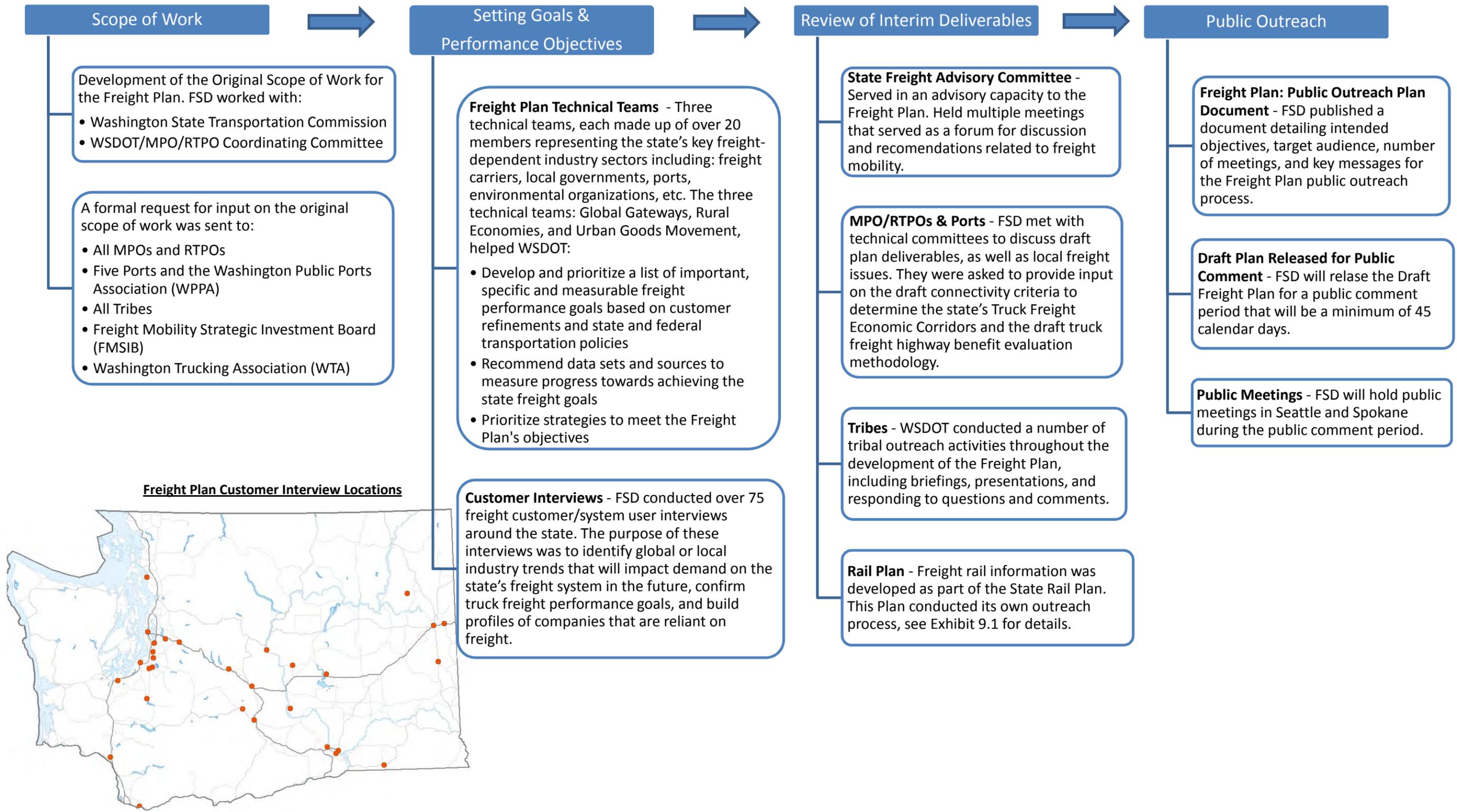
A summary of outreach conducted in support of the Plan is shown in [Exhibit 9.1](#). This is followed by more detailed information on several of the teams, committees, and other groups that played a role in Plan development. [Exhibit 9.2](#) shows an overview of the outreach process used for this Plan.

Exhibit 9.1 Washington State Freight Mobility Plan Stakeholder Outreach



Washington State Freight Mobility Plan Customer Interviews				Washington State Rail Plan Customer Interviews		
Ace Hardware	Costco	Interstate Wood Products	Sweet Clover Produce, LLC	Ballard Terminal Railroad	Port of Quincy	<b>Customer Interviews</b> Washington State Freight Mobility Plan customer interviews were held between April 2012 and December 2013.  Washington State Rail Plan customer interviews were held in December 2012.
Allan Brothers Fruit	Crown Moving Company	Jensen Distribution Services	Sysco	Boeing	Port of Seattle	
American Container Transport	Darigold	JR Simplot Co.	Tetra Pak	Clark County	Port of Tacoma	
American Fast Freight	Diamond E Transport, LLC	MacMillan Piper	Total Transportation Services	Columbia Basin Railroad	Port of Vancouver	
Anderson Hay & Grain Company	Eagle Systems	Mustard Seed	Tri-Cities Grain	Eastside Freight Railroad	Port of Walla Walla	
AREVA	Fast Way Freight	Nintendo	Trident Seafoods	Inland Empire Distribution	Portland-Vancouver Junction Railroad	
Blue Bird Transfer	FedEx Express	NW Grain Growers	Twin City Foods	McGregor Company	RMI (GE Transportation Systems)	
BP Pipelines	Fred Meyer	Peirone Produce Company	UPS	Meeker Southern Railroad	Royal City	
Cardinal Health	Georgia-Pacific Consumer Products	Peninsula Truck Lines, Inc.	WaferTech	Mt. Vernon Terminal Railroad	Tacoma Rail	
Charlie's Produce	Harms Pacific Transport	Potlach Land and Lumber	Walmart	Port of Benton	WA Association of Wheat Growers	
CID Bio-Science	Henningsen Cold Storage	Quincy Foods	Washington State Farm Bureau	Port of Everett	WA Utilities & Transportation Commission	
Co-Ag	Inland Empire Paper Company	Russell Investments	Wesco International	Port of Grays Harbor	WATCO	
Columbia Colstor	International Longshore and Warehouse	Salmon Terminals, Inc.	Western Distribution Services	Port of Longview		
Con Agra Foods	Union (ILWU)	Shoemaker Manufacturing Company	Window Products DBA Cascade Windows	Port of Moses Lake		
Con-Way Freight	Interstate Distributor Co.	Signature Transport Inc.	Yakima Valley Growers & Shippers Association	Port of Pasco		
		Sonico Inc.				

Exhibit 9.2 Washington State Freight Mobility Plan Stakeholder Outreach Process



## Planning Process

To ensure that the best available staff and external technical resources were brought to bear on the analytical needs of the Freight Plan and that the priorities and strategies reflect the situation on the ground, the planning process included extensive public outreach. This included the formation and support of technical teams, consultation with the Washington State Freight Advisory Committee, conducting individual customer interviews, and assistance from researchers. More information on the Public Outreach Plan can be viewed in Appendix C.

### **Technical Teams**

In 2011, WSDOT convened three Technical Teams to work on the freight plan's three objectives supporting: Global Gateways, Rural Economies, and Urban Goods Movement. Each technical team had over twenty members representing the state's key freight-dependent industry sectors, freight carriers, local governments and ports, environmental organizations, labor, and other organizations. See Appendix D to view the Technical Team rosters.

WSDOT organized and staffed the Technical Teams to:

- Develop and prioritize a list of important, specific and measurable freight performance goals based on customer refinements and state and federal transportation policies.
- Recommend data sets and sources to measure progress towards achieving the state freight goals.
- Prioritize strategies to meet the Freight Plan's objectives.

Two to three meetings were held with each of the technical teams in 2011. The Urban Goods Movement Technical Team met at the City of Seattle, the Global Gateways Team met at the Port of Tacoma, and the Rural Economies Team was hosted by the Benton-Franklin and Yakima RTPO and MPO in the Tri-Cities area. Major deliverables resulting from these meetings include:

- A prioritized list of six truck freight performance goals which was used to develop WSDOT's truck freight highway benefit methodology, and will be used to track performance on Washington's State Truck Freight Economic Corridors
- Connectivity criteria to help WSDOT identify the critical connector routes that link important freight hubs to the state's Truck Freight Economic Corridor backbone system in both urban and rural areas.

### **Washington State Freight Advisory Committee**

Section 1117 of MAP-21 encourages states "to establish a freight advisory committee consisting of a representative cross-section of public and private sector freight stakeholders, including representatives of ports, shippers, carriers, freight-related associations, the freight industry workforce, the transportation department of the State, and local governments." The Washington State Freight Advisory Committee was established as a standing committee of FMSIB and consists of members that represent the range of freight modes and other interests across the state.

While WSDOT developed much of the Freight Mobility Plan content (RCW 47.06.045), the Advisory Committee helped shape the discussion of the trends and policies and partnered with

WSDOT to develop a list of regional freight priorities. As defined in MAP-21, the role of the Advisory Committee is to:

- Advise the state on freight-related priorities, issues, projects, and funding needs.
- Serve as a forum for discussion for state transportation decisions affecting freight mobility.
- Communicate and coordinate regional priorities with other organizations.
- Promote the sharing of information between the private and public sectors on freight issues.
- Participate in the development of the freight plan of the state.

### ***Individual Customer Interviews***

The WSDOT Freight Systems Division conducted approximately 110 interviews between 2011 and 2014. The purpose of these interviews was to identify global or local industry trends that will impact demand on the state's freight system in the future, confirm truck freight performance goals, and build profiles of companies across the state that are reliant on freight.

WSDOT interviewed representatives from:

- Companies in the state's key freight-dependent industry sectors: manufacturing, agribusiness, timber/wood products, construction, retail and wholesale trade.
- Freight transportation carriers.
- Labor and workforce.
- Metropolitan Planning Organizations (MPOs) and Regional Transportation Planning Organizations (RTPOs).
- Ports.
- Tribes.

WSDOT Freight Systems Division conducts customer visits and interviews on an ongoing basis as part of its regular business to discuss issues and priorities; major local, national, and global changes; current WSDOT projects; and freight related research. A summary of freight trends identified in customer interviews for the Washington State Freight Plan can be viewed in Appendix E.

## **Stakeholder Involvement**

Throughout the planning process, WSDOT consulted with transportation stakeholders to hear their perspectives on freight issues and provide updates and information. Together WSDOT and FMSIB developed a new process to include regional, port, and Tribal freight priorities in the State Freight Plan. Policy recommendations were prioritized through WSDOT's work with freight stakeholders, and consideration of recommendations made by the State Freight Advisory Committee. The state's highest priority freight strategies are based on the Freight Plan's needs analysis, and are grouped into a capital projects list and a set of recommended policy changes. More information on stakeholder involvement can be viewed in Appendix F.

### ***MPO/RTPO***

WSDOT met with all of the state's MPOs and RTPO technical committees to discuss several draft plan deliverables, as well as local freight issues. The primary purpose of these meetings was to provide input on the draft connectivity criteria to determine the state's Truck Freight

Economic Corridors and the draft truck freight highway benefit evaluation methodology. Representatives from central and eastern Washington were concerned with rural connectivity especially for agricultural products traveling on highways and county roads, and by short line rail and barge. WSDOT refined the connectivity criteria based on their input, adding seasonality criteria for agriculture production areas and defined agribusiness processing clusters.

**Ports**

WSDOT also met with the WPPA and five ports (Grays Harbor, Pasco, Seattle, Tacoma, and Vancouver) to discuss the draft deliverables that were presented to the MPO/RTPOs. In Washington State, ports rely on freight rail connections to reach Midwest and east coast markets.

**Rail Plan**

WSDOT conducted extensive customer and public outreach as part of the Washington State Rail Plan. This is reflected in Exhibit 9.1. Please refer to the pages 27-30 of the State Rail Plan for a discussion of the key themes that emerged as a part of this outreach process.

**Tribes**

WSDOT conducted a number of tribal outreach activities throughout the development of the Freight Plan. Exhibit 9.3 provides a summary. WSDOT also received and responded to a number of questions about the Freight Plan from Tribal representatives.

**Exhibit 9.3 WSDOT Freight Plan Tribal Outreach**

Tribal Outreach Activity	Date
Letter sent to Tribes initiating consultation. Requested nominations for representatives to Advisory Group and Technical Teams to oversee plan development. Requested review and comments on the draft State Freight Mobility Plan Draft Scope of Work and Timeline.	April 28, 2011
WSDOT provided a freight plan update at the Washington Indian Transportation Policy Advisory Committee meeting.	November 9, 2011
WSDOT met with Lennea Wolfe, Skokomish Indian Tribe, regarding the State Freight Mobility Plan and connectivity analysis.	January 31, 2012
At the request of Lennea Wolfe, Barbara Ivanov spoke at the Peninsula RTPO Executive Council Policy meeting to discuss the State Freight Mobility Plan process and deliverables.	February 17, 2012
WSDOT provided a freight plan update at the Washington Indian Transportation Policy Advisory Committee meeting.	September 12, 2012
Presentation at the Affiliated Tribes of Northwest Indians Transportation Symposium.	April 17, 2013

WSDOT provided a freight plan update at the Washington Indian Transportation Policy Advisory Committee meeting.	April 23, 2013
WSDOT requested information on commercial zoning, intermodal facilities, economic, and employment information for freight-dependent industries and truck counts for tribal or BIA-owned roads.	April 2013
WSDOT requested a list of freight projects for inclusion in the Freight Mobility Plan.	August 2013

## How is WSDOT Responding to Public Comments Received?

The Draft Freight Mobility Plan was released for public review and comment on June 4, 2014. Comments were accepted until August 8, 2014 via email and phone. WSDOT held two public meetings, one in Spokane in July and another in Seattle in August, to gather additional input on the draft plan. During the Freight Plan’s public comment period, WSDOT received more than 225 comments from 35 goods receivers and shippers, freight carriers, Tribes, MPOs and RTPOs, ports, local jurisdictions, and freight-related associations. The stakeholders’ input emphasized three themes:

### ***1. Appreciation that MPO, RTPO, local and port freight priorities were incorporated into the State Freight Plan***

The first major theme found was appreciation of the inclusion of local and regional freight priority projects in the State Freight Plan. This was the first time that WSDOT joined with FMSIB to jointly invite regional, Tribal and port agencies to submit their freight priority projects. All freight projects located on State Freight Economic Corridors that had been prioritized in regional, local, Tribal and/or port plans were included.

Puget Sound Regional Council said that they were “involved early in the process and appreciate the work that has gone into development of the plan, particularly that WSDOT took the time to ensure that the plan meets the requirements established under MAP-21.

The City of Tukwila said “...efforts to include important local projects that serve as an integral components of the statewide multimodal transportation plan and state freight mobility plan will help to ensure the State’s economic vitality.”

The Pacific Northwest Waterways Association said that they are “very pleased to see the inclusion of critical maritime infrastructure” in the Plan.

To build on this successful outcome, in 2015 WSDOT will work with its partners to refine the process to identify priority freight strategies. The priority freight strategies in the Freight Plan were developed by partner agencies and by WSDOT. The WSDOT recommendations on State Truck and Freight Rail Economic Corridors are drawn from the WSDOT 2013 Unfunded System Investments list found at <http://www.wsdot.wa.gov/Funding/SystemInvestments.htm>. WSDOT’s recommended freight highway project list may be subject to revision as the department is currently undertaking a rigorous practical design process to continue to seek the lowest-cost and highest-value solutions for freight and passenger needs on the highway system. Project recommendations on the State Waterway Freight Economic Corridors are based on

information provided by the Pacific Northwest Waterways Association and state ports. WSDOT and FMSIB joined together to gather regional and local freight project recommendations from MPOs, RTPOs, Ports and Tribes, to develop a unified State Freight Mobility Plan.

## ***II. How will we manage the impacts of growing freight rail traffic on local communities in the future?***

The second theme found in the public comments was a request for more emphasis on the negative impacts of rapid freight rail growth on communities, and emerging access and mobility problems at rail crossings.

The Cowlitz-Wahkiakum Council of Governments said that “at-grade rail/highway crossings significantly impact freight mobility on a local, regional and statewide basis.”

The City of Seattle Department of Transportation said that they “strongly agree with WSDOT’s conclusion that addressing capacity constraints is critical to meet future rail demands, and we agree that the State should take an active leadership role to address corridor system and corridor needs across the Pacific Northwest in the most cost-effective manner possible.”

The Port of Everett said that they “concur with the recommendation to provide funding to resolve at-grade crossing mobility problems caused by national freight rail growth.”

The Freight Plan took several steps toward addressing this issue. The Plan incorporated freight rail policy and at-grade crossing project recommendations developed in the State Rail Plan, and it includes many state and local at-grade crossing priority projects that are located on the State Freight Economic Corridors. In 2015-2017 the State of Washington will take additional steps to prepare for the rapid growth of multiple commodities – grain, energy, and intermodal - on the mainline freight rail system in the state. WSDOT, the newly formed Association of Washington Cities Rail Committee, and the FMSIB plan to work with the Washington Utilities and Transportation Commission (UTC) and other stakeholders to develop methods to assess and help prioritize current and future system-wide grade-crossing issues. The method will be based on state and federal policies, community values that may include safety and local mobility, multimodal freight mobility, and maintaining and growing the economic vitality of our state.

## ***III. Can WSDOT include additional regional freight priorities in the Plan at this time?***

A few comments came from public agencies asking how freight projects that were not sent to WSDOT during the timeframe established for submission could be included in the Plan.

The City of Vancouver said: “The City of Vancouver feels the Southwest region is under-represented in the project improvement list and would like to see a more robust project list from this region. The City has identified 6 additional projects that we would like to see included that have direct freight mobility impacts on the City’s transportation corridors.”

The Freight Plan included a large list of multimodal freight projects based on extensive coordination, to identify regional, Tribal, local, and port priorities. WSDOT accepted project submissions from August 15 to October 31, 2013. A memo was sent to local partners with details and criteria for inclusion in the Plan as well as the submittal process. Projects submitted through this process were published as part of the Freight Plan.

The Freight Plan acknowledges that freight demand and supply chains are dynamic, and that routing and traffic volumes change over time. Therefore WSDOT will update the State Freight Economic Corridors and the priority strategies – policy, operational, and capital – in the Plan on a two-year cycle, beginning in 2016. To prepare for that update, WSDOT and FMSIB will once again jointly invite the Tribes, MPOs, RTPOS, and ports to submit their freight priorities for inclusion in the Plan. The Freight Plan will be updated every five years.

## Evaluation of Project Proposals

### Background

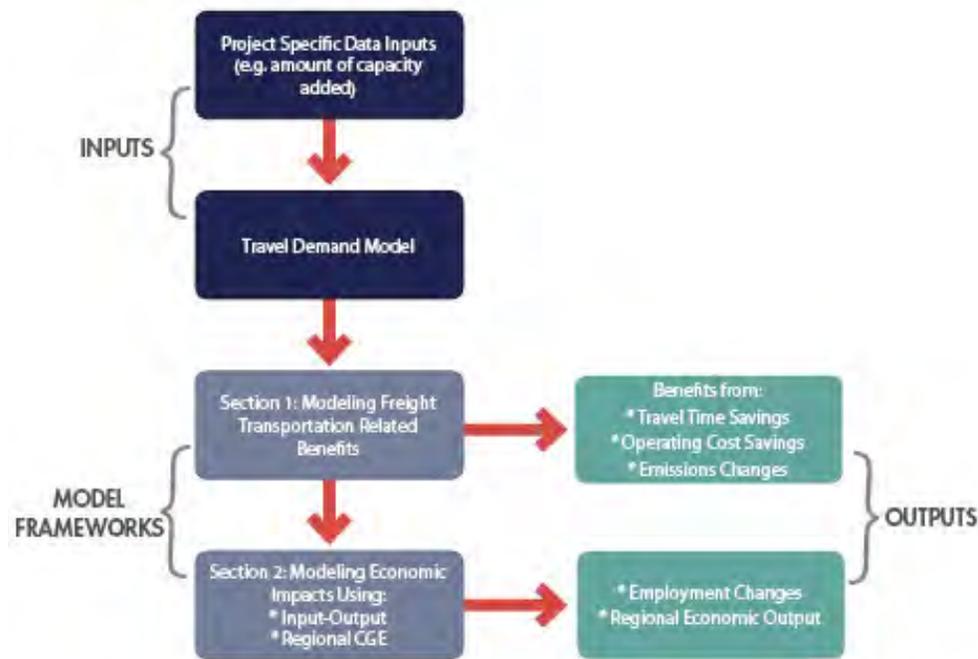
#### ***How do we know if public investments in freight systems improve economic growth?***

The cornerstone of the 2012 federal reauthorization of the surface transportation act, Moving Ahead for Progress in the 21st Century (MAP-21), is the transition to a performance and outcome-based program. WSDOT commissioned research to develop a quantitative analysis method to evaluate the freight benefits of proposed truck freight highway projects. To prioritize public investments in freight systems and to ensure consideration of the contribution of freight to the overall transportation system performance, states and regions need an improved method to analyze freight benefits associated with proposed highway and truck intermodal improvements.

### What We Did

This research developed an agency friendly, data supported framework to prioritize investment in freight systems. This research integrates two ongoing research projects: one to create methods to calculate the value of truck and truck-intermodal infrastructure projects and the other to collect truck probe data from commercial GPS devices to create a statewide Freight Performance Measures (FPM) program. This integration enables the development of a framework that allows public agencies to quantify freight investment benefits in specific areas such as major freight highway corridors.

## Exhibit 9.4 Summary of Truck Freight Direct Benefit and Economic Impact Methodology Process



Source: WSDOT, 2013, BERK, 2013.

### ***Advancing beyond commuter and transit centric economic analyses and performance metrics***

- While the value of time for freight transportation is often estimated based on the hourly wage of the truck driver, the driver's wage reveals only a fraction of the true value of time in a freight operation. Freight transport typically involves multiple actors, consisting at least of shippers (the customer) and carriers (the trucking firms). The value placed on a reduction in travel time differs considerably across shippers of different products based in part on the value of the product, as well as attributes like perishability. Other factors affecting the value of time include distances involved in point-to-point shipments, transport mode connectivity, logistic reorganization, as well as opportunity costs.
- Benefits and impacts extend beyond the roadway and the carriers on it. As carriers experience increased efficiencies on the roadway, shippers may adjust long run scale, scheduling, and logistics plans. The markets and industries involved similarly may witness changes to production patterns in distribution or supply regions. Increased efficiency may then lead to economic development and ensuring public benefits.
- More than simply a consideration of time on the roadway, freight users experience a potentially greater benefit of infrastructure improvement through increased reliability of the time necessary to traverse a roadway or route. In today's just-in-time marketplace, consistent and reliable travel time estimation directly impacts the bottom line of freight dependent industries

### ***The importance of implementing the right model(s) for the job***

- Regional Travel Demand models (TDM): Washington doesn't have a statewide travel demand model, so WSDOT used existing regional travel demand models from the state's MPOs. These models were chosen because of their ability to compute changes in network travel times—an improvement over many sketch planning tools that only estimate link-level travel time changes.
- Benefit Cost Analyses (BCA) such as those developed in this research and those widely used by transportation agencies, provide a necessary first step in understanding whether society is better off under a proposed investment, 'build scenario'. The build scenario is compared to the condition in which the investment is not made ('no-build') or under other investment alternatives. However, a standalone BCA falls short in allowing an agency to consider the increases in productivity and economic efficiency resulting from an infrastructure investment. To respond to MAP-21 and state requirements, WSDOT must provide an analysis of change on the economy due to proposed investments.
- Industry responses to the increased transportation efficiencies may include job creation, wage level changes, business activity, and tax base expansion resulting from increased accessibility and connectivity. These responses may be captured via an Economic Impact Analysis (EIA) that enables the enumeration of the likely change in the economy as a result of the benefits identified previously. In this research, two ways to model economic impacts were identified and compared: (1) Input-Output (I-O) Model, and (2) Computable General Equilibrium (CGE) Model.
- The choice of economic impact model becomes a critical consideration where infrastructure projects are potentially large enough and trucking productivity is increased to the point that fewer trucks – and therefore fewer drivers – can meet demand needs. The nature of the I-O model structure does not pick up this effect. However, the more robust CGE is able to directly model increased productivity of an industry and is thus able to model the entire economy-wide reaction to the infrastructure improvement that is a result of decreased operating cost and travel time.
- Despite some loss of employment in the trucking industry, the gain to employment of other industries more than offsets the loss.
- It is for this specific ability to model productivity changes that a regional CGE model should be incorporated into the prioritization process as a complementary tool to the BCA.

## What We Learned

### ***Engaging knowledgeable stakeholders produces a robust benefit understanding***

The process to develop and identify the benefits that stem from infrastructure investment projects included WSDOT-facilitated discussions with key stakeholders throughout the state. These stakeholders, divided into three Technical Teams (Urban Goods Movement, Global Gateways, and Rural Economy), were tasked with providing the research team with measurable benefits and potential data sources that are important to shippers, freight carriers, air quality stakeholders, labor, and federal, state, regional and local governments including ports. After substantial consideration, the Technical Teams' list of prioritized, measurable, and

implementable benefits included: improved travel times; improved travel time reliability; reduced truck operating cost; improved air quality; truck emissions; and economic output. Based on the available data and modeling tools described above and compatible with regional Travel Demand Models in the state, benefits associated with travel time, truck operating costs, and emissions (using the Motor Vehicle Emissions Simulator) were incorporated into the BCA and evaluated on two case studies in distinctive parts of the state, and located on the Washington's Truck Freight Economic Corridors. As shown in Exhibit 9.4, the benefits were then used as inputs to the Economic Impact Models.

### ***Lessons Learned***

The case study examinations produced several valuable take-home lessons for future WSDOT efforts to fully incorporate freight related benefits and impacts from freight corridor projects:

- Regional assumptions about the geographic scale of potential impacts should be considered. Scale not only impacts benefit estimation as it is generated by land use, household, and employment assumptions, but it also effects the economy wide impacts based on the industrial make-up and subsequent trucking demands of a region.
- DOTs must evaluate both the passenger and truck freight economic impacts of large highway projects. Future efforts should be made to develop feedback loops that will permit forecasting capabilities through combined use of the TDMs and CGEs.

For more information see the report at:

<http://www.wsdot.wa.gov/research/reports/fullreports/815.1.pdf>

### ***The Importance of Accounting for Reliability***

Noticeably absent from inclusion here is an accounting for the improved reliability that results from an investment. Through coordination with a second WSDOT supported probe-data study, researchers have been able to suggest the manner by which consideration of reliability may be further included. This effort has identified a bimodal approach, capable of operating even with sparse data, to characterize roadway segments as reliably fast, reliably slow, or unreliable.

## **Implementation**

The estimation of truck freight benefits and economic impact analysis are designed to be additional factors that can be taken into account in WSDOT's project prioritization process. The two highway project case studies completed by WSDOT Freight Systems Division provided evidence of the strength and capabilities of a Computable General Equilibrium (CGE) Model to evaluate the long-term economic impacts of large and mid-size highway projects. Based on this information, WSDOT will pilot use of this method in 2014 – 2015 to quantify the long-term freight and passenger-related benefits to the state's economy from highway transportation investments. This will enable WSDOT to provide the public with information about the long-term benefits and jobs that come from highway improvements that reduce travel time and congestion for the everyday commuting public, allow freight trucks to get their goods to their destination in a shorter time period, and benefit public transit by reducing travel time and providing alternative routes to their customers.

# CHAPTER 10: THE STATE'S FREIGHT IMPROVEMENT STRATEGY

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The Washington State Freight Plan addresses the period from 2014 to 2030, and this chapter contains both near- and long-term policy, operational and project investment strategies. Policy recommendations come from WSDOT, the Washington State Freight Advisory Committee, and many discussions with other key freight stakeholder groups. The WSDOT freight operational and capital project recommendations on State Truck and Freight Rail Economic Corridors are drawn from the WSDOT 2013 Unfunded System Investments list.<sup>80</sup> Project recommendations on the State Waterway Freight Economic Corridors are based on information provided by the Pacific Northwest Waterways Association and state ports. WSDOT and FMSIB joined together to gather freight project recommendations from MPOs, RTPOs, Ports and Tribes, as a first step towards a unified State Freight Mobility Plan.

WSDOT's recommended freight highway project list may be subject to revision as the department is currently undertaking a rigorous practical design process to continue to seek the lowest-cost and highest-value solutions for freight and passenger needs on the highway system. We must address urgent preservation needs while at the same time make adaptive changes to meet emerging technological and societal needs. Least Cost Planning (LCP) and Practical Design (PD) are two important reforms WSDOT is undertaking to improve transportation decision making. Least cost planning results in an optimum mix of practical policy and capital investments to maximize system performance. Practical design is an approach to making project decisions that focuses on the need for the project and looks for the lowest cost solutions. Practical design allows more flexibility and freedom to innovate, and considers incremental solutions to address uncertainties in future scenarios.

In this process, WSDOT will prioritize projects in this order:

1. Operate Efficiently – This approach gets the most out of existing highways by using traffic management tools to optimize the flow of traffic and maximize available capacity.
2. Manage Demand – Whether shifting travel times, using public transportation reducing the need to travel altogether, managing demand on overburdened routes allows out entire system to function better.
3. Add Capacity Strategically – Targeting our worst hotspots or filling critical system gaps to best serve an entire corridor, community or region means fixing bottlenecks that constrain the flow.

Multimodal preservation projects remain the State's highest freight priority as public stewards of the state's highways and roads, short-line railroads, and waterway systems are struggling to

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<sup>80</sup> <http://www.wsdot.wa.gov/Funding/SystemInvestments.htm>.

meet industries' basic need for a reliable, cost-effective system. Without sufficient preservation and maintenance funding, the conditions of the Freight Economic Corridors will continue to deteriorate, ultimately costing both the economy and taxpayers more than the funds for the recommended preservation program. Some highway and road bridges will be weight restricted to trucks causing them to drive longer distances, which will result in higher consumer costs and more diesel emissions near communities. Short-line railroads will not be able to carry modern railcars and barges moving on the Columbia-Snake River system will not be able to carry a full load, so farmers shipping to global markets will pay a higher price for transportation.<sup>81</sup>

WSDOT's recommendations for highway and rail freight mobility improvements in the State's Freight Economic Corridors conform with the goals of the department's newly adopted strategic plan:

- Strategic Investments – Effectively manage system assets and multimodal investments on strategic corridors to enhance economic vitality.
- Modal Integration – Optimize existing system capacity through better interconnectivity of all transportation modes.
- Community Engagement – Strengthen partnerships to increase credibility, drive priorities and inform decision making.
- Smart Technology – Improve information system efficiency to users and enhance service delivery by expanding the use of technology.

## How are the Washington State Freight Plan strategies coordinated with other state and regional transportation plans?

The State Freight Plan integrated freight elements of other state transportation plans into one multimodal freight plan. The Freight Plan incorporated the freight rail system analysis, needs and recommendations recently developed in the Washington State Rail Plan. WSDOT is responsible for both plans, and closely coordinated internally and with freight stakeholders throughout the development process. The Freight Plan also includes State Highway System Plan unfunded project priorities that provide significant freight benefit. These include both WSDOT's highest priority, funding for highway and bridge preservation program strategies, as well as freight mobility improvements that are located on State Freight Economic Corridors. WSDOT's sister agency, FMSIB, has a proven project evaluation process for local freight projects and the Plan includes the prioritized list of freight projects developed by FMSIB. FMSIB also staffed the Washington State Freight Advisory Committee. The State Freight Plan includes their findings and federal freight policy recommendations. For additional state and local policy recommendations, and for information on the State Freight Advisory Committee's at-grade rail crossing inventory, please see the following link:

[http://www.fmsib.wa.gov/fac/20140602-FINALComplete%20Folio\\_for%20printer5-7-14.pdf](http://www.fmsib.wa.gov/fac/20140602-FINALComplete%20Folio_for%20printer5-7-14.pdf)

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<sup>81</sup> Without proper maintenance and dredging, some locations on the Columbia-Snake River system are not able to carry full barge loads. Inadequate channel depth results in barges being forced to carry lighter loads in order to ensure that they can fit within the un-dredged channel depths.

For the first time, WSDOT and FMSIB jointly invited all MPOs, RTPOs, Tribes, and ports in Washington State to submit their freight priority projects to the State Freight Plan. WSDOT respects and relies on the planning and project prioritization processes conducted by MPOs, RTPOs, Tribes, and ports, and therefore required that regional freight projects included in the State Plan to have already been identified in regional or Tribal short-term or long-term transportation plans. WSDOT received and included over 250 regional strategies that are located on State Freight Economic Corridors in the State Freight Plan. These partnerships benefit the State as:

- The State Freight Plan provides a unified set of priorities to guide both state and federal capital and operating investments in Washington State’s freight systems.
- Under the Moving Ahead for Progress in the 21<sup>st</sup> Century (MAP-21) Act, all freight projects must be in the State Freight Plan in order to be eligible for additional federal matching funds. Several regional organizations indicated that they were interested in this opportunity.
- Most indicated that they want their projects in the State Freight Plan as evidence of strong inter-jurisdictional freight planning and prioritization.

All of these freight projects located on the Washington State Freight Economic Corridors were incorporated into the Freight Plan’s capital project list. During this process, WSDOT learned that a few ports had not previously engaged with state MPOs or RTPOs and therefore their projects were not shown in regional plans. Since this was a new step in the Freight Plan process, WSDOT invited ports to individually submit their projects and included them in the Plan. In the future, WSDOT will continue to encourage all parties to work through regional and Tribal planning processes.

The Freight Plan drew upon the Pacific Northwest Waterways Association’s (PNWA) strategies to maintain and preserve the Columbia-Snake River system and coastal waterways. The PNWA represents public and private sector interests including ports, towboat companies, steamship operators, river and bar pilots, agricultural producers and forest products manufacturers.

The State Freight Plan will inform development of the 2014 Washington Transportation Plan (WTP). The Washington State Transportation Commission and WSDOT share responsibilities for the WTP. The Commission is leading work to develop the Plan’s policies that it will recommend to the Governor and the Legislature. WSDOT is leading development of the information needed for the Plan which will feed into WSDOT’s next update of the federally-compliant long-range statewide multimodal transportation plan.

## Strategies of particular importance to agriculture and timber sectors

MAP-21 emphasizes the need for state freight plans to support freight systems serving rural agribusiness and timber industries, which are strong contributors to Washington State’s economy as described in chapters 2 and 4. Both WSDOT’s analysis of the state’s agricultural and timber supply chains and the federal law recognize that deteriorating infrastructure is the most significant freight transportation problem facing these sectors. The Freight Plan

emphasizes programmatic preservation strategies for state highways, preservation project priorities on the Columbia-Snake River system, and preservation project priorities on the short-line freight rail lines that primarily carry agricultural products.

## Innovative technologies supporting efficient truck operations

WSDOT worked with FHWA in 2014 to develop a proposal to provide real-time truck traveler information within the central Puget Sound region. If funded, this pilot FHWA Intermodal Freight Technology Working Group (IFTWG) project will offer the state's first real-time truck information about the State Truck Freight Economic Corridors. The project will use local data and the experience gained by other State Departments of Transportation on similar deployed systems to deliver real time and historical truck traveler information. Based on the level of funding provided, the website could include: static corridor information (maps, route length, peak times, roadway restrictions for large vehicles; current corridor travel times; reliability data (such as 95 percent reliable travel times and the number of days when traffic speed drops below a standard); historical traffic information (graphs showing the busiest times and days of week, changes over time; connections to traffic cameras on the routes; any on-going incidents or construction projects along the corridor; queue information for major intermodal terminals in the corridors; truck parking availability, and the ability to customize the corridor data and adjust the corridor's geography to fit individual trucker's needs. WSDOT will also consider including voice delivery systems so that drivers could safely make use of the information while on the road. Working with Port of Tacoma, this pilot project also proposes to use Dedicated Short Range Communication technology within Port of Tacoma to provide two-way communication capability between drayage trucks and terminal yard operators and reduce truck delays and terminal congestions.

WSDOT continues to work closely with the Washington State Patrol (WSP) to support and enhance the technology tools the WSP uses at the state's weigh stations and ports of entry. These tools allow WSP to selectively bypass trucks from needing to stop for inspection, maintaining safety while improving truck carrier efficiency. In 2012 these systems allowed 1.2 million truck to bypass weigh stations throughout the state resulting in a total savings to trucking companies of 101,000 travel hours and 484,000 gallons of fuel.<sup>82</sup> Additionally, WSDOT uses a system called Automated Infrared Roadside Screening (AIRS) to help improve safety by keeping trucks with defective brakes off the road. AIRS is currently deployed at one truck weigh station and is being installed at another location later in 2014.

## Freight Policy Recommendations

### Reauthorization of the Surface Transportation Act

MAP-21 contains freight provisions to increase U.S. global competitiveness through the efficient movement of commercial goods. The Act established national freight policy and called for development of a national freight strategic plan, designation of a national freight network through statewide freight planning, data-driven decision making, and reports on truck freight performance on the Interstate system. The following recommendations pertain to the reauthorization of the Surface Transportation Act:

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<sup>82</sup> Gray Notebook 49, page 45.

- Congress should authorize dedicated, sustainable funding for freight system improvement projects. While all possible funding sources should be considered, the national freight system would be best served by a new national freight tax, fee or a combination of both<sup>83</sup>, as supported by the National Surface Transportation Policy and Revenue Study Commission’s report “Transportation for Tomorrow.” This should not lessen funds appropriated to the Highway Trust Fund for transportation purposes.
- Congress should fund programs such as TIGER, Projects of Regional and National Significance, and other programs available for multimodal freight mobility improvements.
- Provide funding to resolve at-grade crossing mobility problems caused by national freight rail growth, in addition to the safety issues addressed by Section 130 of the Highway Safety Improvement Program.
- Re-authorize the Short-line Tax Credit on a minimum of a five-year cycle to ensure short-line capital programs can be properly developed and efficiently administered.
- Because bottlenecks on the national freight network negatively impact freight mobility across many states, Congress should provide financial support for state DOTs engaged in multi-state freight corridor planning.
- The National Freight Cooperative Research Program (NCFRP), authorized under SAFETEA-LU for \$5 million, was not reauthorized in MAP-21. NCFRP has produced numerous research products that provide significant assistance to States in their delivery of freight transportation projects. Congress should seek funding from within the funds allocated to transportation research to reestablish this successful program.
- Provide funding to add truck parking capacity in high-demand locations along national truck freight corridors. Interstate commerce is a state and national priority and small communities located next to high-volume, long-haul truck corridors are not able to resolve multistate truck parking issues by themselves. WSDOT Truck Parking Studies show that the state’s greatest need for additional truck parking is along I-5 and Highway 167 in central Puget Sound and on I-90 near North Bend.
- The U.S. Department of Transportation should define the highway elements of the National Freight Network as the Interstate system and truck routes in the National Highway System equal to or above an average annual truck threshold to be determined in partnership with State DOTs and MPOs. USDOT should also rely on State DOTs to identify routes that will ensure network connectivity to Nationally Significant Intermodal Facilities. Within urban areas, we strongly recommend that State DOTs and MPOs designate Critical Urban Freight Corridors (CUFCs) based on the economic significance of the highway and road routes, not only volume thresholds. Only State DOTs and MPOs have the necessary data sources and datasets to designate CUFCs, therefore they should make the decision regarding designation of urban freight routes.

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<sup>83</sup> Washington Trucking Association has supported an increase in the Federal fuel tax in addition to indexing it for future increases based on inflation, and considers that is the best long term solution for federal highway funding.

- WSDOT will actively engage with regional and Tribal partners and freight system users to develop performance targets for State Freight Economic Corridors. WSDOT and its partners have worked diligently with USDOT to identify national-level truck performance measures that will work with existing data sources, technologies, and processes. It will take several years beyond the current authorization period to fully implement the new performance measures and performance-based planning and programming. In order to provide time for implementation and to assess its effectiveness, Congress should retain the existing freight performance measures provisions and not adopt new procedures or measures until the States have adequate time to implement the performance management standards set in MAP-21.
- There is no institutional mechanism within USDOT to address the multimodal national freight planning needs across the various modal administrations. Congress should reestablish a properly funded and staffed Office of Multimodal Freight Transportation within the USDOT Office of the Secretary with responsibilities that would include international freight transportation issues.
- Congress should provide the different USDOT modal administrations the ability to rely on another modal agency's decision for the same federal action, particularly in relation to NEPA documents. This action will expedite delivery of projects that improve freight mobility.
- USDOT should base development of the National Freight Strategic Plan on information and recommendations provided in state freight plans.
- Congress should modify the national transportation policy to make it multimodal and work with state DOTs, MPOs and other stakeholders to designate a national, multimodal network. WSDOT encourages them to consider including a four-corner improvement strategy for the major U.S. maritime international gateways in the Pacific Northwest, Pacific Southwest, Northeast and the Southeast/Gulf Coast.
- Congress should encourage states to harmonize the way truck oversize and overweight permitting regulations and practices are managed on multistate truck corridors to improve interstate trucking efficiency. WSDOT is working with the American Association of State Highway and Transportation Officials (AASHTO) Subcommittee on Highway Transport to accomplish this goal.

**At the U.S. border, the federal government should:**

- Customize pre-clearance and pre-inspection programs. The U.S. and Canada agreed upon bi-national transportation goals in "Beyond the Border: A Shared Vision for Perimeter Security and Economic Competitiveness." In Washington State, most truck loads crossing the Canadian border carry mixed freight owned by multiple parties, while the U.S. Customs and Border Protection (CBP) C-TPAT: Customs-Trade Partnership Against Terrorism program was designed to quickly process full truck loads owned by a single firm. Customizing these programs to better meet state needs and address each port of entry's specialized function will increase participation in incentivized pre-clearance, pre-inspection and compliance programs.
- Expand and improve physical infrastructure and increase CBP staffing and operating hours as needed in Washington State to support bi-national trade.

### **Freight Rail Recommendations:**

A capacity assessment performed for the State Rail Plan suggests that, unless rail system infrastructure is enhanced, future growth could overwhelm rail system capacity due to shortcomings such as passenger/freight conflicts, height limitations on rail tunnels and bridges, inadequate siding lengths, or bridge capacity. In order to stay nationally and internationally competitive, Washington State must ensure, along with its freight and rail stakeholders, that rail service is comparable or better than its rivals. To address capacity constraints in order to meet future freight rail demands:

- The state's involvement in the rail system should be focused on actions that improve the state's interests, including a thriving and diverse economy, environmental efficiency, resiliency and safety.
- The state should take an active leadership role to build on existing multistate coalitions to address rail system and corridor needs across the Pacific Northwest.
- Statewide rail stakeholders should work through regional and state transportation planning organizations on a regular basis to ensure that their needs and opportunities are understood, and are used to inform any state rail investments or planning efforts.
- WSDOT should improve recognition of rail-related needs in its highway engineering activities.

Procuring new rail right of way and building new rail infrastructure is expensive, time consuming, and may involve complicated land use or political decisions. Therefore, emphasis should be placed on preservation, maintenance, and optimization of existing rail system infrastructure as well as preservation of critical industrial lands served by rail. To preserve existing rail capacity and infrastructure the state should:

- Work with short-line railroads and short-line rail stakeholders to assess short-line rail needs, and create a statewide short-line rail needs inventory.
- WSDOT should consider the stewardship and upkeep history of any potential rail improvement project.
- WSDOT should seek to address rail needs in the most cost-effective manner possible.
- WSDOT should consider strategic state interest when examining the impacts of the loss of rail infrastructure.

Freight rail transportation should be a viable transportation option that contributes to overall statewide mobility goals, helps to alleviate congestion and roadway wear and tear, and offers cost-effective service to Washington's shippers and industries. The state should enhance the efficiency and reliability of existing rail services by ensuring that freight rail metrics are in place that can appropriately evaluate the performance of mobility, efficiency, safety, reliability, and environmental compatibility of proposed new projects.

Freight rail connectivity is crucial to support international trade through Washington's deep-water, river, and inland ports, as well as the linkages to rural industries and agricultural producers. Improvements in rail can increase the transportation modal options that are available to shippers. To support economic development and provide access to industry, the state should:

- Support efforts to identify intermodal and multimodal connectors that provide first and last mile connectivity to businesses and locations that generate freight demand. This designation should be included in the project prioritization processes for state investments.
- Preserve access to global markets by ensuring freight rail access to Washington’s ports.

WSDOT should seek the most cost efficient solutions to alleviating rail bottlenecks, maintain track to provide for optimal efficiency, or alleviate other rail infrastructure and operational concerns when investing public funds in the state rail system:

- WSDOT should use performance metrics to evaluate its freight rail programs and ensure that the program funding is aligned with demonstrated need.
- The state should seek innovative funding and financing sources to leverage public funds and provide more value with limited resources.
- The state should facilitate discussions about community concerns or questions about rail benefits and impacts, and help coordinate with communities, the railroads, and other rail stakeholders.
- Railroads and public agencies should continue to use WSDOT reports, studies and other materials to clearly communicate the benefits of the rail system to Washington residents.

The State should continue to support rail safety and security. For the most part, rail safety and security are regulated and enforced by the FRA, Utilities and Transportation Commission, and Department of Homeland Security. WSDOT’s role has traditionally been in public education, as well as supporting communications in the event of accident, complaint or other safety concern.

The federal government should reauthorize the Short-line Tax Credit on a minimum of a 5-year cycle to ensure short-line capital programs can be properly developed and efficiently administered.

#### **Freight Waterway Recommendations:**

- Congress should increase revenue for the Inland Waterways Trust Fund (ITWF) for major construction and rehabilitation projects on waterways such as the Columbia-Snake River System. The ITWF is underfunded, causing delays in the maintenance, repair, and improvement of our waterways. The IWTF is a 20 cent/gallon diesel tax collected from towboats and intended to fund 50 percent of inland construction and major rehabilitations. The current tax is insufficient to make needed repairs, and investments and collections are expected to remain below needs for the foreseeable future. In the Northwest, stakeholders are part of national conversations to increase revenues and are supportive of a gradual, phased-in increase to the existing diesel tax.

- Congress should reform or replace the Harbor Maintenance Trust Fund (HMTF). The U.S. Department of Transportation Maritime Administration (MARAD) has identified the Harbor Maintenance Tax as a significant burden on marine commerce<sup>84</sup>. The HMTF is funded by a tax on the value of imports and domestic cargo and is intended to fund 100 percent of deep draft and coastal operations and maintenance dredging of designated channels. However, only about half of collections have been spent for the intended purpose and the remaining \$8 billion has been redirected to non-transportation federal purposes. The HMTF does not provide equitable infrastructure investment for naturally deep water ports. The Ports of Seattle and Tacoma, which handle large amounts of imported cargo but require little maintenance dredging, receive only a penny for every HMTF dollar paid by shippers moving goods through their port terminals. Imported goods entering the U.S. should be taxed at the same level, whether entering through a port or a land border crossing.

### **Air Freight Recommendations:**

#### *State Government*

- Ensure that the JTC evaluates investment, both public and private, that first supports economic corridors outlined in the Connecting Washington work.

#### *State Government with local support*

- Identify the need for additional financial resources from the State to be allocated for strategic aviation economic development projects, including those projects that contribute to freight mobility objectives based on a list of projects submitted by local government, airports or through MPOs/RTPOs.
- Ensure that Airport operators are brought into the membership of the MPO/RTPO as independent subject matter experts on aviation and air freight mobility. If the form of government will not allow the Airport representative to have an independent voting membership, the Airport should at minimum be included on the Technical Committee of the MPO/RTPO.

#### *Federal /State/Regional Government*

- Air freight movement by surface transportation to and from air cargo airports should be considered as part of the Transportation Plan (or equivalent) that are developed at the metro and regional levels as encouraged in MAP-21.
- MPOs/RTPOs should consult with airports in their air cargo-related planning activities.
- Encourage air cargo airports to address intermodal planning that includes freight movement by surface transportation to and from their facilities as part of airport master plans as they are updated.
- Treat aviation capacity as a resource and preserve, protect, and enhance it through strategies focusing on airport operations, technology, safety, and land use.
- Develop comprehensive policies and investment strategies related to freight and aviation to allocate funding in a more efficient way by emphasizing economic corridors.

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<sup>84</sup>"An Evaluation of Maritime Policy in Meeting the Commercial and Security Needs of the United States", MARAD, 2009

### *Federal Government*

- Work with FAA and Congress to allow Air Improvement Program (AIP) grants to be available to air cargo airports for intermodal projects that meet regional freight mobility objectives that support air freight activity. AIP grant spending levels should be protected and used only for aviation-related purposes.
- Encourage the FAA to measure all air cargo activity, including air cargo transported in passenger planes.
- Congress should strive to achieve an appropriate balance between safety and security and an efficient supply chain. Goods movement should not be a secondary priority in this discussion.

### **State and regional funding for freight programs:**

Without funding to implement the Washington State Freight Plan capital and operational strategies, the Freight Plan will have limited value. In addition to the capital programs and projects benefitting freight listed in the Plan, strategies include:

- Funding an all-weather core county road system to ensure that Washington State farmers can ship goods to market throughout the year.
- Working with partners and stakeholders to plan for and develop adequate truck parking in high-demand locations along the state's Truck Freight Economic Corridors. This will improve safety and reduce negative impacts on local communities.

### **State guidance for local governments regarding truck freight policies and regulations:**

WSDOT conducted a review of national best practices for an Urban Goods Movement Strategy and recommends that well-conceived city truck freight ordinances will address these issues: Capacity; Design Standards; and, Air Quality. For detailed recommendations please see Appendix G.

## How may the public sector better plan and cooperate to solve complex freight problems?

Jurisdictions often independently pursue goals for parts of what in most industry sectors are deeply integrated supply chains. As a result, we've lacked a statewide common vision of what the State Freight Economic Corridors could look like in the next twenty years. The State Freight Plan has for the first time identified and mapped the State's Freight Economic Corridors that include both the high-volume routes, and the first and last mile connector routes to freight-intensive land uses. This allowed WSDOT to work with regional and local partner agencies and Tribes to include their freight priority improvement projects on the Economic Corridors in the Plan.

As we plan for the future, we must envision the interactions of the multiple economic agents that drive change in demand on freight systems. When agencies plan for future problems in freight systems, they tend to be driven by a single variable: straight-line projections of volumes of goods to be moved on a segment of a corridor. When we undertake plans for integrated corridor management of the greater I-5 Corridor in central Puget Sound and other key

corridors across the state, we must take both passenger and more complex, multimodal cross-state freight needs on the facilities into account to support economic growth.

## We can meet the challenge together

Washington's 2014 State Freight Plan is the result of a fully collaborative process. At its outset, WSDOT sought input on the plan's scope from all MPOs and RTPOs, all Tribes, freight associations including the Washington Public Ports Association and Washington Trucking Association, and the FMSIB.

The plan also advanced through the guidance of three technical teams focused on the plan's three objectives. Again, representatives from multiple sectors – local government, Tribes, businesses, freight carriers, freight system customers and users, and air quality experts – were asked for their input and worked together to aid WSDOT to:

- Develop and prioritize a list of important, specific and measurable freight performance goals based on customer refinements and state and federal transportation policies
- Recommend data sets and sources to measure progress towards achieving the state freight goals

Similar to its creation, the plan's implementation will benefit from input and support of freight system stakeholders, local and tribal governments, and many other members of the community. WSDOT would be happy to discuss the Freight Plan's findings with your organization.

## Recommended Capital Investments in Freight Preservation and Mobility Projects

The State Freight Mobility Plan's multimodal priorities address the current needs and issues shown in Chapter 5 "The Condition and Performance of the State's Transportation System" and anticipated growth shown in Chapters 6 "Freight Forecast" and 7 "Trends, Needs, and Issues".

Please see the following attached project lists<sup>85</sup>:

- Exhibit 10.1L: Freight Unfunded Investments – WSDOT Programmatic Improvements
- Exhibit 10.2L: Freight Unfunded Investments – Interstate
- Exhibit 10.3L: Freight Unfunded Investments – Highway
- Exhibit 10.4L: Freight Unfunded Investments – Local
- Exhibit 10.5L: Freight Unfunded Investments – Waterway
- Exhibit 10.6L: Freight Unfunded Investments – Rail Plan
- Exhibit 10.7L: Freight Unfunded Investments – Air

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<sup>85</sup> WSDOT recognizes that solutions for some important needs on the State Freight Economic Corridors have not been determined. The Freight Systems Division will update this project list in partnership with the state Freight Advisory Committee and FMSIB, MPOs, RTPOs, ports and Tribes every two years so the Freight Plan remains useful in the future.

## Exhibit 10.1L: Freight Unfunded Investments - WSDOT Programmatic Improvements

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
1	Highway System Maintenance	Regionwide (All Regions)		Provides 10-year funding to maintain Nickel/TPA projects at historical level of service, eliminate backlog and catch up to the historic benchmark level of service for existing inventory, and cover increased utility costs.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
2	Highway Road Preservation	Regionwide (All Regions)		Provides a 10-year preservation investment to achieve a pavement condition in excess of 97% fair and good.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
3	Highway Bridge Preservation	Regionwide (All Regions)		Provides a 10-year preservation investment to achieve a bridge condition in excess of 99% fair and good.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
4	Highway Facility Preservation	Regionwide (All Regions)		Provides a 10-year investment in guardrail, signs, drainage systems, electrical systems, wireless communication systems, weight stations, rest areas, and roadside slopes to achieve a comparable performance to existing preservation methods.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
5	Maintenance & Operations system additions	Statewide		Provides for the initial cost of maintaining and operating the new system additions identified above. Actual funding over a 10 year timeframe may vary based on schedule of implementing capital improvements and the biennialization of costs.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Once the above projects are completed, this amount represents the biennial investment needed to maintain and operate the additional infrastructure.	WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	

## Exhibit 10.1L: Freight Unfunded Investments - WSDOT Programmatic Improvements

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
6	Operation Technology Capital Improvements	Regionwide  Legislative Districts: 22, 25, 27, 28, 29, 30, 32, 33, 35, 37, 38		Implement strategic operational investments to reduce congestion and collisions through improvements such as expanded system monitoring and incident detection, ramp metering, minor widening for hard shoulder running supported by lane control and variable speed limit technologies.	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Funding for stand-alone improvements focused on existing congested corridors that do not have near term capacity relief and corridors with emerging congestion. Includes I-5 through Thurston County, I-5: north of JBLM to SR 16, I-5: Everett to Marysville, SR 512/SR 167: I-5 to SR 18.  Tier 2 priority - Additional technology applications at locations that require more intensive roadway modifications to enable hard shoulder running and dynamic interchanges modifications. Including I-5 from SR 101 to Mounts Road.	WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
7	System Operations & Incident Response	Statewide		Provides a 10-year investment to maximize the performance of existing system devices and traffic signals and expands the hours and areas of operation for faster incident response in congested corridors to insure quick clearance of collisions.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input checked="" type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
8	Operations - Low Cost Enhancements	Statewide		Funds a 10-year investment for the proactive identification of operational solutions for emerging needs and constructs low cost operational solutions to traffic mobility and safety deficiencies.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
9	Operations - New Technology	Statewide		Provides a 10-year investment to actively engage in the deployment of emerging connected vehicle technologies and adaptive signal systems. New concepts will offer cost effective ways to improve safety and mobility for road users, and enable utilization of new sources of information to drive our traffic systems. This will position WSDOT to be able to take advantage of early deployment opportunities.	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
10	Highest, High, and Medium Priority Highway Safety Projects	Statewide		Based on a statewide analysis of known and predicted accident locations, provides for strategic investments to minimize future severe and fatal incidents based on Target Zero priorities.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	

## Exhibit 10.2L: Freight Unfunded Investments - Interstate

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
11	I-5 Columbia River Crossing Replacement	Oregon to SR 205, Legislative Districts: 17, 18, 49	Clark	Existing Interstate Bridge structures will be replaced with two new bridge structures to carry a total of five vehicle lanes in each direction and fully safety shoulders. The replacement bridge design did not include a lift span. The project also includes improvements to six I-5 interchanges and adding auxiliary lanes between closely-spaced interchanges which will relieve congestion and improve safety.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	CRC will benefit all travelers through improved reliability, reduced congestion and fewer collisions, benefit the economy through better freight mobility and construction jobs, and benefited community livability in both Oregon and Washington.	WSDOT	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information about this project, please see: <a href="http://www.columbiarivercrossing.org/">http://www.columbiarivercrossing.org/</a>	
12	I-5 Federal Way - triangle vicinity improvements	Federal Way Legislative Districts: 30	King	Multi-stage project to improve congestion and safety at the I-5/SR 18/SR 161 interchange. This project includes elements of unfunded Nickel or TPA project scope.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Constructs the next stage of the project to add SB CD lanes to improve congestion and safety.	WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see: WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
13	I-5 Tacoma to Everett mobility improvements	Tacoma-Seattle-Everett Legislative Districts: 01, 11, 21, 27, 30, 32, 33, 37, 38, 43, 44, 46	King-Pierce-Snohomish	Investments include minor widening and traffic management systems to enable a third northbound lane at Seneca, constructing a southbound contraflow lane in the express lanes, ramp meter fill-in, hard shoulder running supported by lane control and variable speed limit technologies at various locations, integrated corridor management in the south Seattle and north Seattle areas, conversion of the express lanes to express toll lanes, and conversion of HOV lanes to express toll lanes between Tacoma and Lynnwood.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see: WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
14	I-5 Chehalis - widen corridor	Chehalis Legislative Districts: 20	Lewis	Widen I-5 between 13th and Mellen street, plus replaces the interchange at Chamber Way. Additional third lane between 13th street and SR 6 interchanges will remain an auxiliary (add-drop) lane until those interchanges are replaced.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see: WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
15	I-5 Flood Protection	Chehalis-Centralia Legislative Districts: 20	Lewis	Constructs a series of levees and walls, and/or raises sections of I-5 to reduce the risk of I-5 closures in the Chehalis - Centralia area during flood events.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see: WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	

## Exhibit 10.2L: Freight Unfunded Investments - Interstate

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map		
16	I-5 JBLM corridor improvements	Lakewood-Tillicum  Legislative Districts: 02, 22, 28	Pierce	The full range of Moving Wa strategies to reduce congestion through this corridor. Needs include system improvements to enable hard shoulder running, interchange reconstruction to enable mainline widening and manage military gate access, and new lanes to handle overall corridor demand.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Reconstructs the Thorne Ln. and Berkeley interchanges to enable mainline widening and improve access, extends 8 lanes from the north down to the Berkeley interchange, and provides hard shoulder running at locations between Mounts Rd. and Berkeley. Initiates planning efforts through the Nisqually Delta to preserve bridges, and identify operational solutions to reduce congestion.  In addition to the 2 interchange improvements, modify the SB off ramp to the main gate, reconstruct the Dupont- Steilacoom interchange, constructs a connector between Gravelly Lake Drive and Thorne Lane, extends mainline widening to DuPont, and implements operational solutions in the Delta, to improve mobility in the corridor.	WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>			
17	I-5 South Tacoma HOV	Tacoma  Legislative Districts: 27, 29	Pierce	Extends HOV lanes south in both directions between the SR 512 interchange and the SR 16 interchange. Reconstructs the 72nd Street and 84th Street interchanges to accommodate the widening and improve traffic movements on and off the interstate.	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input checked="" type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>			
18	I-5 Mount Vernon - interchange improvements	Mount Vernon  Legislative Districts: 40	Skagit	Widen SR 538 under I-5 to remove the bottleneck.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements		WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>			
19	I-5 Marysville interchanges - improvements	Marysville  Legislative Districts: 38	Snohomish	Reconstruct 116th NE interchange to improve mobility and safety. Commitment to the Tulalip tribe. Tier 3 - In addition to improving the 116 NE interchange, improve the 88th Street NE interchange and I-5/SR 529 intersection improvements to improve capacity.  For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>								
20	Title: SR 529 / I-5 Interchange Completion  Plan Reference: PSRC: Transportation 2040	Begin Location: MP 198.0 Everett  End Location: MP 198.7 Everett	Snohomish	Complete the current half interchange by constructing a new Interstate 5 northbound offramp onto SR 529 and new southbound on-ramps from SR 529 to Interstate 5	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input checked="" type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	This project is expected to reduce freight delay by more than 480 hours per day and general vehicular delay by more than 4,000 hours per day. The project is expected to reduce queuing by 8 vehicles per lane.	City of Everett	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf">http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf</a>	X		

## Exhibit 10.2L: Freight Unfunded Investments - Interstate

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
21	I-5/SR 525 Interchange Phase	Lynnwood Legislative Districts: 32	Snohomish		<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	This project will improve Lynnwood City center access from collector distributor systems on I-5.	WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
22	Title: I-5 Exit 274 Interchange PS&E Design  Plan Reference: Whatcom Transportation Plan	Begin Location: MP 273.5 Blaine  End Location: MP 274.5 Blaine	Whatcom	PS&E for revisions to the partial interchange at Exit 274 (I-5) to a full tight diamond configuration. The design process will include geometric alignment, structural design, required right of way acquisitions, hydraulic report, environmental review/permitting and NEPA, for construction, bid ready documents. The design will be based on data from the Border Circulation Analysis from the IMTC and the completed Interchange Justification Report (approved by FHWA - Jan, 2010).	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input checked="" type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input checked="" type="checkbox"/> Truck-only lanes <input checked="" type="checkbox"/> Truck climbing and runaway truck lanes <input checked="" type="checkbox"/> Truck parking facilities <input checked="" type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	<p>1. Reducing:</p> <p>A. Travel time: Trucks destined for the Blaine industrial area have potential wait times of up to 30 minutes to an hour at Exit 275 during long border wait times. A full interchange at Exit 274 will allow trucks to bypass this congestion and benefit both interchanges.</p> <p>B. Direct freight carrier operating cost: Freight carrier operating costs will be benefitted with shorter cycling times and direct access to the industrial core and regional connectivity.</p> <p>C. Diesel and carbon emissions: This project will provide an alternative exit for freight to access the border and industrial area and reduce the number of trucks idling in queues during excessive border wait times.</p> <p><i>(Additional Information Available)</i></p>	City of Blaine	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  Whatcom Transportation Plan at: <a href="http://wcog.org/planning/wtp/">http://wcog.org/planning/wtp/</a>	X
23	I-5 Bellingham interchange safety improvements	Bellingham Legislative Districts: 40, 42	Whatcom	Interchange improvements throughout the corridor in Bellingham.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Reconstruct the I-5 interchange and replace existing ramps and bridges to alleviate congestion.	WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
24	I-82 West Richland - Red Mountain interchange	West Richland Legislative Districts: 16	Benton	Multi-phase improvements in the Red Mountain vicinity to improve safety at existing intersections and improve access to area vineyards.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	<p>Constructs a roundabout at the SR 224/SR 225 and I-82 ramp terminals.</p> <p>In addition to the SR 224/SR 224 improvements, this constructs a new interchange to provide improved access to commercial and industrial properties and area vineyards.</p>	WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
25	I-82 South of Ellensburg - truck climbing lanes	South of Ellensburg Legislative Districts: 13	Kittitas	Construct truck climbing lanes between Selah and Ellensburg to improve congestion due to slow truck movements on steep grades.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input checked="" type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Construct a truck climbing lane between Thrall Road and Manashtash Ridge in the eastbound direction.	WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	

## Exhibit 10.2L: Freight Unfunded Investments - Interstate

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
26	I-82 Yakima - Union Gap economic development improvements	Yakima Legislative Districts: 14, 15	Yakima		<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	<p>Widen I-82 to six lanes between North First Street and Yakima Avenue and improve connections to the local system.</p> <p>In addition to the widening, make improvements to the South Union Gap interchange to include full access in all directions.</p>	WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	<p>For more information including project budget please see:</p> <p>WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a></p>	
27	I-90 Seattle to Issaquah - corridor improvements	Seattle-Bellevue; King Issaquah Legislative Districts: 37, 41	King	Improves capacity on the I-90 corridor between I-405 and Issaquah; including improvements at the I-90/I-405 interchange. Installs infrastructure between Seattle and Issaquah that is necessary to implement tolling.		<p>Implement tolling on the I-90 floating bridge, converts HOV lane to Express Toll Lane east of I-405, and install ATM and restripe the roadway to allow for EB and WB shoulder use during peak periods between Eastgate and West Lake Sammamish Parkway.</p> <p>In addition to the toll implementation and EB/WB improvements, construct flyover ramps between the express toll lanes on I-405 and the HOV lanes on I-90 in Renton and Issaquah.</p>		<p>For more information including project budget please see:</p> <p>WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a></p>		
28	I-90 HOV to HOT  Plan Reference: PSRC Transportation 2040		King	Convert HOV lanes to HOT lanes	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	<p>For more information including project budget please see:</p> <p>PSRC: Transportation 2040 at: <a href="http://www.psrc.org/transportation/t2040">http://www.psrc.org/transportation/t2040</a></p>	
29	I-90 Ellensburg intersection improvements	Ellensburg Legislative Districts: 13	Kittitas	Construct improvements at the US 97 and Dolarway intersection adjacent to the I-90 ramp terminals to improve capacity.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	<p>For more information including project budget please see:</p> <p>WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a></p>	
30	I-90 Snoqualmie Pass - widen to Easton	Snoqualmie Pass Legislative Districts: 13	Kittitas	Completes the widening from the end of the existing funded projects (MP 62) to Easton.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	<p>Widens an additional 2 mile section between MP 62-64; including reconstruction of the Stampede Pass and Cabin Creek Interchanges to eliminate the existing low clearances.</p> <p>In addition to 2 mile widening to MP 64, also completes design on the final phase of the corridor (between MP 64 and Easton) and begins right of way acquisition.</p>	WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	<p>For more information including project budget please see:</p> <p>WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a></p>	

## Exhibit 10.2L: Freight Unfunded Investments - Interstate

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
31	I-90 Spokane - widening	East of Spokane Valley	Spokane	<p>Widens and makes interchange improvements on I-90 east of Spokane Valley to the Idaho State Line.</p> <p>Note: Regional projects 5.7, 5.8 and 5.9 are part of WSDOT unfunded project "I-90 Spokane widening". The MPO projects construct 3 interchanges and widen I-90 from Barker Rd to Harvard Rd.</p> <p>The WSDOT unfunded project includes those projects and also continues widening I-90 from Harvard Rd east to the Idaho state line.</p>		For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>				
32	Title: Interstate 90 - Barker I/C  Plan Reference: HORIZON 2040: The Metropolitan Transportation Plan for the Spokane Metropolitan Planning Area			Reconstructing the Barker Rd I/C –additional lanes over I-90 and intersection improvements - Provides room for additional lanes on I-90 and intersection improvements	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	Operate efficiently; economic corridor/freight enhancements; improves capacity; improves connectivity across I-90.	Spokane Regional Transportation Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  HORIZON 2040: The Metropolitan Transportation Plan for the Spokane Metropolitan Planning Area at: <a href="http://www.srtc.org/mtp_2040.html">http://www.srtc.org/mtp_2040.html</a>	
33	Title: Interstate 90 - Barker I/C Vic. to Harvard I/C Vic.  Plan Reference: HORIZON 2040: The Metropolitan Transportation Plan for the Spokane Metropolitan Planning Area			Construct additional general purpose lanes to increase capacity	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	Operate efficiently; economic corridor/freight enhancements; improves capacity; improves connectivity across I-90.	Spokane Regional Transportation Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  HORIZON 2040: The Metropolitan Transportation Plan for the Spokane Metropolitan Planning Area at: <a href="http://www.srtc.org/mtp_2040.html">http://www.srtc.org/mtp_2040.html</a>	
34	Title: Interstate 90 Henry Road I/C  Plan Reference: HORIZON 2040: The Metropolitan Transportation Plan for the Spokane Metropolitan Planning Area			Removes existing partial interchange at Greenacres and constructs a split diamond replacement at Henry & Harvard Roads. Provides room for additional I-90 lanes to pass through the area.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	Operate efficiently; economic corridor/freight enhancements; improves capacity; improves connectivity across I-90.	Spokane Regional Transportation Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  HORIZON 2040: The Metropolitan Transportation Plan for the Spokane Metropolitan Planning Area at: <a href="http://www.srtc.org/mtp_2040.html">http://www.srtc.org/mtp_2040.html</a>  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
35	I-205 Vancouver - widening	Vancouver	Clark	Widen I-205 between SR 500 and Padden Parkway.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	

## Exhibit 10.2L: Freight Unfunded Investments - Interstate

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
36	I-405 Renton to Lynnwood - corridor widening	Renton  Legislative Districts: 01, 21, 32, 45, 48, 11, 41	King	Widens the I-405 corridor between Renton and Bellevue; including the implementation of Express Toll Lanes (ETL), rebuilding the I-405/SR 167 interchange and rebuilding other impacted interchanges.  This project includes elements of unfunded Nickel or TPA project scope.		Continues widening of the I-405 corridor between Renton and Bellevue; including the implementation of Express Toll Lanes (ETL) and rebuilding impacted interchanges. Also builds the first segment of the I-405/SR 167 interchange faster plan by constructing a direct connector on northbound and southbound lanes between SR 167 HOT and I-405 express toll lanes. This project would complete a 40 mile corridor wide express toll facility.  In addition to the south end widening, this would construct dual toll express lanes between Bothell and Lynnwood and construct the 132nd full interchange.  For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>				
37	I-405 Corridor: SR 167 Direct HOV Ramps  Plan Reference: PSRC Transportation 2040		King	SR 167 Interchange: Construct NB and SB HOV flyover ramps directly connecting SR 167 HOV/HOT lanes with I-405 HOV lanes north of the SR 167 Interchange. (a) Provides SB I-405 HOV/HOT to SB SR 167 HOV/HOT and (b) NB SR 167 HOV/HOT to NB I-405 HOV/HOT.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/transportation/t2040">http://www.psrc.org/transportation/t2040</a>	
38	I-405 Corridor: SR 169 to I-90 (widening)  Plan Reference: PSRC Transportation 2040		King	(a) Add lanes NB and SB and rebuild the existing roadway from SR 169 to I-90, including the 4 ft. HOV buffer, resulting in 6 lanes (1 HOV & 4 GP & 1 Aux or 2 HOV & 3 GP & 1 Aux) in both directions. Costs of this widening are split between the various interchange projects (4320, 4321, 4322, 4323, 4324, 4325 and 4326).	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/transportation/t2040">http://www.psrc.org/transportation/t2040</a>	
39	I-405 Corridor: SR 169 to I-90 (NE 44th I/C component)  Plan Reference: PSRC Transportation 2040		King	(e) Modify or rebuild NE 44th I/C (to accommodate future HOV Direct Access); Cost includes part of the 4318 widening through this segment.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/transportation/t2040">http://www.psrc.org/transportation/t2040</a>	
40	I-405 Corridor: SR 169 to I-90 (112th St I/C component)  Plan Reference: PSRC Transportation 2040		King	(f) Modify or rebuild 112th St I/C (to accommodate future flyer stop and park & ride expansion). Cost includes part of the 4318 widening through this segment.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/transportation/t2040">http://www.psrc.org/transportation/t2040</a>	

## Exhibit 10.2L: Freight Unfunded Investments - Interstate

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
41	I-405 Corridor: I-90 to SR 520 (widening)  Plan Reference: PSRC Transportation 2040		King	(a) Add one lane NB and SB between I-90 and SR 520 resulting in 7 lanes NB (1 HOV, 5 GP & 1 Aux. or 2 HOV, 4 GP & 1 Aux.) and SB (1 HOV, 4 GP, 1 Aux & 1HOV outside) or (2 HOV, 3 GP, 1 Aux. & 1 HOV outside).	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/transportation/t2040">http://www.psrc.org/transportation/t2040</a>	
42	I-405 Corridor: I-90 to SR 520 (Main St. Bridge component)  Plan Reference: PSRC Transportation 2040		King	(b) Reconstruct the Main Street bridge. Cost included in 4336.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/transportation/t2040">http://www.psrc.org/transportation/t2040</a>	
43	I-405 Corridor: SR 169 to I-90 (SR 169 Direct Connection Ramp)  Plan Reference: PSRC Transportation 2040		King	(i) Construct SB I-405 to SB SR 169 direct connection ramp. Cost includes part of the 4318 widening through this segment.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/transportation/t2040">http://www.psrc.org/transportation/t2040</a>	
44	I-405 Corridor: SR 169 to I-90  Plan Reference: PSRC Transportation 2040		King	(b) Modify or rebuild N 3rd St. I/C (to accommodate future direct ramp to SR 169); Cost includes part of the 4318 widening through this segment.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/transportation/t2040">http://www.psrc.org/transportation/t2040</a>	
45	I-405 Corridor: SR 169 to I-90 (SR 900 I/C component)  Plan Reference: PSRC Transportation 2040		King	(c) Modify or rebuild SR 900 I/C; Cost includes part of the 4318 widening through this segment.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/transportation/t2040">http://www.psrc.org/transportation/t2040</a>	

## Exhibit 10.2L: Freight Unfunded Investments - Interstate

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
46	I-405 Corridor: SR 900 to NE 30th  Plan Reference: PSRC Transportation 2040		King	(k) Construct NB auxiliary lane between SR 900 and NE 30th. Cost included in 4321	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/transportation/t2040">http://www.psrc.org/transportation/t2040</a>	
47	I-405 Corridor: SR 169 to I-90 (NE 30th I/C component)  Plan Reference: PSRC Transportation 2040		King	(d) Modify or rebuild NE 30th I/C. Cost includes part of the 4318 widening through this segment. Cost includes part of the 4318 widening through this segment.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/transportation/t2040">http://www.psrc.org/transportation/t2040</a>	
48	I-405 Corridor: SR 169 to I-90 (Coal Creek Pkwy Component)  Plan Reference: PSRC Transportation 2040		King	(g) Modify or rebuild Coal Ck Pkwy I/C; add lanes NB and SB and rebuild the existing roadway half way to the 112th St interchanges in the south and all the way to I-90 in the north. Cost includes part of the 4318 widening through this segment.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/transportation/t2040">http://www.psrc.org/transportation/t2040</a>	
49	I-405 Corridor: SR 167 Interchange (SR 167 component)  Plan Reference: PSRC Transportation 2040		King	(e) Add one NB lane on SR 167 between S 180th (SW 43rd) and I-405 resulting in 4 lanes (1 HOV and 3 GP).	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/transportation/t2040">http://www.psrc.org/transportation/t2040</a>	
50	I-405 Corridor: I-5 to SR 181 Widening  Plan Reference: PSRC Transportation 2040		King	(h) Add one lane NB and SB resulting in 5 lanes (1 HOV & 4 GP) between I-5 and SR 181	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/transportation/t2040">http://www.psrc.org/transportation/t2040</a>	

## Exhibit 10.2L: Freight Unfunded Investments - Interstate

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
51	I-405 Corridor: I-5 Interchange  Plan Reference: PSRC Transportation 2040		King	(a) Reconstruct the following I-5/I-405 Interchange ramps: NB I-5 to NB I-405 (c) adds new GP direct connector flyover ramp from SB I-405 to SB I-5 (d) SB I-5 to NB I-405	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/transportation/t2040">http://www.psrc.org/transportation/t2040</a>	
52	I-405 Corridor: SR 518 Interchange  Plan Reference: PSRC Transportation 2040		King	(b) Reconstruct of the following Interchange ramps: EB SR 518 to NB I-5, (e) EB SR 518 to SB I-5	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/transportation/t2040">http://www.psrc.org/transportation/t2040</a>	
53	I-405 Corridor: I-5 Improvements  Plan Reference: PSRC Transportation 2040		King	(g) Reconstructs NB I-5 through the interchange.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/transportation/t2040">http://www.psrc.org/transportation/t2040</a>	
54	I-405 Corridor: I-90 I/C and braided ramps  Plan Reference: PSRC Transportation 2040		King	(a) Add NB I-405 to EB I-90 and (b) EB I-90 to SB I-405 braided ramps between Coal Ck Pkwy. and I-90.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/transportation/t2040">http://www.psrc.org/transportation/t2040</a>	
55	I-405 Corridor: I-90/I-90 HOV/HOT connections  Plan Reference: PSRC Transportation 2040		King	WB I-90 to NB I-405 Freeway to Freeway HOV/HOT Connection	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/transportation/t2040">http://www.psrc.org/transportation/t2040</a>	

## Exhibit 10.2L: Freight Unfunded Investments - Interstate

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
56	I-405 Corridor: I-90 to SR 520 (SE 8th braided ramps)  Plan Reference: PSRC Transportation 2040		King	(c) Construct NB and SB braided crossings for the on and off ramps on the north legs of the SE 8th St Interchange.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/transportation/t2040">http://www.psrc.org/transportation/t2040</a>	
57	I-405 Corridor: NE 10th I/C  Plan Reference: PSRC Transportation 2040		King	(b) Includes the EB SR 520 off-ramp to NE 10th.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/transportation/t2040">http://www.psrc.org/transportation/t2040</a>	
58	I-405 Corridor: NE 8th to SR 520 - SB Braided Ramps  Plan Reference: PSRC Transportation 2040		King	(a) Construct SB braided ramp to separate SB I-405 to NE 8th and EB SR 520 to NE 10th traffic from EB SR 520 to SB I-405 traffic.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/transportation/t2040">http://www.psrc.org/transportation/t2040</a>	
59	I-405 Corridor: I-405 interchange at 132nd St. NE  Plan Reference: PSRC Transportation 2040		King	Build half diamond interchange to and from north at the NE 132nd St.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/transportation/t2040">http://www.psrc.org/transportation/t2040</a>	
60	I-405 Corridor: SR 520 to SR 522  Plan Reference: PSRC Transportation 2040		King	(e) SR 522: Add SB climbing auxiliary lane through NE 160th Interchange to SR 522.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/transportation/t2040">http://www.psrc.org/transportation/t2040</a>	

## Exhibit 10.2L: Freight Unfunded Investments - Interstate

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
61	I-405 Corridor: SR 520 to SR 522 (SR 522 I/C and HOV direct access)  Plan Reference: PSRC Transportation 2040		King	(f) SR 522 Interchange Rebuild: Reconfigure and rebuild the SR 522 Interchange. The existing SR 522 WB to I-405 SB ramp will remain. Include HOV direct connection in center.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/transportation/t2040">http://www.psrc.org/transportation/t2040</a>	
62	I-405 Corridor: SR 520 to SR 522 (NB Aux lane NE 160th to NE 195th)  Plan Reference: PSRC Transportation 2040		King	(g) Add NB auxiliary lane extending from NE 160th to NE 195th.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/transportation/t2040">http://www.psrc.org/transportation/t2040</a>	
63	I-405 Corridor: SR 522 to I-5 (widening between NE 195th St to SR 527)  Plan Reference: PSRC Transportation 2040		Snohomish	(a) Add 2 lanes NB and SB, except 1 lane NB between NE 195th St. and SR 527 where NB lane previously built, resulting in 5 lanes (1 HOV & 4 GP or 2 HOV & 3 GP) in each direction. Includes the 4 ft. managed lane buffer.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/transportation/t2040">http://www.psrc.org/transportation/t2040</a>	

## Exhibit 10.3L: Freight Unfunded Investments - Highway

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
64	US 2 and SR 285 North Wenatchee Improvements	Wenatchee Legislative Districts: 12	Chelan	Completes a series of projects that constructs mobility improvements along US 2 and SR 285 in north Wenatchee; including improvements to the intersection of US 2/SR 285/Easy Street and creating a new alignment through north Wenatchee parallel to SR 285.		For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>				
65	Title: US 2 Corridor and Connections to Wenatchee  Plan Reference: North Wenatchee Transportation Master Plan	US 2 / SR 285 / Easy Street interchange and intersection in the Old Station area of Wenatchee	Chelan	The interchange of US 2/SR 285 will be reconstructed to allow eastbound traffic on US 2 to connect directly to the Odabashian Bridge, eliminating the existing loop ramp. In addition, the traffic signal at US 2/Easy Street would be eliminated to allow US 2 to operate as a fully limited-access freeway between Monitor and SR 28 in Douglas County. Easy Street would be reconstructed to cross over US 2 to maintain connectivity between the Olds Station and Sunnyslope subareas. New interchange ramps and local circulation roadways would be constructed to maintain capacity and connectivity between US 2 and the City of Wenatchee, as well as to/from the Olds Station and Sunnyslope subareas.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	This interchange project reduces delay that now occurs at the at-grade fully directional intersection of Easy Street and US 2 and would allow freight to travel in a free flow environment east and west bound on US 2 without having to use the existing loop ramp or go through the Easy Street/US 2 intersection. The project removes the existing loop ramp that currently needs to be utilized for freight to continue eastbound on US 2 across the Columbia River into Douglas County. The loop ramp is slow speed and a tight radius making it difficult for large trucks to maneuver. Freight traveling north out of Wenatchee on SR 285 must utilize the US 2 / Easy Street intersection in order to east bound into Douglas County. This provides significant delay for freight travelling through this area on US 2/97 eastbound and north to eastbound on SR 285.  <b>(Additional Information Available)</b>	Wenatchee Valley Transportation Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  North Wenatchee Transportation Master Plan at: <a href="http://confluenceparkway.org/files/Transportation%20Master%20Plan_Public%20Review%20DRAFT.pdf">http://confluenceparkway.org/files/Transportation%20Master%20Plan_Public%20Review%20DRAFT.pdf</a>	X
66	US 2 Monroe Bypass	Monroe Legislative Districts: 39	Snohomish	Multi-stage project to increase mobility and safety in the corridor.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Constructs a two lane limited access highway that terminates north of the Kelsey shopping center.	WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
67	US 2 Everett trestle improvements	Everett Legislative Districts: 38, 44	Snohomish		<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Modify the US 2/SR 204 interchange to add capacity to existing ramps.	WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
68	SR 3/SR 304 Bremerton interchange improvement	Bremerton Legislative Districts: 26	Kitsap	Widen SR 3 to 2 lanes and extend the SR 304 southbound merge onto SR 3.		For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>				
69	SR 3 @ SR 304 I/C - Ramp Modification	Begin Location:  End Location:	Kitsap	Extend SB SR 3 two-lanes through SR 304 Interchanges and adjust SR 304 SB ramp to merge instead of add lane.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf">http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf</a>	

## Exhibit 10.3L: Freight Unfunded Investments - Highway

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
70	SR 3 Gorst intersection improvements	Gorst  Legislative Districts: 35	Kitsap	Construct improvements at the intersection of SR 3 and Sam Christopherson Avenue. (Roundabout)	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
71	SR 3 @ SR 16 Interchange (Gorst)	Begin Location:  End Location:	Kitsap	Eliminate lane drop on SR 16 to northbound SR 3 by extending the lane north of the railroad bridge and extending the northbound SR 3 on-ramp.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf">http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf</a>	
72	SR 3/Belfair Bypass - New Alignment	Belfair  Legislative Districts: 35	Mason	Constructs a new alignment around Belfair to reduce congestion and improve safety.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Constructs a shorter bypass from vicinity of No. Mason HS to Log Yard Road and has low speed connections with SR 3.  Constructs the "full length" bypass from the SR 302 intersection to Lake Flora Road intersection. This project includes high speed connections.	WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
73	SR 9 corridor	South of Snohomish  Legislative Districts: 01, 44	Snohomish	Multi-stage improvements that widen the SR 9 corridor and make selected intersection improvements to enhance mobility and safety. This project includes elements of unfunded Nickel or TPA project scope.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Continues improvements on SR 9 by widening between 176th and SR 96 and provides additional selected intersection improvements in the corridor. Constructs improvements at the SR 204 interchange.  In addition to the widening between 176th and SR 96 and the SR 204 improvements, widen between Marsh Road and the 2nd Street interchange.	WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
74	US 12 near Walla Walla--complete corridor widening	Touchet  Legislative Districts: 16	Walla Walla		<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Expands on prior corridor investments by continuing widening west from earlier projects by constructing a new alignment between Nine Mile Hill and Frenchtown.  Tier 3 - In addition to the widening between Nine Mile Hill and Frenchtown, this investment would complete the final phase of the corridor by widening between Nine Mile Hill and Wallula Junction.	WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	

## Exhibit 10.3L: Freight Unfunded Investments - Highway

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
75	US 12/Old Naches Highway	Yakima Legislative Districts: 14, 15	Yakima		<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input checked="" type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Constructs a new interchange to remove at-grade signalized intersection and adjacent access points improving mobility and safety.	WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
76	SR 14 Vancouver - add lanes	Vancouver Legislative Districts: 17, 49	Clark	Construct auxiliary lanes between I-205 and 164th avenue.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
77	Title: SR14—15th, 27th and 32nd Street Interchange Project  Plan Reference: Metropolitan Transportation Plan for Clark County	Begin Location: 6th Street Washougal  End Location: 32nd Street Washougal	Clark	This project is a three-phase project involving the completion of the recent improvements to HWY 14 to extend the work through Washougal, enhancing safety and providing improved access to the Port of Camas-Washougal and the City of Washougal, toward our mutual economic development goals. This includes some kind of interchange at 27th Street, with a connector to E Street including a new grade separated railroad crossing (important to add another grade separated crossing to the one other we have for safety and access, especially given the anticipated increase in freight) and ultimately improvements from there north on 32nd St/Stiles Road to an area designated for future employment development.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input checked="" type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	<p>Having an efficient transportation system into the Port's industrial park at 27th and 32nd Street will lead to less travel time, which in turn will in turn have direct cost savings to freight carriers and will reduce fuel and carbon emissions.</p> <p>The Port or the City has not completed any quantitative analysis of this area. The WSDOT Southwest Region has completed a traffic count study of this section of SR-14, but we do not have them at this time.</p> <p>By improving the efficiency of this corridor, safety, time savings and efficiency would be improved. It will allow for a better flow of traffic, access into the park, which in turn will help in the Port's marketing efforts in developing this industrial area and creating jobs.</p>	Port of Camas-Washougal	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT <input checked="" type="checkbox"/> Rail Plan	For more information including project budget please see:  Metropolitan Transportation Plan for Clark County at: <a href="http://www.rtc.wa.gov/programs/mtp/">http://www.rtc.wa.gov/programs/mtp/</a>	X
78	Title: SR 14 - Marble Road to Salmon Falls Road  Plan Reference: Skamania County Regional Transportation Plan	Begin Location: SR 14 MP 22.7 Washougal  End Location: SR 14 MP 26.4 Washougal	Skamania	Eastbound climbing lane, turn pocket, realign curves.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input checked="" type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	<p>Reducing:</p> <p>A) Travel time - A fairly miniscule time savings could collectively add up in this 4 miles stretch of highway improvements.</p> <p>B) Direct freight carrier operating cost - Increased efficiency in the upgrade truck travel could collectively add up to reduced operating costs.</p> <p>C) Diesel and carbon emissions - More efficient uphill travel could collectively result in slightly lower emissions. Increasing:</p> <p>D) Reliability - The proposal improvements upgrade the SR14 segment providing a more reliable platform for the use of the trucking industry.</p> <p style="color: red;">(Additional Information Available)</p>	Skamania County	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  Skamania County Regional Transportation Plan at: <a href="http://www.rtc.wa.gov/programs/#RTP">http://www.rtc.wa.gov/programs/#RTP</a>	X

## Exhibit 10.3L: Freight Unfunded Investments - Highway

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
79	SR 16 Willochet Drive interchange improvement	Gig Harbor Legislative Districts: 26	Pierce	Add ramps to existing interchange to improve safety and mobility during peak hours.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
80	SR 17 Moses Lake Intersection Improvements	Moses Lake Legislative Districts: 13	Grant		<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Widen the Stratford Road bridge and modify interchange ramps to reduce congestion.	WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
81	SR 18/I-90 intersection improvement	West of North Bend Legislative Districts: 5	King		<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Construct direct ramps between the two routes to improve traffic flow and safety. This project can be staged; westbound I-90 to westbound SR 18 is the highest priority.	WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
82	SR 20 Oak Harbor intersection improvements	Oak Harbor Legislative Districts: 10	Island		<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Construct selected intersection improvements at four intersections and widen highway to increase capacity and accommodate bike/pedestrian improvements.	WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
83	SR 20 Sedro-Woolley corridor improvements	Sedro-Woolley Legislative Districts: 39	Skagit		<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	State contribution to a series of projects totaling \$6.5M that widen SR 20 and makes intersection improvements. Provides alternate routes and connections to State Highway System. The remaining \$5M is secured by locals.	WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	

## Exhibit 10.3L: Freight Unfunded Investments - Highway

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map	
84	SR 20 Sharpes Corner intersection improvement	South of Anacortes Legislative Districts: 40	Skagit	This project includes elements of unfunded Nickel or TPA project scope.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Construct intersection improvements at Sharpes Corner and the Miller-Gibraltar intersections.  In addition to the intersection improvements, additional pedestrian improvements are constructed.	WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>		
85	SR 24 Moxee corridor widening	Moxee Legislative Districts: 15	Yakima		<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Add lanes between University Parkway and Moxee and make selected intersection improvements to improve congestion.	WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>		
86	SR 28 East Wenatchee corridor improvements	East Wenatchee Legislative Districts: 12	Douglas	Completes a series of staged projects that constructs mobility improvements along SR 28; including widening and interchange/intersection improvements along the corridor to improve mobility and safety.	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>						
87	Title: SR 28 - Junction US 2/97 to 9th Street  Plan Reference: SR 28 (Sunset Highway) Eastside Corridor Project - Final Environmental Impact Statement Final Section 4(f) Evaluation  Confluence 2030: A Strategic Transportation Plan for the Wenatchee Valley	Begin Location: ARM 0.00 East Wenatchee  End Location: ARM 3.67 East Wenatchee	Douglas	The project would construct an extension of Eastmont Avenue from the intersection of SR 2/97 and Sunset Highway to Badger Mountain Road and Sunset Highway would be widened to five lanes with a divided median and U-turn intersections.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input checked="" type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	The proposed project will reduce travel times, which will result in a reduction in carrier operating cost, and diesel and carbon emissions.  The project will also increase safety by reducing left turns to only at intersections and provide economic output by providing access to property that currently does not have access adequate for development.  <b>(Additional Information Available)</b>	Wenatchee Valley Transportation Council  North Central Regional Transportation Planning Organization	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  Confluence 2030: A Strategic Transportation Plan for the Wenatchee Valley at: <a href="http://www.wvtpc.org/mtp/">http://www.wvtpc.org/mtp/</a>		
88	US 97 Blewett Pass - truck climbing lanes	Blewett Pass Legislative Districts: 12, 13	Chelan-Kittitas		<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input checked="" type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Constructs truck climbing lanes and passing lanes in selected locations to improve congestion due to slow truck movements on steep grades.	WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>		

## Exhibit 10.3L: Freight Unfunded Investments - Highway

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
89	Title: Highway 99 Corridor  Plan Reference: TIP	Begin Location: NE Highway 99/City of Vancouver Limits Lat: 45.66 / Long: -122.66 Vancouver  End Location: NE Highway 99/NE 139th Street Lat: 45.71 / Long: -122.65 Vancouver	Clark	The NE Highway 99 Corridor (T-2) will be improved to 4-lane principal arterial standard with center turn lane/median, bike lanes, and sidewalks. Multimodal improvements will be implemented throughout the corridor. The narrow and low Clark County Railroad Bridge over Highway 99 just north of Ross Street will be replaced to accommodate truck traffic. Highway 99 is an alternate route to Interstate 5 and connects to both Interstates 5 and 205, which are major truck freight routes. Construction will be phased.	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	1. Reducing: A. Travel time Travel time will be improved by providing incident management via ITS reader boards that inform the public of an accident and directs them to Highway 99. Eliminating the bridge clearance constraint will also allow trucks to use this route. And trucks will be able to travel continuously along Highway 99 without having to backtrack onto I-5 or to surrounding substandard truck routes. B. Direct freight carrier operating cost These improvements will directly reduce freight operating cost by allowing continuous travel along the Highway 99 Corridor without having to backtrack due to the height restriction at the Clark County Railroad Bridge. <span style="color: red;">(Additional Information Available)</span>	Clark County	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  TIP at: <a href="http://www.clark.wa.gov/TIP">www.clark.wa.gov/TIP</a>	X
90	SR 99 Lynnwood area widening	Lynnwood  Legislative Districts: 21, 32	Snohomish		<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Widen SR 99 to improve mobility and route continuity between 148th and Airport Road.	WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
91	US 101 Sequim intersection improvements	Sequim  Legislative Districts: 24	Clallam	Constructs improvements at the Simdars interchange to provide full access in both directions of US 101.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
92	US 101/Dawley Rd Vic to Blyn Highway	Sequim  Legislative Districts: 24	Clallam	Constructs a climbing lane to allow for improved mobility and safety around slow moving vehicles.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input checked="" type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	

## Exhibit 10.3L: Freight Unfunded Investments - Highway

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
93	Title: US 101 Intelligent Transportation Systems (ITS)  Plan Reference: Cowlitz-Wahkiakum Council of Governments Metropolitan & Regional Transportation Plan 2009-2029  Grays Harbor Regional TIP WA-00268	Begin Location: US 12 at Elma; US 101 Aberdeen; SR 109 Hoquiam Elma  End Location: US 12 at Aberdeen; US 101 Cosmopolis & US 101 Hoquiam; SR 109 Hoquiam Aberdeen/Cosmopolis/Hoquiam	Grays Harbor	Long Range Plan: Install ITS infrastructure at strategic locations to alleviate congestion, improve safety and provide driver information.  TIP: Install ITS infrastructure at strategic locations to alleviate congestion, improve safety, and provide driver information. Including but not limited to: variable message signs, closed circuit television cameras, highway advisory radio, data stations, road/weather information systems, and photo detection cameras.	<input type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Providing ITS to both freight and passenger vehicle traffic will reduce delay, alleviate congestion and reduce lost productivity and increase economic efficiency. Drivers can be alerted to possible delays due to train traffic or increased vehicle traffic in the region (such as during clam tides) and be directed to alternate routes. Utilization of ITS will reduce congestion and delays along the US 12/US101/SR 109 corridor through Aberdeen, Cosmopolis, and Hoquiam.  <span style="color: red;">(Additional Information Available)</span>	Grays Harbor Council of Governments	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  Cowlitz-Wahkiakum Council of Governments Metropolitan & Regional Transportation Plan 2009-2029 at: <a href="http://www.cwcog.org/documents/CWCOG2009finalMRTP_wholedocument.pdf">http://www.cwcog.org/documents/CWCOG2009finalMRTP_wholedocument.pdf</a>	
94	US 101/Gardiner Vicinity	Gardiner  Legislative Districts: 24	Jefferson	Constructs a climbing lane to allow for improved mobility and safety around slow moving vehicles.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input checked="" type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
95	SR 162 Sumner to Orting widening	Sumner  Legislative Districts: 02, 31	Pierce	Widen SR 162 to 2 lanes in each direction between SR 410 in Sumner and 96 Street E near Alderton, including widening the Puyallup River bridge.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
96	SR 167 Auburn to Puyallup HOT lane extension	Auburn-Sumner-Puyallup  Legislative Districts: 25, 47	King-Pierce		<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Extends the HOT lanes from 8th St E (Jovita Blvd) on SR 167 northbound lanes to 15th St SW in Auburn  Completes the extension of the HOT lanes in both directions to the SR 410/SR 512 interchange.	WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
97	SR 167  Plan Reference: PSRC Transportation 2040		King	Construct auxiliary lanes between interchanges.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/transportation/t2040">http://www.psrc.org/transportation/t2040</a>	

## Exhibit 10.3L: Freight Unfunded Investments - Highway

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
98	SR 167  Plan Reference: PSRC Transportation 2040		King	Add 1 GP lane each direction from 15th St. NW to S. 180th St.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/transportation/t2040">http://www.psrc.org/transportation/t2040</a>	
99	SR 167 Completion	Fife-Edgewood  Legislative Districts: 25, 31	Pierce	Constructs a new alignment between SR 509 in Tacoma and SR 512 in Puyallup; including two lanes in each direction, and new interchanges at I-5, Valley Ave, and SR 161.  As part of the Puget Sound Gateway Project, this investment is complemented by investments shown in the "SR 509 Completion" and "I-5 Tacoma to Everett mobility improvement" projects.	Constructs a new alignment between SR 509 in Tacoma and SR 512 in Puyallup; including the full build-out of the facility between SR 509 and I-5, a new interchange at I-5, and one lane in each direction between I-5 and SR 512 (including 2 interchanges on this segment).  Full build out of the project to include two lanes in each direction over the entire corridor and HOV lanes in each direction between I-5 and Puyallup. All other interchange modifications and I-5 improvements are the same as the reduced scope.				For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
100	Title: SR 167 Corridor Completion Phase 1  Plan Reference: PSRC: Transportation 2040	Begin Location:  End Location:	Pierce	Phase I includes one lane in each direction from the existing SR167 terminus at the Meridian interchange in Puyallup to I-5. There will be two lanes in each direction from the I-5/SR 167 Extension to the SR 167 / 54th Avenue.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf">http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf</a>	
101	Title: SR 167 HOV lane completion	Begin Location:  End Location:	Pierce	Extend HOV/HOT Lanes from current termini to SR 410 in Sumner.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf">http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf</a>	
102	US 195 Hatch Road to Medowlane Road - new interchange	South of Spokane  Legislative Districts: 6	Spokane	Construct a new interchange and associated frontage road to improve safety and mobility in the corridor.		For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>				
103	Title: US 195 - Hatch Rd. I/C and Meadow Lane I/C  Plan Reference: HORIZON 2040: The Metropolitan Transportation Plan for the Spokane Metropolitan Planning Area			Construct new interchange(s) and associated frontage road to improve safety and mobility in the corridor.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	Mobility improvements; operate efficiently; safety; economic corridor/freight enhancements.	Spokane Regional Transportation Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  HORIZON 2040: The Metropolitan Transportation Plan for the Spokane Metropolitan Planning Area at: <a href="http://www.srtc.org/mtp_2040.html">http://www.srtc.org/mtp_2040.html</a>	

## Exhibit 10.3L: Freight Unfunded Investments - Highway

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
104	Title: US 195/Spring Flat Creek	Colfax	Whitman	Replaces and existing aging structure to preserve the functionality of the corridor and extend the asset life.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
105	US 395 North Spokane corridor	Spokane	Spokane	Completes the construction of a new corridor between Francis and I-90. Completes the BNSF rail realignment. Builds interchanges at Wellesley and Trent Avenues. Makes improvements on I-90 to accommodate the connection with the new corridor.		For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>				
106	Title: NSC - Spokane River to Francis Ave. Phase 1  Plan Reference: HORIZON 2040: The Metropolitan Transportation Plan for the Spokane Metropolitan Planning Area			Construct new 4 lane section between Francis and the Spokane River including railroad realignment and Wellesley I/C. Also includes intersection improvements on Wellesley.	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	The North Spokane Corridor will improve freight movement through Spokane; reduce delays; create and improve north/south bike/pedestrian movements and safety.	Spokane Regional Transportation Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  HORIZON 2040: The Metropolitan Transportation Plan for the Spokane Metropolitan Planning Area at: <a href="http://www.srtc.org/mtp_2040.html">http://www.srtc.org/mtp_2040.html</a>	
107	Title: NSC - Spokane River to Francis Phase 2  Plan Reference: HORIZON 2040: The Metropolitan Transportation Plan for the Spokane Metropolitan Planning Area			Construct full interchanges and roadway Phase 2	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	The North Spokane Corridor will improve freight movement through Spokane; reduce delays; create and improve north/south bike/pedestrian movements and safety.	Spokane Regional Transportation Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  HORIZON 2040: The Metropolitan Transportation Plan for the Spokane Metropolitan Planning Area at: <a href="http://www.srtc.org/mtp_2040.html">http://www.srtc.org/mtp_2040.html</a>	
108	Title: NSC - Trent Ave. to Spokane River Phase 1  Plan Reference: HORIZON 2040: The Metropolitan Transportation Plan for the Spokane Metropolitan Planning Area			Construct interchange and roadway for half of facility	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	The North Spokane Corridor will improve freight movement through Spokane; reduce delays; create and improve north/south bike/pedestrian movements and safety.	Spokane Regional Transportation Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  HORIZON 2040: The Metropolitan Transportation Plan for the Spokane Metropolitan Planning Area at: <a href="http://www.srtc.org/mtp_2040.html">http://www.srtc.org/mtp_2040.html</a>	
109	Title: NSC - Interstate 90 North Access Connection Phase 1  Plan Reference: HORIZON 2040: The Metropolitan Transportation Plan for the Spokane Metropolitan Planning Area			Construct interchange and roadway for half of facility	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	The North Spokane Corridor will improve freight movement through Spokane; reduce delays; create and improve north/south bike/pedestrian movements and safety.	Spokane Regional Transportation Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  HORIZON 2040: The Metropolitan Transportation Plan for the Spokane Metropolitan Planning Area at: <a href="http://www.srtc.org/mtp_2040.html">http://www.srtc.org/mtp_2040.html</a>	

## Exhibit 10.3L: Freight Unfunded Investments - Highway

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
110	Title: NSC - Collector Distributor System Phase 1  Plan Reference: HORIZON 2040: The Metropolitan Transportation Plan for the Spokane Metropolitan Planning Area			Reconstruction of I-90 with C/D system Phase 1	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	The North Spokane Corridor will improve freight movement through Spokane; reduce delays; create and improve north/south bike/pedestrian movements and safety.	Spokane Regional Transportation Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  HORIZON 2040: The Metropolitan Transportation Plan for the Spokane Metropolitan Planning Area at: <a href="http://www.srtc.org/mtp_2040.html">http://www.srtc.org/mtp_2040.html</a>	
111	Title: NSC - Collector Distributor System Phase 2  Plan Reference: HORIZON 2040: The Metropolitan Transportation Plan for the Spokane Metropolitan Planning Area			Reconstruction of I-90 with C/D system Phase 2	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	The North Spokane Corridor will improve freight movement through Spokane; reduce delays; create and improve north/south bike/pedestrian movements and safety.	Spokane Regional Transportation Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For information about project budget please see:  HORIZON 2040: The Metropolitan Transportation Plan for the Spokane Metropolitan Planning Area at: <a href="http://www.srtc.org/mtp_2040.html">http://www.srtc.org/mtp_2040.html</a>	
112	Title: NSC - Trent Ave. to Spokane River Phase 2  Plan Reference: HORIZON 2040: The Metropolitan Transportation Plan for the Spokane Metropolitan Planning Area			Construct interchange and roadway for half of facility	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	The North Spokane Corridor will improve freight movement through Spokane; reduce delays; create and improve north/south bike/pedestrian movements and safety.	Spokane Regional Transportation Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  HORIZON 2040: The Metropolitan Transportation Plan for the Spokane Metropolitan Planning Area at: <a href="http://www.srtc.org/mtp_2040.html">http://www.srtc.org/mtp_2040.html</a>	
113	Title: US 395 from Half Moon Road to Stevens County Line  Plan Reference: HORIZON 2040: The Metropolitan Transportation Plan for the Spokane Metropolitan Planning Area	Begin Location: Half Moon Road (approx. Lat 47.860489 Lon 117.421127)  End Location: Stevens County Line (approx. Lat 47.986297 Lon - 117.536217)	Spokane	Construct passing lanes.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	The proposed US 395 from Half Moon Rd to Stevens Co Line project will improve performance by reducing travel time to/from Interstate 90 and important regional freight facilities. Reducing the delay due to truck freight traversing congested roads will improve air quality while increasing reliability and intermodal connectivity, ensuring a state of good repair and addressing safety issues.	Spokane Regional Transportation Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  HORIZON 2040: The Metropolitan Transportation Plan for the Spokane Metropolitan Planning Area at: <a href="http://www.srtc.org/mtp_2040.html">http://www.srtc.org/mtp_2040.html</a>	X

## Exhibit 10.3L: Freight Unfunded Investments - Highway

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
114	Title: Oregon Avenue (SR 397, I-182/SR-395 to Ainsworth Street)  Plan Reference: Six Year Transportation Improvement Plan	Ainsworth Avenue to US 395 I-182/US 395/US 12  Begin Location: 46.14.54.61 -119.04.55.62 Pasco  End Location: 46.13.06.75 -119.04.49.06 Pasco	Franklin	The Oregon Avenue (SR 397) Corridor is located between Ainsworth Avenue on the south and the US 395/I-182/US 12 interchange to the north. The Oregon Avenue Corridor, including Ainsworth Avenue and 10th Avenue serves as a critical north-south link, connecting the City with one of three regional Columbia River crossings, and providing a crucial connection for the Port of Pasco's "Big Pasco" marine terminals/rail yards to the Interstate and airport. The City of Pasco intends to widen Oregon Avenue to include a two-way left turn lane, and provide for a gateway treatment near the Port of Pasco property at the Oregon Avenue and Ainsworth Avenue intersection.  <span style="color: red;">(Additional Information Available)</span>	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	1. Reducing: A. Travel time- The proposed improvements will include addition of a center left turn lane that provide safer left turn movements and by removing the turning trucks and car from through movement lanes. Additional three new traffic signal and significant improvements to the existing traffic signals that will provide less congestion and safety that will reduce travel time. B. Direct freight carrier operating cost- By proposed improvement it will reduce congestion and delay, it will improve travel time along the corridor. Therefore, reduced time loss thus reducing the operating cost and fuel consumptions C. Diesel and carbon emissions- By reducing the current and future delays as proposed in the improvement plans for the corridor, it will reduce Diesel and carbon emission  <span style="color: red;">(Additional Information Available)</span>	City of Pasco	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  Six Year Transportation Improvement Plan at: <a href="http://www.bfcog.us/2011_RTP_APPENDIX%20H_Rev1.pdf">http://www.bfcog.us/2011_RTP_APPENDIX%20H_Rev1.pdf</a>	X
115	Title: SR 432 Rail and Highway Realignment Improvements Project  Plan Reference: Cowlitz-Wahkiakum Council of Governments Metropolitan & Regional Transportation Plan 2009-2029	Begin Location: SR 432/MP 2.16 SR 433/MP 0.79 SR 411/MP 0.00 Longview  End Location: SR 432/7.61 SR 433/0.94 SR 411/0.04 Longview	Cowlitz	Rail and highway improvements. Short Term Elements: Preliminary Analysis, Final Design, environmental engineering for rail and hwy. Long Term: ROW and CN - Single Point Urban Interchange and Rail Improvements.	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input checked="" type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements  <input checked="" type="checkbox"/> Other; Highway traffic, businesses, economic development, bi-state travel and the local communities will not be impacted	When unit train activity goes west of SR 432/433 a bi-state T-1 (SR 432 is a highway of statewide significance) and a regional economic engine. With the at grade crossing at SR 432/433, the region (including Oregon) will experience severe delay and congestion, "just in time delivery will be unreliable, which will translate into lost productivity, economic efficiency, resiliency (freight corridor gridlock), poor intermodal connectivity and an adverse environmental and community impacts of the freight system. Safety will also be highly impacted, as emergency vehicles from Oregon will not be able to get to their closest hospital (Longview, WA) in an expeditious manner.	Cowlitz-Wahkiakum Council of Governments	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT <input checked="" type="checkbox"/> Rail Plan	For more information including project budget please see:  Cowlitz-Wahkiakum Council of Governments Metropolitan & Regional Transportation Plan 2009-2029 at: <a href="http://www.cwcog.org/documents/CWCOG2009finalMRTP_wholedocument.pdf">http://www.cwcog.org/documents/CWCOG2009finalMRTP_wholedocument.pdf</a>	
116	SR 500 Vancouver - construct interchange	Vancouver  Legislative Districts: 49	Clark	Remove at grade intersections, replacing the intersection at 42nd avenue with a bridge over SR 500 and constructing and interchange at 54th avenue.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
117	SR 509 Completion	SeaTac-Des Moines-Kent-Federal Way  Legislative Districts: 33	King	Extends SR 509 south from SeaTac to I-5. The ultimate project includes two lanes on SR 509 and interchanges at S 188th and S 24th (allows new south access road to Sea-Tac airport), added SB lanes on I-5 to 320th in Federal Way, and improvements on I-5 in the vicinity of SR 516 to accommodate the SR 509 with connections to I-5 and local routes.  As part of the Puget Sound Gateway Project, this investment is complemented by investments shown in the "SR 167 Completion" and "I-5 Tacoma to Everett mobility improvement" projects.	Connects SR 509 south from SeaTac to I-5; including one lane in each direction between S 188th and S 24th/28th Avenue, two lanes in each direction between S24th/28th Avenue and I-5, interchanges at S 188th and S 24th, and improvements on I-5 in the vicinity of SR 516 to accommodate the SR 509 with connections to I-5 and local routes. Evaluation of conversion of I-5 HOV lanes to Express Toll Lanes associated with the Puget Sound Gateway project is underway.  Full build out of the project to include two lanes in each direction over the entire length of SR 509. Includes two SB lanes on I-5 to 272nd Street and one SB land to 320th Street. All other interchange modifications and I-5 improvements are the same as the reduced scope.  For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>					

## Exhibit 10.3L: Freight Unfunded Investments - Highway

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
118	SR 509 Extension (with I-5), Phase 1  Plan Reference: PSRC Transportation 2040		King	SR 509 Connection and I-5 Freight Mobility Project Phase 1 includes one lane in each direction between S 188th Street and S 24th/26th Ave, and two lanes in each direction between S 24th/26th Ave and I-5 with both GP & HOV/express toll lane connections to I-5, a full diamond interchange at SR509/S 188th Street, a half diamond interchange at SR 509/S 24th Ave to provide access to the airport via S 24/26th Ave and an improved air cargo road from S 188th Street to the airport, and a direct access to I-5 from the Kent Valley via S 228th Street and reconstruction of the SR 516 interchange. On I-5, Phase 1 also includes adding SB auxiliary lane from the extension to S 272nd St and NB auxiliary lane from the SR 516 Interchange to the extension, converting the existing I-5 HOV lanes to ETL and the upgrading inside shoulders as ETL during peak periods from the SR 509 Connection to Federal Way.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/transportation/t2040">http://www.psrc.org/transportation/t2040</a>	
119	I-5/SR 512 Lakewood interchange improvements	Lakewood  Legislative Districts: 29	Pierce	Selected improvements in the vicinity of the SR 512 interchange to improve mobility and relieve congestion.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Constructs short term improvements to address congestion at the SR 512 interchange; including auxiliary lanes between NB I-5 Bridgeport Way and EB SR 512 and NB I-5 between SR 512 and 84th, a SB I-5 flyover ramp to SR 512-Steele Street, and WB SR 512 channelization and signing.  Tier 2 - In addition to the short term improvements, this investment rebuilds the interchange to improve traffic movements between I-5 and SR 512.	WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
120	Title: SR 512/SR 7 Interchange - Mobility	Begin Location:  End Location:	Pierce	Construct a two lane eastbound off-ramp to SR 7.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf">http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf</a>	
121	SR 512/Canyon Rd Interchange EB & WB Mobility	Begin Location:  End Location:	Pierce	Construct a two lane eastbound and westbound off-ramps to Canyon Road.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf">http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf</a>	
122	SR 512/94th Ave WB Ramps to SR 161 - Widening	Begin Location:  End Location:	Pierce	Widen the westbound off ramp to SR 161 to two lanes, widen the eastbound on ramp from SR 161 to two lanes, widen the SR 512/SR 161 under-crossing from two to six lanes and extend the westbound climbing lane through interchange to tie in with the westbound on-ramp from 94th Ave. SE to SR 512.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf">http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf</a>	

## Exhibit 10.3L: Freight Unfunded Investments - Highway

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map		
123	SR 512	Begin Location: End Location:	Pierce	Construct eastbound and westbound auxiliary lanes from Meridian to Pioneer with two lane offramps at each Interchange.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf">http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf</a>			
124	Title: SR 516 - Jenkins Creek to 185th Place SE  Plan Reference: City of Covington Comprehensive Plan	Begin Location: 47° 21' 29.00" N, 122° 06' 14" W Covington  End Location: 47° 21' 29.00" N, 122° 05' 39" W Covington	King	The project will remove a critical choke point and barrier in the transportation network in and around Covington. This choke point on SR 516 is a two lane 24' wide pavement section with no shoulders. This roadway section currently experiences long delays and congestion because the current section is the beginning of two lanes east of SR 18. The two lanes carry approximately 26,000 vehicles per day. Traffic frequently backs up more than one half mile from the east termini of the project. The proposed project will widen a portion of the two lane section and extend four lanes east approximately one half mile reducing delays, easing congestion and creating a more reliable transportation facility.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	The proposed project will reduce travel time for this portion of the state freight system. Freight carrier operating costs may be reduced by the decreased delay and congestion. This section of roadway currently functions at a LOS F with frequent delays to commuters as well as freight (this is a T-2 facility). The project would include 2 GP (one lane in each direction) that would reduce congestion and improve travel times and reliability. SR 516 is a critical east-west route that serves not only Covington, but Maple Valley and Black Diamond and connects to the regional center and MIC in Kent as well as SR 18 and SR 167.	City of Covington	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  City of Covington Comprehensive Plan at: <a href="http://www.covingtonwa.gov/covington/2011_FINAL_Ch_5_Transportation_Element.pdf">http://www.covingtonwa.gov/covington/2011_FINAL_Ch_5_Transportation_Element.pdf</a>	X		
125	SR 518 Des Moines interchange improvement	Des Moines  Legislative Districts: 33	King	<p style="text-align: center;">Constructs an EB off ramp at the Des Moines Memorial Drive.</p> <p style="text-align: center;">In addition to the EB off ramp, rebuilds the existing interchange into a full access interchange to the Northeast Redevelopment Area and Des Moines Memorial Drive.</p> <p style="text-align: center;">For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a></p>								
126	SR 518/Des Moines Memorial Drive Vicinity - I/C Improvements  Plan Reference: PSRC Transportation 2040		King	Reconstruct the existing half diamond interchange at Des Moines Memorial Drive. Phase 1 includes adding a east bound off ramp from SR 518 to Des Moines Memorial Drive. Phase 2 includes adding a westbound off- ramp from SR 518 to northbound SR 509 that div	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/transportation/t2040">http://www.psrc.org/transportation/t2040</a>			
127	SR 520 Seattle Corridor Improvements - west end	Seattle  Legislative Districts: 43	King	Completes corridor improvements between I-5 and the West High Rise to address congestion and safety needs of the corridor	<p style="text-align: center;">Continues improvements to the corridor by replacing the west approach south bridge. This investment assumes that the west approach north bridge is fully funded through existing budget and finance mechanisms.</p> <p style="text-align: center;">In addition to the west approach south bridge, this investment would replace the portage bay structures. This investment would address the highest priority safety issues, but not address all congestion improvements needed in the corridor.</p> <p style="text-align: center;">For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a></p>							

## Exhibit 10.3L: Freight Unfunded Investments - Highway

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
128	SR 520  Plan Reference: PSRC Transportation 2040		King	Construct new six lane connection between I-5 and Montlake Blvd. This includes reconstruction of the Portage Bay Bridge. Construct a westbound to southbound freeway-to-freeway Core HOV Connection at the I-5/SR520 interchange.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/transportation/t2040">http://www.psrc.org/transportation/t2040</a>	
129	SR 520 Bellevue - Redmond corridor improvements - east end	Bellevue-Redmond  Legislative Districts: 41, 48	King	Constructs improvements at the 148th Ave NE interchange and reconstructs the 124th Ave NE interchange to the Master Plan configuration, improving access to Bellevue and Redmond off the SR 520 corridor.  In addition to improvements at the 124th and 148th interchanges, constructs flyover ramps connecting the express toll lanes on I-405 to the HOV lane on SR 520 with access improvements to downtown Bellevue. Evaluates conversion of SR 520 HOV lane to Express Toll Lane east of I-405 to Redmond.  For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>			Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/transportation/t2040">http://www.psrc.org/transportation/t2040</a>	
130	Bel-Red Regional Connectivity - SR 520 @ 124th I/C  Plan Reference: PSRC Transportation 2040		King	Pending Interchange Justification effort currently underway. Upgrade the interchange to provide additional access to and from the east and construct an auxiliary lane each direction between 124th and 148th Ave. NE.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/transportation/t2040">http://www.psrc.org/transportation/t2040</a>	
131	SR 520 @ 148th Ave NE I/C Vicinity - I/C Improvements  Plan Reference: PSRC Transportation 2040		King	Provide 2nd eastbound grade separated off ramp access to the east of 148th Ave NE. Improve interchange ped and bike facilities along 148th Ave NE.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/transportation/t2040">http://www.psrc.org/transportation/t2040</a>	
132	SR 520 HOV to HOT  Plan Reference: PSRC Transportation 2040		King	Convert HOV lanes to HOT lanes	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/transportation/t2040">http://www.psrc.org/transportation/t2040</a>	

## Exhibit 10.3L: Freight Unfunded Investments - Highway

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
133	SR 520 Eastbound Auxiliary Lane: NE 148th Ave to NE 40th St.  Plan Reference: PSRC Transportation 2040		King	Construct a auxiliary lane eastbound between NE 148th Ave to NE 40th St.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Puget Sound Regional Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/transportation/t2040">http://www.psrc.org/transportation/t2040</a>	
134	SR 522 Kenmore to Monroe corridor - complete corridor	West of Monroe  Legislative Districts: 01, 39, 46	Snohomish	Completes the widening of SR 522 between Woodinville and Monroe by adding a lane in each direction between Paradise Lake Rd and the Snohomish River, constructs a new interchange at Paradise Lake Rd, and makes selected improvements (including widening) in the Kenmore/Bothell area.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	<p>Completes the widening of SR 522 between Woodinville and Monroe by adding a lane in each direction between Paradise Lake Rd and the Snohomish River and constructs a new interchange at Paradise Lake Rd.</p> <p>Tier 2 priority - In addition to completing the widening to Monroe, widen the corridor in the Kenmore/Bothell area to provide greater route continuity, Bus Access and Transit lanes, and bike/pedestrian improvements</p>	WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
135	Title: SR 529 Highway/The Landing North Wharf Rehabilitation  Plan Reference: 2013 Capital Improvement Program	Begin Location: WMVD centerline N366594,E1302442, start project at ~62-ft left  End Location: WMVD centerline N366824	Snohomish	Replacement of piling/stringers/planking and bulkhead structure at the Port of Everett's Landing North Wharf to maintain structural integrity of SR 529 (W. Marine View Drive).	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	This project is critical to keep Highway 529 safe, secure and in a state of good repair. In April 2006, a condition assessment and report was performed by Moffatt & Nichol Engineers that determined the superstructure and upper bulkhead were found to be in "good" condition. However, the substructure (i.e., support piles) was found to be in "fair" condition, and the lower bulkhead was found to be in "worn" condition with major repair or replacement being recommended.	Port of Everett	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input checked="" type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  Capital Improvement Program: <a href="http://www.portofeverett.com/docs/resolution_no_9766.pdf">http://www.portofeverett.com/docs/resolution_no_9766.pdf</a>	X
136	SR 531 Smokey Point corridor widening	Smokey Point  Legislative Districts: 39	Snohomish		<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Widen SR 531 between 43rd Ave NE and 67th Ave NE to relieve congestion.	WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
137	SR 539 Lynden - corridor widening to border	Lynden  Legislative Districts: 42	Whatcom	Completes corridor widening to the international boundary.		<p>Continue widening SR 539 from Birch Bay Lynden Rd to SR 546 (Badger Road)</p> <p>Tier 3 - In addition to widening to SR 546, this investment would complete the widening to the border.</p> <p>For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a></p>				

## Exhibit 10.3L: Freight Unfunded Investments - Highway

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
138	Title: SR 539/Lynden, Birch Bay-Lynden Rd to SR 546 - Widening  Plan Reference: Whatcom Transportation Plan	Begin Location: MP 10.4 Lynden  End Location: MP 12.68 Lynden	Whatcom	SR 539, Guide Meridian, is a border-crossing highway essential for local commerce and 2 international freight headed to and from the Canadian border. This section of the Guide Meridian is currently a narrow two-lane roadway with minimal shoulders. Widening SR 539 to four lanes within Lynden will eliminate a bottleneck, reduce collisions and is the last portion of a critical upgrade to the corridor extending from Bellingham to the Canadian border. SR-539 has been widened to four lanes from I-5 to the Birch Bay-Lynden Road. WSDOT will be improving and widening SR-539 in the vicinity of the US-Canada border crossing. The completion of this work will leave only the gap identified with the proposed project.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	1. Reducing: A. Travel time: The additional travel lanes will eliminate a bottleneck on SR 539 for trucks and cars, resulting in reduced travel time. This is the only practical freight route between the US and Canada for freight crossing at the Sumas/Abbotsford and the Lynden/Aldergrove ports of entry. Significant volumes of truck traffic generated within the city of Lynden also rely on SR 539. By 2030 average vehicle delay will exceed 100 seconds/vehicle (LOS F) in PM peak hours. This project will reduce delay to 27 seconds per vehicle in PM peak. B. Direct freight carrier operating cost: On average, 2100 trucks a day currently travel this section of SR 539. As volumes grow in the future, trucks will experience LOS F levels of delay during PM peak hour. <i>(Additional Information Available)</i>	City of Lynden	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  Whatcom Transportation Plan at: <a href="http://wcog.org/planning/wtp/">http://wcog.org/planning/wtp/</a>	
139	Title: 543 Border Truck Route Improvements  Plan Reference: Whatcom Transportation Plan	Begin Location: MP 0.13 Blaine  End Location: MP 0.55 Blaine	Whatcom	This project involves design and construction of improvements to the SR 543 freight corridor serving the Pacific Highway truck border crossing to include, an upgraded signal at the Boblett Street intersection, ITS elements to support dynamic lane assignment into the border, and an additional truck lane to support FAST trucks and reduce large truck queues during excessive border delays.	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input checked="" type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input checked="" type="checkbox"/> Truck-only lanes <input checked="" type="checkbox"/> Truck climbing and runaway truck lanes <input checked="" type="checkbox"/> Truck parking facilities <input checked="" type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	1. Reducing: A. Travel time: Trucks destined for the Blaine industrial area have potential wait times of up to 30 minutes to an hour at Exit 275 during long border wait times. Addition of ITS and dynamic lane assignment coupled with an additional truck lane continuing south of H Street and Boblett Street will greatly increase access efficiency into the border. B. Direct freight carrier operating cost: For much of the same reasons stated above, more efficient access to the border which reduces overall congestion to the border and industrial area will increase cycle times and reduce idle time delay. C. Diesel and carbon emissions: This project will make access through the border and industrial area more efficient reducing the number of trucks idling in queues during excessive border wait times. <i>(Additional Information Available)</i>	City of Blaine	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  Whatcom Transportation Plan at: <a href="http://wcog.org/planning/wtp/">http://wcog.org/planning/wtp/</a>	X
140	SR 704/Cross Base Highway	Tacoma  Legislative Districts: 28	Pierce	Completes a new alignment between I-5 and Spanaway Loop Road.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
141	SR 902/Spokane - interchange improvements	West of Spokane  Legislative Districts: 3, 6	Spokane	Reconstructs the SR 902 Medical Lake Interchange and provides intersection and ramp improvements at the Geiger Road interchange. These improvements facilitate improved mobility for the growing development occurring in the area adjacent and around Spokane International Airport.		For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>				

## Exhibit 10.3L: Freight Unfunded Investments - Highway

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
142	Title: Interstate 90 - Medical Lake I/C  Plan Reference: HORIZON 2040: The Metropolitan Transportation Plan for the Spokane Metropolitan Planning Area			Interchange Reconstruction - Reconstructs the SR 902 Medical Lake Interchange. These improvements facilitate improved mobility for the increasing industrial development occurring in the area.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	Mobility improvements; operate efficiently; safety; economic corridor/freight enhancements.	Spokane Regional Transportation Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  HORIZON 2040: The Metropolitan Transportation Plan for the Spokane Metropolitan Planning Area at: <a href="http://www.srtc.org/mtp_2040.html">http://www.srtc.org/mtp_2040.html</a>	
143	Title: Interstate 90 - Geiger I/C  Plan Reference: HORIZON 2040: The Metropolitan Transportation Plan for the Spokane Metropolitan Planning Area			Interchange Reconstruction - Provides intersection and ramp improvements at the Geiger Road interchange. These improvements facilitate improved mobility for the increasing industrial development occurring in the area.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	Mobility improvements; operate efficiently; safety; economic corridor/freight enhancements.	Spokane Regional Transportation Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  HORIZON 2040: The Metropolitan Transportation Plan for the Spokane Metropolitan Planning Area at: <a href="http://www.srtc.org/mtp_2040.html">http://www.srtc.org/mtp_2040.html</a>	
144	Title: SR 904/Betz Rd to Interstate 90  Plan Reference: HORIZON 2040: The Metropolitan Transportation Plan for the Spokane Metropolitan Planning Area	Begin Location: Interstate 90 (approx. Lat 47.564148 Lon 117.594450)  End Location: Betz Road (approx. Lat 47.507283 Lon 117.564522)  SR 904 MP 12.56 to MP 16.81	Spokane	Construct additional lanes for 5 lane roadway.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	The proposed SR904 project will improve performance by reducing travel time to/from Interstate 90 and important regional freight facilities. Reducing the delay for truck freight movement will improve air quality while increasing reliability and intermodal connectivity. The proposed SR 904 project is designed to widen existing SR 904 to 5 lanes (2 lanes in each direction with a center two way left turn lane). The SR 904 project is proposed to reduce congestion, improve traveler safety, provide additional capacity, and accommodate existing and future freight and commuter travel demands.	Spokane Regional Transportation Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  HORIZON 2040: The Metropolitan Transportation Plan for the Spokane Metropolitan Planning Area at: <a href="http://www.srtc.org/mtp_2040.html">http://www.srtc.org/mtp_2040.html</a>	

## Exhibit 10.4L: Freight Unfunded Investments - Local

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
145	Title: 1) Center Parkway (future UGA access) 2) Center Parkway Interchange  Plan Reference: Six Year Transportation Improvement Plan	Hildebrand Blvd to I-82 & I/S Center Parkway/I-82  Begin Location: Latitude 46d11'13"N Longitude 119d13'56"W Kennewick  End Location: Latitude 46d10'37"N Longitude 119d13'55"W Kennewick	Benton	1) Center Parkway (future UGA access) – New construction, City standard street, curb, gutter, sidewalk, illumination, roundabouts at Hildebrand Blvd and Ridgeline Drive, grade separation at I-82 2) Center Parkway Interchange - Interchange justification report, on/off ramps to existing structure, traffic control devices, channelization, signage.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	The capital facilities analysis for the UGA expansion noted that for the 2018 build conditions that "a new interchange at Center Parkway would significantly reduce---the mitigation required at several intersections." Three of these intersections are on US 395. It also includes the existing interchange at I-82 at Locust Grove and at I-82 and Badger Road. All of these are projected to experience LOS F conditions in both the 2018 build and 2032 full build scenarios.	City of Kennewick	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  Six Year Transportation Improvement Plan at: <a href="http://www.go2kennewick.com/go2kennewick/default.aspx?option=com_flexicontent&amp;view=items&amp;cid=306&amp;id=363&amp;Itemid=751">http://www.go2kennewick.com/go2kennewick/default.aspx?option=com_flexicontent&amp;view=items&amp;cid=306&amp;id=363&amp;Itemid=751</a>	X
146	Title: Downtown/UPRR-BNSF Grade Separation  Plan Reference: Benton-Franklin Council of Governments 2011-2032 Regional Transportation Plan	Intersection of Fruitland Street and the BNSF Stampede Pass Mainline, and the UPRR Hanford Industrial Spur.  <b>(Additional Information Available)</b>	Benton	Railway Crossing Grade Separation for the Downtown	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input checked="" type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	1. Reducing: A. Travel time ✓ B. Direct freight carrier operating cost ✓ C. Diesel and carbon emissions ✓  The project reduces idle time at the existing at-grade crossings. Current rail traffic on the BNSF mainline is 6-10 trains per day and it is anticipated that future traffic will increase to 16-22 trains per day. The UPRR industrial spur sees 1-2 trains perday. This project is approximately 0.92 miles from the US395/ SR240 junction. <b>(Additional Information Available)</b>	City of Kennewick	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  Benton-Franklin Council of Governments 2011-2032 Regional Transportation Plan at: <a href="http://www.bfcog.us/2011_RTP_APP/ENDIX%20H_Rev1.pdf">http://www.bfcog.us/2011_RTP_APP/ENDIX%20H_Rev1.pdf</a>	X
147	Title: 1) Edison Street/BNSF Grade Separation  Plan Reference: Benton-Franklin Council of Governments 2011-2032 Regional Transportation Plan	Intersection of Edison Street and the BNSF Stampede Pass Mainline  Begin Location: Latitude 46d13'08"N Longitude 119d11'30"W Kennewick  End Location: Latitude 46d13'08"N Longitude 119d11'30"W Kennewick	Benton	Railway Crossing Grade Separation	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input checked="" type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	1. Reducing: A. Travel time ✓ B. Direct freight carrier operating cost ✓ C. Diesel and carbon emissions ✓  The project reduces idle time at the existing at-grade crossing. Current rail traffic is 6-10 trains per day and it is anticipated that future traffic will increase to 16-22 trains per day. This project is approximately 0.68 miles from SR240. <b>(Additional Information Available)</b>	City of Kennewick	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  Plan Reference: Benton-Franklin Council of Governments 2011-2032 Regional Transportation Plan at: <a href="http://www.bfcog.us/2011_RTP_APP/ENDIX%20H_Rev1.pdf">http://www.bfcog.us/2011_RTP_APP/ENDIX%20H_Rev1.pdf</a>	X
148	Title: Sellards Road; SR221 to 2 Miles East of SR221  Plan Reference: Benton County 6 Year Road Plan	Begin Location: N46-07-51.78 W119-36-04.57 Prosser  End Location: N46-07-51.17 W119-33-32.38 Prosser	Benton	Sellards Road will be reconstructed to an all weather standard, so that weight restrictions will not be needed in the future. The horizontal alignment will remain the same but the vertical will be changed through out the project by grading and creating a new subgrade. Other work to be done will be drainage, including the extension of a 12' x 6' Multi Plate Arch; crushed surfacing with two lifts of HMA; guardrails; seeding and other items of work.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	This route reduces the travel length by 10 miles for trucks wanting to get from SR221 to Benton City on I-82 or on to the Tri-Cities.  Also this route goes to the I-82 Interchange with SR397, which since it has been open to traffic in 2012 has become a major farm to market and freight route hauling over 1 million tons of produce in a 3 month period.  Reducing the travel length reduces time, costs and emissions.	Benton County	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  Benton County 6 Year Road Plan at: <a href="http://www.co.benton.wa.us/docview.aspx?docid=10605">http://www.co.benton.wa.us/docview.aspx?docid=10605</a>	X

## Exhibit 10.4L: Freight Unfunded Investments - Local

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
149	Title: Confluence Parkway Plan Reference: North Wenatchee Transportation Master Plan	Euclid Interchange on US2/97 in the Old Station Area of north Wenatchee to Miller Street Extended in Wenatchee	Chelan	The Confluence Parkway is a two-lane arterial corridor will be constructed by extending Miller Street south of the Wenatchee River to connect to Euclid Avenue and US 2. The Miller Street intersection with the North Wenatchee Avenue would be modified to add capacity to provide for southbound traffic on Miller Street south of Maple Street. The new arterial will directly benefit regional traffic, freight, and Intercity transit service. A new bridge would be constructed over the Wenatchee River reducing the bottleneck on the existing bridge. Improvements include under-crossings of Miller Street with the mainline BNSF railroad tracks and with Walla Walla Avenue. The Loop Trail will be relocated and upgraded to enhance visibility and access near Hawley Street. North of the Wenatchee River the new roadway will connect to an improved Euclid Avenue to provide regional access with US 2.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input checked="" type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	The project will provide two lanes of highway capacity north and south into Wenatchee freeing up much needed capacity on SR285 (North Wenatchee Avenue). This proposed corridor will connect directly to the existing highway interchange (Euclid Avenue Interchange) on US2/97 to the north and Miller Street extended to the south. This route will also be controlled access and grade separated at the BNSF railroad crossings approaching Miller Street to providing expedited freight access into the core of Wenatchee. Based on travel demand forecasting the North Wenatchee Avenue Master Plan this route should operate at T-2 level when constructed and opened because it will be strongly favored for freight access into the community.  <span style="color: red;">(Additional Information Available)</span>	Wenatchee Valley Transportation Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  North Wenatchee Transportation Master Plan at: <a href="http://confluenceparkway.org/files/Transportation%20Master%20Plan_Public%20Review%20DRAFT.pdf">http://confluenceparkway.org/files/Transportation%20Master%20Plan_Public%20Review%20DRAFT.pdf</a>	X
150	Title: North Wenatchee Avenue Improvements at Horse Lake Road and Maiden Lane Plan Reference: North Wenatchee Transportation Master Plan	Horse Lake Road intersection with SR 285 to approximately 800' south of Maiden Lane	Chelan	The segment of North Wenatchee Avenue near Maiden Lane and Horse Lake Road was identified as one of the most critical safety and traffic flow issues in the study corridor. The Plan calls for constructing a new access road on the east side of North Wenatchee Avenue. This would allow modification of access points which are the source of many collisions. In addition, the intersection of North Wenatchee Avenue at Maiden Lane would be modified to increase capacity and reduce impacts of traffic backups. Pedestrian facilities and transit stops in the vicinity of Maiden Lane and Horse Lake Road also would be upgraded.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	The project will consolidate turns to and from SR 285 to one location thereby preserving north and south throughput on the state highway and reducing delay for the freight trips that do not have another option around this location or do not choose the Confluence Parkway route.	Wenatchee Valley Transportation Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  North Wenatchee Transportation Master Plan at: <a href="http://confluenceparkway.org/files/Transportation%20Master%20Plan_Public%20Review%20DRAFT.pdf">http://confluenceparkway.org/files/Transportation%20Master%20Plan_Public%20Review%20DRAFT.pdf</a>	X
151	Title: Columbia Shores Portal Plan Reference: Vancouver 20 Year Arterial Street Projects (2011)	Begin Location: End Location:	Clark	Reconstruct and widen existing portal.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input checked="" type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	The Columbia Shores Portal is a grade separated passage underneath a BNSF rail line. Due to the age of the elevated railway structure, the opening underneath the berm is about 30 feet wide. Connecting into the portal access is an interchange with SR-14. The substandard width, proximity to the interchange and regional industrial areas creates a significant bottleneck.	City of Vancouver	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT <input checked="" type="checkbox"/> Rail Plan	For more information including project budget please see:  Vancouver 20 Year Arterial Street Projects (2011)	X
152	Title: Pioneer Street Railroad Overpass Plan Reference: WSDOT STIP	Begin Location: Begins at existing western terminus of SR501 End Location: Ridgefield End Location: .34 mi from beginning Ridgefield	Clark	Construction of a vehicle/pedestrian overpass over the BNSF Railway (BNSF) north-south mainline in the City of Ridgefield, Washington, and removal of two existing grade crossings. Major work elements will be over-crossing structure, retaining walls, new roadway, curbs and sidewalks, illumination, traffic signal, storm sewers and replacement of lift station. Phase 1 of this project includes approximately 200' of Pioneer Street west of Main Avenue adjacent to Overlook Park. Phase 2 of the project includes approximately 850' approach road on west side of project. Phase 3 includes the construction of the over-crossing structure.	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input checked="" type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Completing the construction of rail overpass would address all of the challenges listed above, and improve performance of the state freight system by: increasing reliability and resiliency, and improving safety conditions by closing two at-grade crossings, eliminating the chance of accidents between trains and vehicles, bicycles, or pedestrians that disrupt traffic on the rail corridor and harm the public.	Port of Ridgefield	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input checked="" type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT <input checked="" type="checkbox"/> Rail Plan	For more information including project budget please see:  WSDOT STIP at: <a href="http://webpub1.wsdot.wa.gov/LocalPrograms/Projects/Reports/Report.aspx?report=STIP4YearWithoutBannerPage&amp;ticks=635176138695800569">http://webpub1.wsdot.wa.gov/LocalPrograms/Projects/Reports/Report.aspx?report=STIP4YearWithoutBannerPage&amp;ticks=635176138695800569</a>	X

## Exhibit 10.4L: Freight Unfunded Investments - Local

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
153	Title: Union Ridge Parkway  Plan Reference: Metropolitan Transportation Plan for Clark County	Begin Location: S. 65th Ave Roundabout Ridgefield  End Location: South 10th Street Ridgefield	Clark	Union Ridge Parkway	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	The existing route between the Union Ridge Industrial Park and Interstate-5 junction is in a poor state of repair and is not geometrically designed for large truck traffic. The proposed project will improve safety by providing a wider roadway with less sharp corners, improve resiliency by providing an alternate route to I-5, and allow access for large and over-dimensional trucks.	City of Ridgefield	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  Metropolitan Transportation Plan for Clark County at: <a href="http://www.rtc.wa.gov/reports/mtp/mtp2011Update.Unabridged.pdf">http://www.rtc.wa.gov/reports/mtp/mtp2011Update.Unabridged.pdf</a>	X
154	Title: West Vancouver Freight Access	Begin Location: Latitude 45.62686 – Longitude -122.68757 Vancouver  End Location: Latitude 45.65197 – Longitude -122.73651 Vancouver  (Additional Information Available)	Clark	Establish new freight rail entrance to the Port from the BNSF Railway mainline, a grade separated entrance to T-5 and construct additional internal rail track storage to accommodate unit trains.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input checked="" type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements <input checked="" type="checkbox"/> Other; rail infrastructure	Vancouver is the economic and transportation hub for Southwest Washington with growth in population and demand for road and rail transportation serving as the catalyst for large scale infrastructure investments in the region. The West Vancouver Freight Access project addresses deficiencies in the state/regional freight transportation system while increasing efficiency, creating jobs and favorably impacting the environment. The project:  • Improves Washington State and national rail mainline velocity and capacity. The project intends to reduce mainline rail congestion by 40 percent through the elimination of an at-grade freight rail crossing into the Port of Vancouver. The project constructs grade separated rail access to the port along the Columbia River affecting a positive ripple effect across the entire Pacific Northwest rail system network.  (Additional Information Available)	Port of Vancouver, USA	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input checked="" type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT <input checked="" type="checkbox"/> Rail Plan	For more information including project budget please see:  Port of Vancouver at: <a href="http://www.portvanusa.com/wvfa/wvfa_home/">http://www.portvanusa.com/wvfa/wvfa_home/</a>	
155	Title: Pasco-Kahlotus Road Reconstruction and Overlay II  Plan Reference: Franklin County STIP	Begin Location: About Peterson Road (MP 5.92) City of Pasco  End Location: MP 8.93 City of Pasco	Franklin	The project will upgrade an existing two-lane roadway to provide safety, mobility, and drainage improvements. The improvements will consist of reconstructing portion of the roadway for vertical sight distance issues, structural overlay and paving of existing gravel shoulders for the total length of project.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements <input checked="" type="checkbox"/> Other; Provide better access to agricultural shipping and processing	The P-K Road serves as the main thoroughway for eastern Franklin County, an agriculturally productive rural region. P-K Road ties this vital economic area to the City of Pasco, where food processors and distributors serve as the next step in produce freight transport. From here, transport by truck or rail distributes the bounty of eastern Washington throughout the state and beyond. However, the current roadway must be closed during inclement weather, both for the safety of individuals and for the preservation of the existing BST roadway. With no ready alternative, this can create expensive delays for shipping. Additionally, vertical curve issues along the road can pose a threat to motorists, a threat heightened by the heavy truck traffic the P-K Road experiences.  (Additional Information Available)	Franklin County	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  Franklin County STIP at: <a href="http://www.co.franklin.wa.us/public_works/documents/2014-2019STIPReport.pdf">http://www.co.franklin.wa.us/public_works/documents/2014-2019STIPReport.pdf</a>	X

## Exhibit 10.4L: Freight Unfunded Investments - Local

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
156	Title: Northern Columbia Basin Railroad Project  Plan Reference: State Transportation Improvement Plan, WA 06287	Begin Location: 47 07'49.55" N 119 11'12.28" W Moses Lake  End Location: 47 12'03.48" N 119 17'44.18" W Moses Lake	Grant	The Northern Columbia Basin Railroad (NCBR) rail project is a \$23 million project that will improve rail service to businesses in Moses Lake. By improving rail access, this project will provide an alternative transportation mode for the freight that currently moves in and out of the area by truck. Increased options will help reduce transportation costs for the local business that can use rail to move their goods and supplies.  <i>(Additional Information Available)</i>	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input checked="" type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	The Benefits of this project are: •Rail access to vital industries in the Northern Columbia Basin area (around Moses Lake). •Retention of family wage jobs at industrial businesses in the Moses Lake area that need rail access in order to be more competitive. These jobs are critical to the economic livelihood of Moses Lake and the northern Columbia Basin. •Rail access to hundreds of acres of prime industrial property. •Improved freight mobility and economic development opportunities in the greater Moses Lake area.  <i>(Additional Information Available)</i>	Port of Moses Lake	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input checked="" type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT <input checked="" type="checkbox"/> Rail Plan	For more information including project budget please see:  State Transportation Improvement Plan, WA 06287	X
157	Title: Grant County Port District No. 1 Industrial Park No. 4 Intermodal Terminal Infrastructure Expansion Project  Plan Reference: Washington State Rail Plan	Begin Location: 119.8201W / 47.2418N Quincy  End Location: -119.80000W / 47.2456N Quincy	Grant	Improvements to the Grant County Port District No. 1 Intermodal Yard/Terminal at Industrial Park No. 4 to include the installation of over 6,000 feet of rail track extension within the Intermodal Yard/Terminal and also east of Industrial Park No. 4, turnouts, and rail appurtenances; the construction of a rail track bridge over a U.S. Bureau of Reclamation major canal and irrigation wasteway; improvements to the intersection of the rail track extension and County Road "O" NW to the east of Industrial Park No. 4; the placement of approximately 34,000 tons of granular material over three acres of the Port District's Intermodal Yard to accommodate the expansion of container storage facilities; and the purchase of accompanying properties east of the current intermodal terminal for rail track right-of-ways.	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input checked="" type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	The underlying premise of the Quincy Port District's Intermodal Terminal is to provide a location by which truck freight can be loaded (via domestic intermodal containers) on to intermodal trains for shipment to other states and provinces. Washington State is one of top producing agricultural states in United States. Hundreds of thousands of truckloads of Washington State apples, potatoes, onions, carrots, pears, frozen French fries, frozen vegetables, frozen juice, etc. are shipped to destinations outside of the state every year. By locating an intermodal facility in Quincy, the Port District is able to utilize the existing Seattle to Chicago BNSF rail mainline to transport the above mentioned agricultural products and other perishable products with domestic refrigerated intermodal containers via expedited rail.  <i>(Additional Information Available)</i>	Port of Quincy	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input checked="" type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT <input checked="" type="checkbox"/> Rail Plan	For more information including project budget please see:  Washington State Rail Plan at: <a href="http://www.wsdot.wa.gov/NR/rdonlyres/F67D73E5-2F2D-40F2-9795-736131D98106/0/DSRP_Draft_Final_Report_20131003.pdf">http://www.wsdot.wa.gov/NR/rdonlyres/F67D73E5-2F2D-40F2-9795-736131D98106/0/DSRP_Draft_Final_Report_20131003.pdf</a>	X
158	Title: Gateway Mall Access Improvements  Plan Reference: Cowlitz-Wahkiakum Council of Governments Metropolitan & Regional Transportation Plan 2009-2029	Begin Location: Fleet Street on US 12 Aberdeen  End Location: Harbor Street on US 12 Aberdeen	Grays Harbor	Channelization improvements and access revisions to alleviate identified traffic problems caused by access issues to this regional destination. Improvements would reduce vehicle delays at side access driveways; improve safety by changing access control at some mall driveways and providing a dedicated emergency vehicle access route that is not blocked by a train.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input checked="" type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	This project will provide for the free flow of freight traffic to the Port of Grays Harbor and ease the congestion in the area around the Gateway Mall. Both idling and travel times for both truck freight and rail freight will be reduced which in turn lowers operating costs and vehicle emissions.  This would provide greater economic activity and quicker and safer traffic in the area. The reliability for rail freight to reach the Port of Grays Harbor will be increased which in turn will continue the economic output being achieved currently with the growth of the port. The primary retail outlets in the region are located in the Gateway mall and will continue to generate tax revenue for the region. Pedestrian and bicycle access will be immensely improved.	Grays Harbor Council of Governments	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  Cowlitz-Wahkiakum Council of Governments Metropolitan & Regional Transportation Plan 2009-2029 at: <a href="http://www.cwcog.org/documents/CWCOG2009finalMRTP_wholedocument.pdf">http://www.cwcog.org/documents/CWCOG2009finalMRTP_wholedocument.pdf</a>	X

## Exhibit 10.4L: Freight Unfunded Investments - Local

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
159	Title: Maintenance Priority - Complete Seismic Upgrades to Area Bridges  Plan Reference: Cowlitz-Wahkiakum Council of Governments Metropolitan & Regional Transportation Plan 2009-2029	Begin Location: US 12 over the Wishkah River and US 101 over the Chehalis River Aberdeen  End Location: US 12 over the Wishkah River and US 101 over the Chehalis River Aberdeen	Grays Harbor	The regional highway system in the tri-city area is connected by five aging bridges, two of which need upgrades. Upgrades to the Chehalis River Bridge (US 101) include strengthening the two bascule pier foundations with drilled shafts. Upgrades to Heron Street Bridge (US 12) include strengthening the center pier foundation with drilled shafts.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Seismic upgrades to the Chehalis River Bridge and the Heron Street Bridge will help ensure that after natural disaster, such as an earthquake, the transportation infrastructure system will continue to operate. Seismic upgrades now would reduce the potential need for bridge replacement, in case of an immediate failure, or prolonged closure for repair. Thereby reducing the potential loss of life, in case of total bridge failure.	Grays Harbor Council of Governments	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  Cowlitz-Wahkiakum Council of Governments Metropolitan & Regional Transportation Plan 2009-2029 at: <a href="http://www.cwcog.org/documents/CWCOG2009finalMRTP_wholedocument.pdf">http://www.cwcog.org/documents/CWCOG2009finalMRTP_wholedocument.pdf</a>	X
160	Title: Tri City Operational Improvements  Plan Reference: Cowlitz-Wahkiakum Council of Governments Metropolitan & Regional Transportation Plan 2009-2029	Begin Location: Aberdeen, Cosmopolis, and Hoquiam  End Location: Aberdeen, Cosmopolis, and Hoquiam	Grays Harbor	17 improvements that can be implemented in the short term to benefit the quality of the regional transportation system.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	The Tri-City Operational Improvements project provides 17 needed improvements to alleviate bottleneck areas for freight traffic through the US 12/US 101/SR 109 corridor.  This project addresses several small, but beneficial projects throughout the US 12/US 101/SR 109 corridor that would enhance the quality of the regional transportation system. Each project in the tri-city operational improvements is relatively low cost, and would provide a quick and immediate benefit to the region. Several projects, including constructing curb extensions, ADA compliant ramps, and sidewalks, would provide non-motorized safety and accessibility improvements in the tri-city area.  <b>(Additional Information Available)</b>	Grays Harbor Council of Governments	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  Cowlitz-Wahkiakum Council of Governments Metropolitan & Regional Transportation Plan 2009-2029 at: <a href="http://www.cwcog.org/documents/CWCOG2009finalMRTP_wholedocument.pdf">http://www.cwcog.org/documents/CWCOG2009finalMRTP_wholedocument.pdf</a>	X
161	Title: US 101 Truck Route Alternate EIS (in TIP) Truck Route Alternate (In long range plan)  Plan Reference: Cowlitz-Wahkiakum Council of Governments Metropolitan & Regional Transportation Plan 2009-2029  Regional TIP	Begin Location: SR 109 / SR 109 Spur intersection Hoquiam  End Location: US 12 / Chehalis Street Intersection Aberdeen	Grays Harbor	TIP: Re-evaluation and update of the Final Environmental Impact Statement (EIS) (FHWA and WSDOT et al. 2000) completed in the late 1990's. Long Range Plan: Project would provide an alternate truck route corridor from SR 109/SR 109 Spur Intersection in Hoquiam to the US 12 /Chehalis Street Intersection in Aberdeen.	<input type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input checked="" type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	A new truck route will provide for the free flow of freight traffic to the Port of Grays Harbor and ease the congestion in Aberdeen and Hoquiam. Both idling and travel times for both truck freight and rail freight will be reduced which in turn lowers operating costs and vehicle emissions.  This project will provide greater economic activity and quicker and safer traffic in the area. The reliability for rail freight to reach the Port of Grays Harbor will be increased which in turn will continue the economic output being achieved currently with the growth of the port. The new and stabilized bridges and overpasses will reduce the number of bridge closures of the state freight corridors and better access for large trucks. Pedestrian and bicycle access will be immensely improved. This project will provide greater economic activity and a better quality of life for the region.	Grays Harbor Council of Governments	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  Cowlitz-Wahkiakum Council of Governments Metropolitan & Regional Transportation Plan 2009-2029 at: <a href="http://www.cwcog.org/documents/CWCOG2009finalMRTP_wholedocument.pdf">http://www.cwcog.org/documents/CWCOG2009finalMRTP_wholedocument.pdf</a>	X
162	Title: 1st Avenue S Rebuild  Plan Reference: PSRC Transportation 2040	Begin Location: SR 519  End Location: SR 509	King	Rebuild and make operational / ITS improvements to 1st Ave S	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input checked="" type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	Average weekday traffic on 1st Ave. S. is approximately 19,700 vehicles, with truck volumes in the 6% range. This roadway accesses the Port of Seattle's terminal 46 (T-46) and the SODO warehouse/industrial district. In the last three years there have been 15 collisions (two involving bicycles) between S. Atlantic St. and S. Royal Brougham Way alone. In the same period, at the intersection of 1st Ave. S. and S. Atlantic St., there have been two pedestrian/vehicle collisions and 15 vehicle/vehicle collisions.	City of Seattle	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	The project is included in the programmatic section of the region's long range plan, rather than being identified as a distinct project.	X

## Exhibit 10.4L: Freight Unfunded Investments - Local

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
163	Title: 1st Avenue S Viaduct over UPRR Yard  Plan Reference: PSRC Transportation 2040	Begin Location: NA  End Location: NA	King	Replace the viaduct structure spanning the Union Pacific railyard	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input checked="" type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	The viaduct structure carries approximately 18,700 vehicles per day, with truck volumes around 8%. Without the 1st Ave viaduct, freight operations would have to detour to 4th Ave. S. or Airport Way to access the northern Duwamish industrial area and the SODO warehouse/industrial district. With only two viable routes (S. Lucile St. and S. Michigan St.), the added vehicle traffic would quickly overwhelm the existing roadway network. This is especially critical at several intersections that currently experience low levels of service, such as S. Lucile St. at Airport Way S. and East Marginal Way S. at S. Michigan St. These intersections typically operate at LOS D during the morning peak hour. The 1st Ave. S. Viaduct also operates as an oversize truck haul route and is identified as a Major Truck Street in the Freight Master Plan.	City of Seattle	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	The project is included in the programmatic section of the region's long range plan, rather than being identified as a distinct project.	X
164	Title: 4th Avenue S Viaduct over UPRR Yard  Plan Reference: PSRC Transportation 2040	Begin Location: S Nevada St  End Location: S Dawson St	King	Replace the viaduct structure spanning the Union Pacific railyard. Increase vertical clearance above track to improve safety and rail operations. Remove columns and pier walls to increase functionality of railyard and optimize yard operations.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input checked="" type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Fourth Ave. S. is classified as a principal arterial in the manufacturing/industrial center area in south Seattle. To the west, it connects directly to Port terminals via S Spokane Street and Royal Brougham Way. To the north, it ties to the south end of the Seattle CBD. At Royal Brougham Way, it links with the interstate system – I-5 and I-90. To the south, it connects with I-5, SR-99, and SR-509 via S. Michigan St. and E. Marginal Way S. <i>(Additional Information Available)</i>	City of Seattle	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	The project is included in the programmatic section of the region's long range plan, rather than being identified as a distinct project.	X
165	Title: 6th Avenue S Rebuild  Plan Reference: PSRC Transportation 2040	Begin Location: S Holgate St  End Location: S Alaska St	King	Rebuild and make operational / ITS improvements to 6th Ave S	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	This project seeks to return 6th Ave S to a state of good repair while increasing the resiliency of the truck network and maintaining travel time.  Currently 6th Ave S has a pavement rating of 43 out of 100, which indicates that either a full overlay (immediately) or a rebuild (in 5 years) is required. ADT is 17,400 and vehicle mix includes approximately 15% trucks. Although this is classified as a minor arterial, it is a 4-lane roadway with parking. It is wide enough to support freight in the SODO industrial area.	City of Seattle	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	The project is included in the programmatic section of the region's long range plan, rather than being identified as a distinct project.	X
166	Title: Air Cargo Road Safety Improvements  Plan Reference: Port of Seattle Aviation 2012-2016 Business Plan	Begin Location: North entrance/exit to service tunnel: Latitude: 47.449229; Longitude: -122300114 SeaTac  End Location: S. 154th Street:	King	Pavement rehabilitation, cargo access and wayfinding improvements, and transit and pedestrian improvements (bus stop upgrades, new sidewalks) along Air Cargo Road to support mobility for airport operations and increase safety for pedestrians and vehicles.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements <input checked="" type="checkbox"/> Safety improvements for all modes	The project will reduce travel time/delay by increasing intersection efficiency and improving truck access to cargo facilities.  The project will increase the state of good repair of the roadway by assessing pavement condition and making improvements where necessary.  The project will improve safety for pedestrians and vehicles by improving lighting, adding a bike lane and sidewalks, and improving wayfinding and signage.	Port of Seattle	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input checked="" type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  Port of Seattle Aviation 2012-2016 Business Plan	

## Exhibit 10.4L: Freight Unfunded Investments - Local

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
167	Title: Argo Yard Truck Roadway  Plan Reference: PSRC Transportation 2040	Argo Yard access drive Begin Location: NB E Marginal Way S  End Location: S Oregon St	King	Construct new drayage route facility between Port of Seattle terminals and Union Pacific Argo Intermodal Container Yard	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input checked="" type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	The Argo Yard Connector is a two-lane one-way traffic connection to a private drive, which removes signalization and addresses lane change (geometry) constraints. Initial projections show that 900 one-way truck movements will benefit from this connection. Travel time reduction is estimated at 30% with an incidental reduction of vehicles on SR-99. When completed, this connection will remove the need to cross UP railroad tracks twice in a ¼ mile section, which will reduce freight delay, emissions and conflict points. It will increase safety, reliability and resiliency.	City of Seattle	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	The project is included in the programmatic section of the region's long range plan, rather than being identified as a distinct project.	X
168	Title: Aurora Avenue N Rebuild  Plan Reference: PSRC Transportation 2040	Begin Location: N 145th St  End Location: Denny Way	King	Rebuild Aurora Avenue N (SR 99) and make operational/ITS improvements to facilitate freight through-movement	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input checked="" type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	The daily volumes on Aurora Avenue N vary from 76,300 to 32,500 AAWDT. AAWDT on major intersecting arterials is on the order of 20,000 to 25,000 AAWDT.	City of Seattle	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	The project is included in the programmatic section of the region's long range plan, rather than being identified as a distinct project.	X
169	Title: BNSF Intermodal Railyard Access  Plan Reference: Capital Improvement Program (CIP) for 2014-2019	Begin Location: Latitude 47.488470 Longitude -122.266395  End Location: Latitude 47.489209 Longitude -122.265451	King	Construct a new access to the BNSF Regional Distribution Center	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	This project will increase efficiency of truck access between BNSF Facility and freeways, overall freeway traffic and regional freight movement	City of Tukwila	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see: Capital Improvement Program (CIP) for 2014-2019 at: <a href="http://www.tukwilawa.gov/pubwks/cip.html">http://www.tukwilawa.gov/pubwks/cip.html</a>	X
170	Title: Colorado Avenue S (access road) Rebuild  Plan Reference: PSRC Transportation 2040	Begin Location: S Atlantic St  End Location: S Massachusetts St	King	Rebuild Colorado Avenue S to improve safety and access	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input checked="" type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	<p>This project will reduce travel time, increase reliability and resiliency, and return the roadway to a state of good repair.</p> <p>The roadway will be rebuilt to heavy haul standard of 12" concrete. This is a short haul drayage connection between two major freight generators: Terminal 46 and the BNSF SIG Yard North entrance.</p>	City of Seattle	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	The project is included in the programmatic section of the region's long range plan, rather than being identified as a distinct project.	X

## Exhibit 10.4L: Freight Unfunded Investments - Local

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
171	Title: Connecting 28th/24th Avenue South  Plan Reference: 2014-2023 Transportation Improvement Program	Begin Location: Lat: 47.4215 Long: -122.3001 SeaTac  End Location: Lat: 47.4155 Long: -122.3025 SeaTac	King	Construct a new five lane principal arterial roadway including curb, gutter, bicycle and pedestrian facilities, storm drainage, street lighting, signalization, channelization, landscaping, and utility extensions. This project will provide a connection between Des Moines' 24th Avenue South improvements at South 208th Street and the existing 26th Avenue South at South 200th Street. This project completes the gap in the overall 28th/24th Avenue South corridor which extends from South 188th St and 28th Avenue South to South 216th Street and 24th Avenue South.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements <input checked="" type="checkbox"/> Other; Reduces truck travel time to Sea-Tac International Airport	1. Reducing: A. Travel time - This project would reduce congestion along SR 99 by creating a new roadway between the southern travel time terminus - north of SR 516 on SR 99 (i.e. trucks from the Kent Manufacturing Industrial Area) and the northern travel time terminus - South 188th Street at Air Cargo Road (Sea-Tac Airport). A complete trip between these two points (about 5 miles) would take approximately 18 minutes along SR 99 without the project. The Connecting 28th/24th Avenue South Project would improve that travel time by up to 4 minutes, a savings of approximately 25 percent, as trucks are able to travel on a less congestion roadway. Year 2024 was assumed for the future conditions, as this was the most recent analysis done that is comparable to a 10-year future conditions. <i>(Additional Information Available)</i>	City of SeaTac	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  2014 - 2023 Transportation Improvement Program at: <a href="http://www.ci.seatac.wa.us/Modules/showDocument.aspx?documentid=7606">http://www.ci.seatac.wa.us/Modules/showDocument.aspx?documentid=7606</a>	X
172	Title: Delridge Way SW Rebuild  Plan Reference: PSRC Transportation 2040	Begin Location: West Seattle Bridge  End Location: SW Roxbury St	King	Rebuild and make operational/ITS improvements to Delridge Way SW	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input checked="" type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	This project seeks to return Delridge Way SW to a state of good repair and provide access for large and over-dimensional trucks. <i>(Additional Information Available)</i>	City of Seattle	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	The project is included in the programmatic section of the region's long range plan, rather than being identified as a distinct project.	X
173	Title: Diagonal Avenue S / S Oregon St / Denver Avenue S Rebuild  Plan Reference: PSRC Transportation 2040	S Oregon St Begin Location: West terminus, Diagonal Ave S  End Location: Argo Yard entrance gate	King	Full rebuild existing drayage route facility between Port of Seattle and Union Pacific Argo Yard	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	Diagonal Ave S is a two-lane, two-directional roadway with existing rail (UP) and adjacent freight/commercial land use. Roadway surface and base is in poor condition due to the 2,000+ freight movements throughout the day. <i>(Additional Information Available)</i>	City of Seattle	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	The project is included in the programmatic section of the region's long range plan, rather than being identified as a distinct project.	X
174	Title: Duwamish Rail Corridor Project  Plan Reference: Port of Seattle's Preparing for Growth Plan	The project limits generally include the existing rail lines on the south side of the Spokane Street from Terminals 5 and 18 through the south end of Argo Yard on properties owned by both the UP and the BNSF to the railroad mainline.	King	To create a more direct rail access from the Port marine terminals T-5 and T-18 to the Union Pacific Railroad (UP) and BNSF Railway Company (BNSF) mainlines.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Currently, trains heading between mainline and Port terminals must pass through the middle of the Argo Yard. This causes operational inefficiencies within the Argo Yard and delays for mainline access. By moving the track farther east, there would be no conflicts between the southbound train and yard operations. This project would improve travel time for the through train, cutting operating cost and reducing emissions. It would improve reliability as there would be less potential conflicts within the yard. Overall, it would improve intermodal connectivity.  The project will also allow BNSF to move directly to their mainline track from Harbor Island/West Seattle without having to move trains into the SIG Yard first. The project will increase safety and efficiency for train movements for both the UP and the BNSF.	Port of Seattle	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input checked="" type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT <input checked="" type="checkbox"/> Rail Plan	For more information including project budget please see:  Port of Seattle's Preparing for Growth Plan	

## Exhibit 10.4L: Freight Unfunded Investments - Local

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
175	Title: Duwamish Avenue S Rebuild/East Marginal Way Grade Separation Rebuild  Plan Reference: PSRC Transportation 2040	Begin Location: S Spokane St Duwamish Ave Bridge  End Location: E Marginal Way S NB E Marginal Way S	King	Rebuild and make operational / ITS improvements to Duwamish Avenue S, Duwamish Ave Bridge and S Spokane St	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	Increases reliability and resiliency as well as intermodal connectivity – Terminal to Rail movements. State of good repair will be maintained.  This roadway connection is the primary access to Port Terminal 104 for northbound SR-99. Alternate access requires crossing UP rails as well as heavy freight routes along East Marginal Way S.	City of Seattle	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	The project is included in the programmatic section of the region's long range plan, rather than being identified as a distinct project.	X
176	Title: E Marginal Way S Rebuild  Plan Reference: PSRC Transportation 2040	Begin Location: S Atlantic St  End Location: 1st Ave S	King	Rebuild and make operational/ITS improvements to E Marginal Way S	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	The project will increase turning movement reliability by further defining freight and bicycle right-of-way and add controls at terminal entrances via signalization for both modes. The channelization proposed will segregate bicycle and freight modes to increase safety. <i>(Additional Information Available)</i>	City of Seattle	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	The project is included in the programmatic section of the region's long range plan, rather than being identified as a distinct project.	X
177	Title: Grade Separated Crossing of BNSF Yard  Plan Reference: 2014-2019 Transportation Improvement Program	Begin Location: C Street SW/SR-18 EB Ramp, or C Street SW/15th Street SW  End Location: A Street SE/6th Street SE, or A Street SE/12th Street SE/17th Street SE  Auburn	King	This project will grade-separate the crossing of the BNSF Railyard, either from SR-18 to 6th Street SE or from 15th Street SW to A Street SE. The first alternative would realign the SR-18 eastbound ramp, grade separate the main north/south line and the Stampede Pass line and connect to 6th Street SE. The second alternative would provide a new corridor from 15th Street SW to A Street SE in the vicinity of 12th Street SE and 17th Street SE, either via an overpass or underpass of the BNSF Railyard. This new east/west connection will improve access and circulation associated with the potential redevelopment of the BNSF yard as an intermodal freight facility.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input checked="" type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	1. Reducing: A. Travel time – the new connection will improve intersection operations at the existing crossing locations to the north and south and will provide a new, more grade separated connection across the railyard. B. Direct freight carrier operating cost C. Diesel and carbon emissions – the improved operations and reduced connection, combined with the more central location of the new crossing relative to SR-18 and 15th Street SW will reduce emissions. 2. Increasing: D. Reliability – the crossing will be grade separated, improving reliability due to rail traffic.	City of Auburn	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT <input checked="" type="checkbox"/> Rail Plan	For more information including project budget please see:  2014-2019 Transportation Improvement Program at: <a href="http://weblink.auburnwa.gov/External/docview.aspx?dbid=0&amp;openfile=true&amp;id=236692">http://weblink.auburnwa.gov/External/docview.aspx?dbid=0&amp;openfile=true&amp;id=236692</a>	X
178	Title: Harbor Island Access Improvements  Plan Reference: PSRC Transportation 2040	Begin Location: SW Spokane St  End Location: SW Spokane St	King	Rebuild and make operational/ITS improvements to 11TH Ave SW, SW Florida St, 16th Ave SW and Klickitat Ave SW. Project does not include non-City right of way (T18 access portions).	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	Roadway rebuild will return the network to a state of good repair while maintaining intermodal connectivity between Port facilities and Rail Yards directly affecting economic output. The rebuild also will maximize truck turn radii in constrained locations. <i>(Additional Information Available)</i>	City of Seattle	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	The project is included in the programmatic section of the region's long range plan, rather than being identified as a distinct project.	X

## Exhibit 10.4L: Freight Unfunded Investments - Local

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
179	Title: Logan Avenue Plan Reference: Six-Year Transportation Improvement Program	Begin Location: N 6th Street Renton End Location: N 8th Street Renton	King	Reconstruction of the roadway pavement, adding a northbound lane that from N 6th to N 8th St, new curb, gutter and sidewalks, landscaped buffer between the sidewalks and travel lanes, (east side of Logan Ave N), improvements to the Cedar River bridge(west side) to accommodate bicycle crossing, streetlighting, pedestrian scale illumination, crosswalks, pedestrian ramps, channelization, traffic signal pre-emption, stormwater quality and conveyance system.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	Reconstruction of the roadway pavement, adding a northbound lane from N 6th St to N 8th St, new curb, gutter and sidewalks, landscaped buffer between sidewalks and travel lanes (east side of Logan Ave N), improvements on the Cedar River bridge (west side) to accommodate bicycle crossing, streetlighting, pedestrian scale illumination, crosswalks, pedestrian ramps, channelization, traffic signal pre-emption, stormwater quality and conveyance system. Current quantitative information is not available at this time. Logan Ave N connects directly from the Kent /Auburn warehouse and industrial areas via SR 167 to the BOEING plant and The Landing retail center.	City of Renton	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  Six-Year Transportation Improvement Program at: <a href="https://rentonwa.gov/uploadedFiles/Government/PBPW/2014_2019_TIP_DRAFT.PDF">https://rentonwa.gov/uploadedFiles/Government/PBPW/2014_2019_TIP_DRAFT.PDF</a>	
180	Title: Montlake Blvd NE HOV Lane and ITS Improvements Plan Reference: PSRC Transportation 2040	Begin Location: NE Pacific Place End Location: 25th Ave NE	King	Extend HOV lane on southbound Montlake Blvd and install ITS improvements to increase speed of HOV vehicles and encourage new transit service	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input checked="" type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	Montlake Blvd has a 5-lane section with average weekday daily volumes on the order of 38,000 AWDT. It is part of a T-2 Freight Economic Corridor designated by WSDOT. Adding additional capacity will improve movement for all traffic and with ITS, the reliability of travel times can be improved.	City of Seattle	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	The project is included in the programmatic section of the region's long range plan, rather than being identified as a distinct project.	X
181	Title: N 85th Street Rebuild Plan Reference: PSRC Transportation 2040	Begin Location: I-5 End Location: 15th Ave NW	King	Rebuild and make operational/ITS improvements to N 85th Street	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	This project will reduce travel time, as well as diesel and carbon emissions, while increasing reliability and resiliency for east/west routes. It will restore the facility to a state of good repair. <i>(Additional Information Available)</i>	City of Seattle	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	The project is included in the programmatic section of the region's long range plan, rather than being identified as a distinct project.	X
182	Title: Nickerson St / W Nickerson St Rebuild Plan Reference: PSRC Transportation 2040	Begin Location: 15th Ave W End Location: Westlake Ave N	King	Rebuild Nickerson to improve freight movement alternatives in the Ballard-Interbay-Northend Manufacturing Industrial Center	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	The project will maintain a state of good repair and access for large and over-dimensional trucks, improve the operational efficiency of the intersections, and reduce travel time on this corridor. It also increases resiliency by maintaining the limited number of east/west routes in Seattle. <i>(Additional Information Available)</i>	City of Seattle	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	The project is included in the programmatic section of the region's long range plan, rather than being identified as a distinct project.	X
183	Title: Northgate Way / Holman Rd / 15th Ave / Elliott Ave Rebuild Plan Reference: PSRC Transportation 2040	Begin Location: I-5 End Location: Alaskan Way	King	Rebuild and make operational/ITS improvements to Northgate Way, Holman Road, 15th Avenue and Elliott Avenue	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	This project seeks to reduce travel time and maintain a resilient network connection in a state of good repair, while also maintaining oversize and over-dimensional truck routes. <i>(Additional Information Available)</i>	City of Seattle	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	The project is included in the programmatic section of the region's long range plan, rather than being identified as a distinct project.	X

## Exhibit 10.4L: Freight Unfunded Investments - Local

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
184	Title: NW Market St / Leary Way / N 36th St  Plan Reference: PSRC Transportation 2040	Begin Location: 24th Ave NW  End Location: Fremont Ave N	King	Rebuild and make operational/ITS improvements to the Leary Way corridor to facilitate freight movement.	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input checked="" type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	This project network incorporates 4-lane and 5-lane cross-sections with multiple signalized cross streets. Signal delay in the peak hour exceeds 180 seconds at Stone and Leary Way/24th Ave. Vehicle traffic exceeds 29,000 on Leary Way at NW 45th St, which contributes to the congestion and delay along the only freight route to the Ballard Interbay North Manufacturing area.  <i>(Additional Information Available)</i>	City of Seattle	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	The project is included in the programmatic section of the region's long range plan, rather than being identified as a distinct project.	X
185	Title: Oakesdale Avenue SW/Monster Rd SW/68th Ave to SR 900  Plan Reference: Six-Year Transportation Improvement Program	Begin Location: Monster Road Renton  End Location: SR 900 Renton	King	Widen existing roadway to four lanes plus two-way left turn lane where needed and bike lanes. Realign Beacon Coal Mine approach road to intersection with new Oakesdale Ave SW roadway. Includes new roadway, curbs, sidewalk, drainage, street lighting, traffic signals, channelization, retaining walls and widening the existing bridge.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	Widen existing roadway to four lanes plus two-way left-turn-lane where needed and bike lanes. Realign Beacon Coal Mine Road approach to intersection with the new Oakesdale Ave SW roadway. Includes new roadway, curbs, sidewalk, drainage, street lighting, traffic signals, channelization, retaining walls and widening the existing bridge.	City of Renton	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  Six-Year Transportation Improvement Program at: <a href="https://rentonwa.gov/uploadedFiles/Government/PBPW/2014_2019_TIP_DRAFT.PDF">https://rentonwa.gov/uploadedFiles/Government/PBPW/2014_2019_TIP_DRAFT.PDF</a>	
186	Title: Railroad Crossing ITS implementation  Plan Reference: PSRC Transportation 2040	Begin Location: 24th Ave NW  End Location: Fremont Ave N	King	Install and operationalize ITS to improve railroad crossing safety at Broad Street, S Atlantic Street, S Holgate Street, S Lander Street and S Spokane Street within the Duwamish Manufacturing Industrial Center	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input checked="" type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	This project seeks to provide ITS improvements that allow freight and all vehicle traffic to minimize delay at railroad crossings. Static and dynamic boards will inform drivers at decision points of crossing closures, so that vehicles can take alternate routes. This will reduce travel time, emissions and carrier operating costs while increasing reliability and economic output.  There are three north/south rail lines (One UP, one BNSF and one main line), 18 at-grade railroad crossings and three at-grade light-rail crossings in the SODO area. Based on October 2012 data, gate closures are approximately 3.5 hours per day on the mainline crossing with greater closure times at the tail tracks for BNSF SIG Yard. There are approximately 90 vehicle-hours of delay every day on mainline crossings.  <i>(Additional Information Available)</i>	City of Seattle	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	The project is included in the programmatic section of the region's long range plan, rather than being identified as a distinct project.	X
187	Title: Rainier Avenue S Corridor Improvements – Phase 2, S 3rd St to Airport Way  Plan Reference: Six-Year Transportation Improvement Program	Begin Location: S 3rd Street Renton  End Location: Airport Way Renton	King	Phase 2 of the Rainier Ave Corridor Improvements will extend the improvements from where the current project ends to Airport Way. Project elements include roadway and sidewalks widening with streetscaping, adding pedestrian-scale illumination, transit facility improvements (shelters, benches and information kiosks), planted buffer strips and landscaped medians.	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	Rainier Ave is a critical corridor in central Renton with existing operational problems and in need of infrastructure enhancements to provide greater ease of non-motorized and transit-based travel. Improvements will enhance traffic flow and reduce accidents.	City of Renton	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  Six-Year Transportation Improvement Program at: <a href="https://rentonwa.gov/uploadedFiles/Government/PBPW/2014_2019_TIP_DRAFT.PDF">https://rentonwa.gov/uploadedFiles/Government/PBPW/2014_2019_TIP_DRAFT.PDF</a>	

## Exhibit 10.4L: Freight Unfunded Investments - Local

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
188	Title: SW 27th/Strander Phase 2  Plan Reference: Six-Year Transportation Improvement Program	Begin Location: Renton  End Location: Renton	King	This new arterial will provide an alternative to existing parallel routes. The new route will eliminate many right and left hand turn movements at several key intersections. Therefore stoppage at these locations will be eliminated and safety will be greatly improved. Also, coordinated traffic signals will be installed along the corridor which will reduce the number of stops, improving traffic flow and reducing the number of idling vehicles, with consequent reduction in emissions and noise.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input checked="" type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	A new east-west arterial roadway will connect the cities of Renton and Tukwila and provide significant congestion relief to existing arterials. The new road will provide access to the new Tukwila Station, a multi-modal center being developed by Sound Transit immediately north of the new alignment. By undercrossing the UPRR and BNSF railroads, the new arterial will provide significant benefits to both freight mobility and general motorists.	City of Renton	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT <input checked="" type="checkbox"/> Rail Plan	For more information including project budget please see:  Six-Year Transportation Improvement Program at: <a href="https://rentonwa.gov/uploadedFiles/Government/PBPW/2014_2019_TIP_DRAFT.PDF">https://rentonwa.gov/uploadedFiles/Government/PBPW/2014_2019_TIP_DRAFT.PDF</a>	
189	Title: SW 27th/Strander Phase 1 Segment 2b Grade Separation (SW 27th St - Strander Blvd)  Plan Reference: Capital Improvement Program (CIP) for 2014-2019 at:	From SW 27th St. to Strander Blvd. on SW 27th St. connecting Strander Blvd.	King	Strander Blvd/SW 27th St Extension	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input checked="" type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	This project will be constructed in three phases. Phase 1 has been completed that extended Strander Blvd/SW 27th St from Oaksdale Ave to Naches Ave SW. Phase 2 will construct a 2 lane roadway from Naches to the new Sounder's Tukwila Longacres Station's parking lot. Phase 3 will construct the undercrossing of the UPRR and complete the 4 lane roadway from West Valley Hwy to Naches Ave SW. Project partners include the City of Renton, Boeing, WSDOT, FMSIB, Sound Transit, Metro, Amtrak, and BNSF and UP Railroads. Funds in 2014 are for professional services for a TIGER grant application.	City of Tukwila City of Renton	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  Capital Improvement Program (CIP) for 2014-2019 at: <a href="http://www.tukwilawa.gov/pubwks/2014-2019CIP.pdf">http://www.tukwilawa.gov/pubwks/2014-2019CIP.pdf</a>	X
190	Title: S. 212th Street BNSF Railroad Grade Separation  Plan Reference: PSRC: Transportation 2040	Begin Location: S. 212th St. 700 feet West of the BNSF Tracks Kent  End Location: S. 212th St. 700 East of the BNSF tracks Kent	King	"Grade Separated Railroad Crossing"	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input checked="" type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	1. Reducing: A. Travel time The project will eliminate daily traffic delay and improve safety at the BNSF railroad crossing by eliminating hours of wait times per day for vehicles at the crossing. B. Direct freight carrier operating cost The reduction of time waiting at this grade separation will have a direct impact on freight operating costs by the savings of fuel, time and increased safety. C. Diesel and carbon emissions - The project will reduce diesel and carbon emissions by eliminating the emissions from the idling of trucks and cars waiting for freight trains to cross the roadway. <b>(Additional Information Available)</b>	City of Kent	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT <input checked="" type="checkbox"/> Rail Plan	For more information including project budget please see:  PSRC: Trnaporation 2040 at: <a href="http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf">http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf</a>	X
191	Title: S. 212th Street Union Pacific Railroad Grade Separation  Plan Reference: PSRC: Transportation 2040	Begin Location: S. 212th St. 700 feet west of the UPRR Tracks Kent  End Location: S. 212th St. 700 East of the UPRR tracks Kent	King	"Grade Separated Railroad Crossing in Kent – FAST Phase II"	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input checked="" type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	1. Reducing: A. Travel time The project will eliminate daily traffic delay and improve safety at the Union Pacific railroad crossing by eliminating nearly two hours of wait times per day for vehicles at the crossing. B. Direct freight carrier operating cost The reduction of time waiting at this grade separation will have a direct impact on freight operating costs by the savings of fuel, time and increased safety. C. Diesel and carbon emissions - The project will reduce diesel and carbon emissions by eliminating the emissions from the idling of trucks and cars waiting for freight trains to cross the roadway. <b>(Additional Information Available)</b>	City of Kent	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Trnaporation 2040 at: <a href="http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf">http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf</a>	X

## Exhibit 10.4L: Freight Unfunded Investments - Local

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
192	Title: S. 228th Street Union Pacific Railroad Grade Separation  Plan Reference: Transportation Improvement Program	Begin Location: S. 228th St. 700 feet west of the UPRR Tracks Kent  End Location: S. 228th St. 700 East of the UPRR tracks Kent	King	The project will provide a grade separation between the Union Pacific Railroad tracks at S. 228th Street via an overcrossing. The railroad will operate at the existing track grade and the road bed for S. 228th Street will be constructed over the rails. To accommodate the overcrossing, associated improvements will include driveway improvements for the adjacent businesses, to accommodate access, concrete curbs, gutters, and sidewalks, storm drainage improvements, geogrid reinforced block walls, and new lighting.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input checked="" type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	1. Reducing: A. Travel time The project will eliminate daily traffic delay and improve safety at the Union Pacific railroad crossing by eliminating nearly two hours of wait times per day for vehicles at the crossing. B. Direct freight carrier operating cost The reduction of time waiting at this grade separation will have a direct impact on freight operating costs by the savings of fuel, time and increased safety. C. Diesel and carbon emissions - The project will reduce diesel and carbon emissions by eliminating the emissions from the idling of trucks and cars waiting for freight trains to cross the roadway. (Additional Information Available)	City of Kent	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT <input checked="" type="checkbox"/> Rail Plan	For more information including project budget please see: Transportation Improvement Program at: <a href="http://www.psrc.org/assets/8610/A-REV_Detailed_Project_Listings.pdf">http://www.psrc.org/assets/8610/A-REV_Detailed_Project_Listings.pdf</a>	X
193	Title: S 272nd/277th Street Corridor Capacity and Non-Motorized Trail Improvements  Plan Reference: 2014-2019 Transportation Improvement Program	Begin Location: Auburn Way North Auburn  End Location: L Street NE Auburn	King	This project includes preliminary engineering, design, right-of-way acquisition and construction of major widening on S 277th Street including the addition of three lanes, one westbound and two eastbound, a Class I trail, and storm improvement. The project extends from Auburn Way North to L Street NE, approximately 0.9 miles.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Delay – vehicles traveling through the Auburn Way North/S 277th Street intersection experience excessive delays during the weekday peak periods due to single through-lanes on the eastbound/westbound approaches. Congestion – significant congestion and long vehicle queues occur on the eastbound and westbound intersection approaches due to the provision of single through lanes. The project will provide additional capacity which will alleviate this condition. (Additional Information Available)	City of Auburn	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see: 2014-2019 Transportation Improvement Program at: <a href="http://weblink.auburnwa.gov/External/docview.aspx?dbid=0&amp;openfile=true&amp;id=236692">http://weblink.auburnwa.gov/External/docview.aspx?dbid=0&amp;openfile=true&amp;id=236692</a>	X
194	Title: South Access  Plan Reference: PSRC: Transportation 2040	Begin Location: S. 188th Street: Latitude 47.44947, Longitude - 122.307217 SeaTac  End Location: SR 509: Latitude 47.415566, Longitude -	King	New Construction of a two lane, limited access arterial connecting the planned South Airport Link Roadway to the planned extension of SR 509 at I-5.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	By creating a shorter, more direct route to I-5 from the south, truckers will experience less travel delay and decreased travel time which will result in reduced emissions and reduced travel cost for the driver. Based on WSDOT modeling, nearly one in five vehicles on South Link is forecasted to be a light, medium or heavy truck in 2030.  The South Link Project will create an improved "resiliency" for airport access, which will also increase safety and reliability. The South Access Roadway will provide much improved freight mobility from south of the Airport.	Port of Seattle	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input checked="" type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see: PSRC: Transportation 2040 at: <a href="http://www.psrc.org/assets/9201/Appendix_A_13-09.pdf">http://www.psrc.org/assets/9201/Appendix_A_13-09.pdf</a>	
195	Title: S Atlantic Street Rebuild  Plan Reference: PSRC Transportation 2040	Begin Location: Alaskan Way S  End Location: 1st Ave S	King	Rebuild and make operational/ITS improvements to S Atlantic Street	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input checked="" type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	The project will deliver increased resiliency, intermodal connectivity, and access for large and over-dimensional trucks. It will also provide improved safety for mixed modes - pedestrian and freight.  Safeco Field is located on the NE corner of S Atlantic St and 1st Ave S. This venue attracts up to 60,000 fans per game impacting peak freight travel times. Existing demands put the intersection of S Atlantic St and 1st Ave S at LOS F during these periods. (Additional Information Available)	City of Seattle	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	The project is included in the programmatic section of the region's long range plan, rather than being identified as a distinct project.	X

## Exhibit 10.4L: Freight Unfunded Investments - Local

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
196	Title: SE Carr Rd Plan Reference: Six-Year Transportation Improvement Program	Begin Location: Benson Dr SE Renton End Location: Talbot Rd S Renton	King	A corridor design report prepared by King County in 2003 identified the need for roadway improvements from Benson Dr SE (108th Ave SE) to Talbot Rd S. Potential improvements vary from roadway realignment/widening at several locations to address geometric deficiencies, widening to 5-lane roadway (2 lanes westbound, 3 lanes eastbound), to a new 4-5 lane roadway, including bicycle lanes on new alignment.	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input checked="" type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Carr Road is classified as a principal arterial. It has four lanes of traffic with left-turn lanes at intersections. Improvements are necessary to enhance vehicle traffic capacity and safety for vehicles, bicycles, and pedestrians on this major east-west transportation corridor. Detailed quantitative information is available. Upon request the City will provide a copy of Benson Rd SE (SR 515) at Carr Rd SE Intersection.	City of Renton	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see: Six-Year Transportation Improvement Program at: <a href="https://rentonwa.gov/uploadedFiles/Government/PBPW/2014_2019_TIP_DRAFT.PDF">https://rentonwa.gov/uploadedFiles/Government/PBPW/2014_2019_TIP_DRAFT.PDF</a>	
197	Title: S Hanford Street Rebuild Plan Reference: PSRC Transportation 2040	Begin Location: E Marginal Way S End Location: Occidental Ave S	King	Rebuild and make operational/ITS improvements to S Hanford Street	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input checked="" type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	This project seeks to reduce travel time by installing ITS components to alert freight about rail crossing delays, assign greater priority to queuing and turn volume management, and directly increase intermodal connectivity by returning the road to a state of good repair for drayage as well as large and over-dimensional trucks.  2013 turning movement data indicates at least 3,000 freight turning movements per day at the western limit of S Hanford St at East Marginal Way S. In January of 2013, S Hanford St was resurfaced, but the 80+ year old brick base is not designed to take the continuous heavy (80,000+ pound) freight volume. Both Union Pacific and Burlington Northern Santa Fe Railway tracks cross this important east-west connector, and BNSF has expressed concern that the signalized intersections within the project cannot adapt to the multiple daily rail closures associated with rail yard operations.	City of Seattle	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	The project is included in the programmatic section of the region's long range plan, rather than being identified as a distinct project.	X
198	Title: S Holden Street Rebuild Plan Reference: PSRC Transportation 2040	Begin Location: W Marginal Way S End Location: SR 509	King	Rebuild and make operational/ITS improvements to S Holden Street	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input checked="" type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	The project will maintain resiliency for the state economic corridors by returning the roadway connection to a state of good repair. As such it will restore access to large and over-dimensional trucks that may not be able to use the area.  This 800-foot segment connects two state routes as well as a principal arterial. However multiple merges create a congestion point at all approaches. The signal within this project is under state control. The approaches are degrading and have resulted in ruts in the asphalt that exceed 3 inches in some lanes. The resulting uneven pavement discourages heavy or oversize freight use even though the roadway provides an alternate connection from port and rail facilities to the warehousing district in Kent.	City of Seattle	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	The project is included in the programmatic section of the region's long range plan, rather than being identified as a distinct project.	X
199	Title: SW Klickitat Way Rebuild Plan Reference: PSRC Transportation 2040	Begin Location: Klickitat Ave SW End Location: E Marginal Way S	King	Rebuild and make operational/ITS improvements to SW Klickitat Way	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input checked="" type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	S.W. Klickitat Way is a primary access road to the Port of Seattle's s terminal 18 (T-18). At 196 acres, T-18 is the largest of the Port's container handling and storage facilities, and also the largest such facility in the Pacific Northwest.	City of Seattle	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	The project is included in the programmatic section of the region's long range plan, rather than being identified as a distinct project.	X

## Exhibit 10.4L: Freight Unfunded Investments - Local

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
200	Title: South Lander Street Grade Separation  Plan Reference: PSRC Transportation 2040	Begin Location: 1st Ave S  End Location: 4th Ave S	King	This project develops a grade separation of the Lander St. roadway and the Burlington Northern mainline railroad tracks between 1st Ave. S near the Starbucks Headquarters and 4th Ave S. This grade separation will alleviate the growing rail blockages on this important east-west arterial street. South Lander Street is located east of the Port of Seattle, in the Duwamish Manufacturing and Industrial Center. South Lander Street is a FAST Corridor Partnership project and a FMSIB project, and anticipates future federal funding. The bridge is to be four lanes wide, with a 10-foot-wide sidewalk on one side.	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input checked="" type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input checked="" type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	South Lander Street has a 5-lane cross-section with adjacent parking lanes on either side. The street carries 14,080 AAWDT and 300,000 to 4,000,000 annual tons of freight and goods (tonnage class T-3, see the 2011 Washington State Freight and Goods Transportation System maps).  <i>(Additional Information Available)</i>	City of Seattle	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT <input checked="" type="checkbox"/> Rail Plan	The project is included in the programmatic section of the region's long range plan, rather than being identified as a distinct project.	X
201	Title: South Link  Plan Reference: PSRC: Transportation 2040	S. 188th Street: Latitude 47.44947, Longitude -122.307217 SeaTac	King	New construction of a south airport expressway to connect the existing north airport expressway and the airport terminal drives to the planned South Access roadway and extension of SR 509 to I-5. The project would close the existing south airport entrance at S. 192nd Street and International Boulevard and create a new at-grade connection to the local network at S. 188th Street and 28th Avenue S.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	By creating a shorter, more direct route to I-5 from the south, truckers will experience less travel delay and decreased travel time which will result in reduced emissions and reduced travel cost for the driver. Based on WSDOT modeling, nearly one in five vehicles on South Link is forecasted to be a light, medium or heavy truck in 2030.  The South Link Project will create an improved "resiliency" for airport access, which will also increase safety and reliability. The South Link Project will provide much improved freight mobility from south of the Airport.	Port of Seattle	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input checked="" type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/assets/9201/Appendix_A_13-09.pdf">http://www.psrc.org/assets/9201/Appendix_A_13-09.pdf</a>	
202	Title: S Lucile Street Rebuild  Plan Reference: PSRC Transportation 2040	Begin Location: E Marginal Way S  End Location: Airport Way S	King	Rebuild and make operational/ITS improvements to S Lucile Street	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input checked="" type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	When completed, the project will increase reliability and resiliency by converting S Lucile St to a concrete street that can withstand the increased load. Since this is a well-known alternate access to the Argo Rail Yard, it will provide a much needed intermodal resiliency to the established network by formalizing an additional east-west connection.  <i>(Additional Information Available)</i>	City of Seattle	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	The project is included in the programmatic section of the region's long range plan, rather than being identified as a distinct project.	X
203	Title: S Michigan Street ITS Implementation  Plan Reference: PSRC Transportation 2040	Begin Location: E Marginal Way S  End Location: Carlton Ave S	King	Install and operationalize ITS to facilitate freight movement in SR 99 / I-5 interchange area	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	This project will reduce travel time, maintain reliability, and provide much needed resiliency for interstate and intermodal connectivity. The roadway acts as an alternate route for freight moving into and out of the SODO and Lower Duwamish industrial areas and as such allows for growth of economic output.  S Michigan St is an east-west 5-lane principal arterial with a concrete base and partial asphalt overlay that carries 42,400 vehicles per day. Optimizing timing along the corridor will allow this principal arterial to more fluidly move freight traffic to and from the Interstate and the principal arterials (East Marginal Way S, 1st Ave S, and 4th Ave S). The connection allows for resiliency and intermodal connectivity on an intra-state level between the SODO/Lower Duwamish and regional carriers.	City of Seattle	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	The project is included in the programmatic section of the region's long range plan, rather than being identified as a distinct project.	X

## Exhibit 10.4L: Freight Unfunded Investments - Local

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
204	Title: SW Spokane Place Rebuild  Plan Reference: PSRC Transportation 2040	Begin Location: Klickitat Ave SW Seattle  End Location: SW Spokane St Seattle	King	Rebuild and make operational/ITS improvements to SW Spokane Place	<input type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	<p>ITS improvements will improve travel time and reliability while maintaining the resiliency of this network connector, which takes large and over-dimensional trucks to and from key resources on Harbor Island.</p> <p>This one-way roadway offers secondary access to the Port of Seattle's Terminal 18 and is the only candidate for gate realignment to reduce queuing on SW Spokane St which can exceed ¼ mile during peak ship arrival and in turn congests East Marginal Way S. Both SW Spokane St and East Marginal Way S carry heavy freight volumes exceeding 3,000 freight moves per day and are the primary intermodal drayage routes.</p>	City of Seattle	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	The project is included in the programmatic section of the region's long range plan, rather than being identified as a distinct project.	X
205	Title: S Spokane Street Rebuild  Plan Reference: PSRC Transportation 2040	Begin Location: Airport Way S  End Location: Harbor Ave	King	Rebuild and make operational/ITS improvements to S Spokane Street. Includes intersection improvements at Chelan Avenue SW and W Marginal Way.	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input checked="" type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	<p>ITS improvements throughout the corridor will allow freight vehicles to assess alternate routes and provide for greater consistency/reliability in delivery and drayage times. With increased reliability will come greater economic output which will in turn reduce carrier operating costs.</p> <p>The project seeks to incorporate ITS and advanced warning for railroad crossing closures. There are four rail crossings along this route. Specific points along this route also require reconstruction to return the road to a state of good repair. Especially critical is the portion between East Marginal Way and Harbor Island, which exceeds 20% freight vehicle ADT. This location is the access for Terminal 18 and is the main access to Terminal 5 for drayage vehicles. Also important is the area of Spokane St between 6th Ave and Airport Way, which is directly under I-5 and is physically and geometrically constrained.</p>	City of Seattle	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	The project is included in the programmatic section of the region's long range plan, rather than being identified as a distinct project.	X
206	Title: SODO Rail Corridor Grade Separations  Plan Reference: PSRC Transportation 2040	Begin Location: S Royal Brougham Way  End Location: S Spokane Street	King	Improve access to manufacturing and industrial center and Port facilities	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input checked="" type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	<p>Grade separations in the SODO area will reduce travel time, freight carrier operating cost, and emissions. The project also will drastically increase reliability, safety, intermodal connectivity, and resiliency. The positive economic impact to the increased resiliency and removal of crossing impediments is in the million-dollar range annually for just the associated wait time at these crossings. <b>(Additional Information Available)</b></p>	City of Seattle	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	The project is included in the programmatic section of the region's long range plan, rather than being identified as a distinct project.	X
207	Title: Terminal 18 Truck Access Improvements  Plan Reference: PSRC TIP #PS-12	Begin Location: Latitude 47.571713; Longitude -122.350991 Seattle	King	This project will reconfigure the southern end of the Port of Seattle's Terminal 18 to relocate the security check and Optical Character Recognition (OCR) equipment to move the truck queue generated by the security check out of the public right-of-way and onto Port property. Other project components include fence, light standard and fire hydrant relocation as well as minor demolition and pavement activities.	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	<p>The project will eliminate trucks queuing onto westbound Lower Spokane Street waiting to enter Terminal 18, thus freeing up roadway capacity for other vehicles. This also improves safety along the roadway for both the queued trucks and other traffic. In general, this will help improve freight mobility and the flow of goods and allow the Duwamish Manufacturing Center an opportunity to grow. Because the Duwamish MIC already supports more than 80,000 jobs, it's important to utilize the existing transportation system to its highest level. Neighboring companies impacted by the recurring queues include Vigor Shipyard, Kinder Morgan, and Nucor Steel. <b>(Additional Information Available)</b></p>	Port of Seattle	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input checked="" type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see: PSRC TIP #PS-12	

## Exhibit 10.4L: Freight Unfunded Investments - Local

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
208	Title: Terminal 46 Modernization Project Plan Reference: Port of Seattle 2014 Capital Budget	Terminal 46 is located west of East Marginal Way between S. Jackson Street and S. Atlantic Street in Seattle, Washington.	King	T46 was one of the first container terminals in the US, helping enable the massive growth of US-Asia trade of the second half of the 20th Century. Today it remains one of our nation's premier trade infrastructure assets, handling 20% of port cargo volume and supporting 3,200 NW jobs. After decades of service, investments must be made to address maintenance issues that threaten the reliability and cost-effectiveness of the trade corridor and to compete with major upgrades at Canadian ports. <i>(Additional Information Available)</i>	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	State of good repair: Dock rehabilitation will extend service life of T46 by 25 to 30 years and avoid a much more costly tear down and rebuild scenario. Estimates suggest a \$36.9m rehabilitation would provide levels of service consistent with a \$303m rebuild project, while maintaining operations and avoiding environmental implications of removal and replacement. <i>(Additional Information Available)</i>	Port of Seattle	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input checked="" type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  Port of Seattle 2014 Capital Budget	
209	Title: Terminal 5 (T5) Dock Upgrade Plan Reference: Port of Seattle 2014 Capital Budget	Project is on Terminal 5 which is just north of the West Seattle Freeway, West of Terminal 18 and just east of Harbor Avenue in West Seattle	King	Upgrade 600 linear feet of dock and provide additional electrical capacity to support 22' wide cranes and additional refrigerated container power plugs at T5 north berth.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Increased capacity, efficiency and economic output: The dock upgrade will enable deployment of larger cranes and enable the north berth at T46 to service super post-Panamax ships. Increasing size of ships calling at the berth from 8,000 TEUs to 11,000 TEUs would increase capacity by around 3,000 TEUs a week. Another benefit of upgrading to accommodate larger ships is reduced emissions per container and lower cost. We estimate the upgrade would result in \$24.7 million in annual savings for ocean carriers, which could be passed on to shippers or serve as an inducement to bring more volume through Seattle. <i>(Additional Information Available)</i>	Port of Seattle	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input checked="" type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  Port of Seattle 2014 Capital Budget	
210	Title: W Emerson Street / W Emerson Place / W Nickerson St/ 15th Ave W Interchange Structures (Gilman Avenue W) Rebuild Plan Reference: PSRC: Transportation 2040	Begin Location: 15th Ave W End Location: 31st Ave W	King	Rebuild W Emerson Street and replace bridge to improve freight connectivity	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	This project seeks to return to a state of good repair the only feasible freight route to the Fisherman's Terminal which includes maritime commercial and industrial businesses. Although pavement condition is good (80 out of 100), the elevated rail grade crossing is deteriorating and needs full reconstruction. The route is an over-dimensional truck route as well as an important intermodal connector for perishable goods.	City of Seattle	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	The project is included in the programmatic section of the region's long range plan, rather than being identified as a distinct project.	X
211	Title: W Marginal Way SW Rebuild Plan Reference: PSRC Transportation 2040	Begin Location: SW Spokane St End Location: SR509	King	Rebuild and make operational/ITS improvements to W Marginal Way SW	<input type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	This project seeks to reduce travel time and increase resiliency, intermodal connectivity, and reliability via ITS and intersection rebuild.  The north and south endpoints of this project are limited to 3-lane cross sections while the interior of the roadway is a 5-lane cross section. The resulting constriction of the access points creates congestion and delay that limits this route's effectiveness as a primary route and as an important secondary route when East Marginal Way and SR-99 are unavailable. ADT across the corridor is 16,900 and is approximately 16% freight. Pavement quality is degrading quickly at the 2nd Ave S intersection, and is now 60 out of 100 while the remainder of the project is approximately 80 out of 100.	City of Seattle	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	The project is included in the programmatic section of the region's long range plan, rather than being identified as a distinct project.	X

## Exhibit 10.4L: Freight Unfunded Investments - Local

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
212	Title: Willis Street Grade Separations  Plan Reference: PSRC: Transportation 2040	Begin Location: Central Ave. Kent  End Location: SR 167 Kent	King	Provides a critical, grade-separated link through the commercial/industrial/central area of Kent. Links the valley warehouse/industrial center to SR 167 and I-5.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input checked="" type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	1. Reducing: A. Travel time The project will eliminate daily traffic delay and improve safety at the railroad crossing by eliminating over two hours of wait times per day for vehicles at the crossing. B. Direct freight carrier operating cost The reduction of time waiting at these grade separations will have a direct impact on freight operating costs by the savings of fuel, time and increased safety. C. Diesel and carbon emissions - The project will reduce diesel and carbon emissions by eliminating the emissions from the idling of trucks and cars waiting for freight trains in order to cross the roadway. (Additional Information Available)	City of Kent	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT <input checked="" type="checkbox"/> Rail Plan	For more information including project budget please see:  PSRC: Trnaporation 2040 at: <a href="http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf">http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf</a>	X
213	Title: Port of Chehalis Rail Infrastructure Development  Plan Reference:	Begin Location: 46.6304 -122.9239 Chehalis  End Location: 46.6227 -122.9058 Chehalis	Lewis	2014 – 2019 Plan to expand rail infrastructure within the Chehalis Industrial Park to attract businesses to create jobs in our community.	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	1. Reducing: A. Travel time: Travel time due to Interstate and regional highway congestion and delay are reduced by rail transportation. B. Direct freight carrier operating cost: Direct transfer to rail cars at the Port reduces congestion at reload and intermodal facilities elsewhere in the region thereby reducing operating costs at those facilities. C. Diesel and carbon emissions: More freight on rail means fewer trucks on the highways thereby reducing GHG and diesel emissions. 2. Increasing: D. Reliability of freight shipments without the possibility of road congestion delays E. Economic output due to higher volumes of freight movement in and out of the industrial park. (Additional Information Available)	Port of Chehalis	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input checked="" type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:	
214	Title: 70TH Ave East grade separation at UPRRR and arterial corridor completion  Plan Reference: Six Year Transportation Improvement Program	Begin Location: Lat 47° 13' 20" Lon 122° 20' 12" Fife  End Location: Lat 47° 13' 36" Lon 122° 20' 11" Fife	Pierce	Corridor improvements as part of Canyon Road Northerly extension, including grade separation at the Union Pacific Railroad and widening to a uniform 5 lane urban principal arterial complete street, plus additional lands at intersections with River Road, Levee Road, and Valley Avenue.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input checked="" type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	1. Reducing: A. Travel time X B. Direct freight carrier operating cost X C. Diesel and carbon emissions X 2. Increasing: D. Reliability X E. Economic output X F. Resiliency (reducing closures of State Freight Economic Corridors) G. State of good repair H. Safety or security X I. Intermodal connectivity J. Access for large and over-dimensional trucks X (Additional Information Available)	City of Fife	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT <input checked="" type="checkbox"/> Rail Plan	For more information including project budget please see:  Six Year Transportation Improvement Program at: <a href="http://www.cityoffife.org/downloads/public_works/Stip_2014-2019_YP_Final_10413.pdf">http://www.cityoffife.org/downloads/public_works/Stip_2014-2019_YP_Final_10413.pdf</a>	X

## Exhibit 10.4L: Freight Unfunded Investments - Local

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
215	Title: 112th Street East/South  Plan Reference: PSRC: Transportation 2040	Begin Location: 112th Street East and 86th Avenue East intersection Puyallup  End Location: 112th Street South and Steele Street South intersection Lakewood	Pierce	Widen and reconstruct existing (two-lane in sections) roadway to 5 lanes, improve intersections and provide non-motorized features.	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	112th Street East is a principal east/west arterial in Pierce County that parallels and provides an alternative route to using SR-512, a highly traveled and regularly congested state route. This corridor provides direct access to the Puyallup South Hill Mall regional center at its eastern terminus and to JBLM Military Base, SR-7, and I-5 at its western terminus. The area's growth has caused increased congestion, travel delays, and failed concurrency. The project will improve access by truck traffic traveling on 112th Street East/South to deliver freight and goods to destinations in the South Hill Mall area. 112th Street East serves as an alternate route to SR-512 in the event of closure, such as after the year 2000 Nisqually Earthquake when SR-512 was closed for inspection and this corridor was the only direct eastwest route in the area.  <i>(Additional Information Available)</i>	Pierce County	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT  <input checked="" type="checkbox"/> Rail Plan	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf">http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf</a>	X
216	Title: 176th Street East  Plan Reference: PSRC: Transportation 2040	Begin Location: SR 161 and 176th Street East intersection Puyallup  End Location: SR 7 and 176th Street East intersection Dupont	Pierce	Widen and reconstruct existing 2/4-lane road to 5 lanes. Provide non-motorized features.	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	176th Street East is a major east/west Principal Arterial and T2 truck route that provides direct access to the Frederickson MIC and the South Hill Employment Center and connects to the major north/south corridors (SR-7, Canyon Road East, and SR-161) in the mid-Pierce County area. The Frederickson MIC is the largest industrial/employment center in unincorporated Pierce County; Boeing, Toray Composites, the Port of Tacoma, and others conduct business there. The area's growth has caused increased congestion, travel delays, and failed concurrency. The purpose of this project is to bring the roadway segment into compliance with County concurrency requirements by adding additional roadway capacity.  <i>(Additional Information Available)</i>	Pierce County	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf">http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf</a>	X
217	Title: Additional Arrival/Departure Tracks  Plan Reference: Port of Tacoma Strategic Plan 2012-2022	Begin Location: 47° 14'54.50" N Tacoma  End Location: 122° 22'23.90" W Tacoma	Pierce	Additional Arrival and Departure Tracks.	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	1. Reducing: B. Direct freight carrier operating cost  2. Increasing: D. Reliability E. Economic output I. Intermodal connectivity	Port of Tacoma	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input checked="" type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT <input checked="" type="checkbox"/> Rail Plan	For more information including project budget please see:  Port of Tacoma Strategic Plan 2012-2022 at: <a href="http://www.portoftacoma.com/strategic-plan">http://www.portoftacoma.com/strategic-plan</a>	X

## Exhibit 10.4L: Freight Unfunded Investments - Local

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
218	Title: Canyon Road East  Plan Reference: PSRC: Transportation 2040	Begin Location: Canyon Road East and 72nd Street East Puyallup  End Location: Canyon Road East and Pioneer Way East Fife	Pierce	Widen and reconstruct existing roadway to provide additional lanes, add turn lane(s) at intersections, add auxiliary lane where appropriate, and provide non-motorized features.	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	Canyon Rd E is a major north/south arterial and T1/T2 truck route and the only north-south Urban Principal Arterial in the seven mile area between SR-7 and SR-161. The purpose of improving the existing Canyon Road East and extending it to the north and east (as part of the Canyon Road East Northerly Extension) is to continue to build toward the ultimate goal of having a direct link, T1/T2 freight route, between the Port of Tacoma MIC and the Fredrickson MIC. The completed Canyon Road corridor will connect existing, recent, and future improvements in Fife. The improvements are part of the greater multi-jurisdictional freight corridor effort.  <b>(Additional Information is Available)</b>	Pierce County	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf">http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf</a>	X
219	Title: Canyon Road East  Plan Reference: PSRC: Transportation 2040	Begin Location: Intersection of Canyon Road East and 99th Street East Puyallup  End Location: 900 feet north of the intersection of Canyon Road East and 84th Street East Puyallup	Pierce	Widen to five lanes, reconstruct existing arterial including non-motorized facilities.	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	Canyon Rd E is a major north/south arterial and T1/T2 truck route and the only north-south Urban Principal Arterial in the seven mile area between SR-7 and SR-161. The purpose of improving the existing Canyon Road East and extending it to the north and east (as part of the Canyon Road East Northerly Extension) is to continue to build toward the ultimate goal of having a direct link, T1/T2 freight route, between the Port of Tacoma MIC and the Fredrickson MIC. The completed Canyon Road corridor will connect existing, recent, and future improvements in Fife. The improvements are part of the greater multi-jurisdictional freight corridor effort.  <b>(Additional Information is Available)</b>	Pierce County	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf">http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf</a>	X
220	Title: Canyon Road East  Plan Reference: PSRC: Transportation 2040	Begin Location: 1000 ft south of the intersection of Canyon Road East and Pioneer Way East Puyallup  End Location: 70th Avenue East at 48th St Ct E Vicinity Fife	Pierce	Northerly Extension. Extend major arterial roadway from its current northerly terminus to connect with the planned completion of SR-167, crossing over 2 railroads and the Puyallup River. The project would be a four-lane roadway with paved shoulders (to accommodate non-motorized modes). This roadway would link the planned employment center in Frederickson with the Port of Tacoma and destinations northward (e.g. Seattle).	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input checked="" type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	The purpose of extending Canyon Road East to the north and east is to continue to build toward the ultimate goal of having a direct link, T1/T2 freight route, between the Port of Tacoma MIC and the Fredrickson MIC. The new road will connect recent and future improvements in Fife. The improvements are part of the greater multi-jurisdictional freight corridor effort. Canyon Road Corridor stretches north, straight as an arrow, from the Frederickson MIC, until it reaches Pioneer Way East. At that point, the freight corridor ceases to exist, ending in a "T" intersection. Freight traffic must either abandon its journey across the Puyallup Valley or make an at-grade rail crossing to enter a maze of disconnected routes that include many unsignalized intersections, to reach the City of Fife and then the Port of Tacoma.  <b>(Additional Information is Available)</b>	Pierce County	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf">http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf</a>	X
221	Title: Canyon Road East  Plan Reference: PSRC: Transportation 2040	Begin Location: 400 feet north of the intersection of Canyon Road East and 84th Street East Puyallup  End Location: Canyon Road East and 72nd Street East Puyallup	Pierce	Widen and reconstruct existing roadway to provide additional lanes, add turn lane(s) at intersections, add center turning lane where appropriate, and provide non-motorized features.	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	Canyon Rd E is a major north/south arterial and T1/T2 truck route and the only north-south Urban Principal Arterial in the seven mile area between SR-7 and SR-161. The purpose of improving the existing Canyon Road East and extending it to the north and east (as part of the Canyon Road East Northerly Extension) is to continue to build toward the ultimate goal of having a direct link, T1/T2 freight route, between the Port of Tacoma MIC and the Fredrickson MIC. The completed Canyon Road corridor will connect existing, recent, and future improvements in Fife. The improvements are part of the greater multi-jurisdictional freight corridor effort.  <b>(Additional Information is Available)</b>	Pierce County	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf">http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf</a>	X

## Exhibit 10.4L: Freight Unfunded Investments - Local

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
222	Title: Double Ending Washington United Terminals Intermodal Yard  Plan Reference: Port of Tacoma Strategic Plan 2012-2022	Begin Location: 47°-15'-48.10" N, 122°-23'-49.43" W Fife  End Location: 47°-15'-54.98" N, 122°-24'05.22" W Fife <b>(Additional Information Available)</b>	Pierce	Improving train movements within the Tideflats require connecting the northerly end of the existing Washington United Terminals Intermodal Yard to the rail line on the west side of Port of Tacoma Road. Project includes building 3,750 track feet, relocation of existing truck gate, guard house, cameras/optical recognition readers, railroad crossing, and utility modifications to support the gate relocation and rail installation.	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	1. Reducing: B. Direct freight carrier operating cost  2. Increasing: D. Reliability E. Economic output I. Intermodal connectivity	Port of Tacoma	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input checked="" type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT <input checked="" type="checkbox"/> Rail Plan	For more information including project budget please see:  Port of Tacoma Strategic Plan 2012-2022 at: <a href="http://www.portoftacoma.com/strategic-plan">http://www.portoftacoma.com/strategic-plan</a>	X
223	Title: Double Ending Pierce County Intermodal Yard  Plan Reference: Port of Tacoma Strategic Plan 2012-2022	Begin Location: 47°-14'-53.67" N, 122°-22'-23.67" W Fife  End Location: 47°-14'-57.29" N, 122°-22'09.89" W Fife	Pierce	Improving train movements along the SR509 rail corridor requires connecting the easterly end of the existing Pierce County Terminal Intermodal Yard to the North and South lead tracks. Project includes extending 12 tracks 1,300 feet east, constructing a railroad bridge across Wapato Creek and relocating existing 230 kV overhead power lines.	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	1. Reducing: B. Direct freight carrier operating cost  2. Increasing: D. Reliability E. Economic output I. Intermodal connectivity	Port of Tacoma	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input checked="" type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT <input checked="" type="checkbox"/> Rail Plan	For more information including project budget please see:  Port of Tacoma Strategic Plan 2012-2022 at: <a href="http://www.portoftacoma.com/strategic-plan">http://www.portoftacoma.com/strategic-plan</a>	X
224	Title: DuPont-Steilacoom Road  Plan Reference: PSRC: Transportation 2040	Begin Location: from I-5 Exit 119, intersection of Steilacoom-DuPont Road and Barksdale Avenue DuPont  End Location: Center Drive, intersection of Steilacoom DuPont Road and Center Drive DuPont	Pierce	Scope of the project has not been fully defined, as the project will need to be integrated with various potential improvements along the I-5/JBLM corridor near DuPont. Widening Improvements to DuPont-Steilacoom Rd are anticipated to accommodate expected growth in the City of DuPont and nearby areas. The existing road is two lanes with left turn pockets.	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input checked="" type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	The project coupled with other corridor level improvements will reduce travel time to and congestion increasing freights and economic vitality and reliability.	City of Dupont	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/transportation/t2040/t2040-pubs/final-draft-transportation-2040">http://www.psrc.org/transportation/t2040/t2040-pubs/final-draft-transportation-2040</a>	X
225	Title: Lake Tapps Corridor (Stewart Road - 8th Street East) UPRR at grade crossing  Plan Reference: 2013-2016 STIP	Begin Location: Valentine Avenue SE 47o 15' 01" N 122o 14' 55" W  End Location: Butte Avenue SE 47o 15' 32" N 122o 14' 41" W	Pierce	This project is a phase of the Lake Tapps (Stewart Road - 8th Street East) Corridor Project. This phase of the project consists of adding intersection improvements (Butte Avenue SE and the Manke lumber driveway), pedestrian facilities, and improvements to an existing at-grade road and pedestrian railroad crossing. This project does not provide a substantial benefit to Pacific. However, there is a regional significance for Auburn, Sumner, and unincorporated Pierce County.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	The widening of this segment of the road in conjunction with the rest of the improvements underway in the corridor will reduce travel times and fuel emissions. The project will also increase transportation safety and economic development in Pacific and Sumner. Lake Tapps Corridor currently serves an average daily traffic (ADT) of 14,500 vehicles, which is expected to climb to 40,000 in Year 2025. City of Pacific has adopted LOS D as the lowest level of acceptable service. The corridor is a designated truck route per the City of Pacific Transportation Plan, and over 10% of the current ADT is trucks (three axels or more). Absence of left turn lanes cause trucks to block through movements on Stewart Road.  <b>(Additional Information Available)</b>	City of Pacific	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  2013-2016 STIP at: <a href="http://www.wsdot.wa.gov/NR/rdonlyres/A60AA54E-7A61-42CB-B2A3-FC0E763C94D1/0/2012_2015_STIP.pdf">http://www.wsdot.wa.gov/NR/rdonlyres/A60AA54E-7A61-42CB-B2A3-FC0E763C94D1/0/2012_2015_STIP.pdf</a>	X

## Exhibit 10.4L: Freight Unfunded Investments - Local

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
226	Title: Port Transfer Yard Connection  Plan Reference: Port of Tacoma Strategic Plan 2012-2022	Begin Location: 47°15'18.50"N 122°24'2.30"W Tacoma  End Location: 47°15'27.10"N 122°24'11.00"W Tacoma	Pierce	This project would install a new connection from the Port Transfer Yard to existing tracks along Lincoln Avenue providing a direct access route to US Oil and reduce road/rail congestion on Port of Tacoma Road.	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	1. Reducing: A. Travel time B. Direct freight carrier operating cost  2. Increasing: E. Economic output	Port of Tacoma	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input checked="" type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT <input checked="" type="checkbox"/> Rail Plan	For more information including project budget please see:  Port of Tacoma Strategic Plan 2012-2022 at: <a href="http://www.portoftacoma.com/strategic-plan">http://www.portoftacoma.com/strategic-plan</a>	X
227	Title: Port of Tacoma Road Rehabilitation Project  Plan Reference: PSRC: Transportation 2040	E. 11th Street to SR 509 overpass (just south of Marshall Avenue)	Pierce	The project will include replacing the existing roadway with either asphalt or cement concrete. The new roadway surface will be designed to accommodate heavy haul vehicles. Existing curb and gutter will be replaced or added as necessary to provide continuous curb and gutter. Sidewalks and driveways will be provided/replaced where missing or damaged. All elements will be improved to ADA standards. Other roadway amenities will be provided as necessary including but not limited to storm drainage, streetlighting, channelization, permanent traffic signal and landscaping.	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input checked="" type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	1. Reducing: A. Travel time B. Direct freight carrier operating cost  2. Increasing: G. State of good repair H. Safety or security	Port of Tacoma	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input checked="" type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC Transportation 2040 at: <a href="http://www.psrc.org/assets/9201/Appendix_A_13-09.pdf">http://www.psrc.org/assets/9201/Appendix_A_13-09.pdf</a>	X
228	Title: Port of Tacoma Pier 4 Reconfiguration  Plan Reference: Port of Tacoma Strategic Plan 2012-2022	Pier 4 on the General Central Peninsula, Port of Tacoma, Tacoma, WA  Located at the corner of East 11th Street and Port of Tacoma Road:	Pierce	In alignment with the Port of Tacoma's Strategic Plan objective to improve Port business assets to meet market demand, the Port is pursuing the redevelopment of the General Central Peninsula (GCP) terminal complex including the upgrade of Pier 4.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements <input checked="" type="checkbox"/> Other; Pier upgrade to	2. Increasing: E. Economic output  I. Intermodal connectivity	Port of Tacoma	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input checked="" type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  Port of Tacoma Strategic Plan 2012-2022 at: <a href="http://www.portoftacoma.com/strategic-plan">http://www.portoftacoma.com/strategic-plan</a>	X
229	Title: Puyallup Bridge F16A & F16B Replacement  Plan Reference: Six Year Comprehensive Transportation Plan	Begin Location: Portland Avenue and Puyallup Avenue intersection  End Location: Approximately 1,200 ft. east of the Portland Avenue/Puyallup Avenue intersection	Pierce	Bridge replacement.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	A. Travel time. Without this project the bridge will close and travel times will increase approximately 5 minutes per truck using a detour route. B. Direct cost. The increased travel time will increase fuel costs to the freight carrier. C. Emissions. The increased travel time will increase emissions for 800 trucks per day. D. Reliability. There are only 4 bridges across the Puyallup River. Keeping all bridges open increases reliability of freight schedules to the Port. E. Economic. Keeping the Port accessible with open transportation corridors allows freight volumes to increase and thus increases economic output. (Additional Information Available)	City of Tacoma	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  Six Year Comprehensive Transportation Plan	X

## Exhibit 10.4L: Freight Unfunded Investments - Local

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
230	Title: Puyallup Bridge Rehabilitation (F16C, F16D, F16E)  Plan Reference: Six Year Comprehensive Transportation Plan	Begin Location: Approximately 1,200 ft. east of the Portland Avenue/Puyallup Avenue intersection Tacoma  End Location: Eells Street and Milwaukee Way Tacoma	Pierce	Bridge replacement. Note the Puyallup River Bridge is made of 6 segments. This project includes segments F16C, D, E and F16.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	A. Travel time. Without this project the bridge will close and travel times will increase approximately 5 minutes per truck using a detour route. B. Direct cost. The increased travel time will increase fuel costs to the freight carrier. C. Emissions. The increased travel time will increase emissions for 800 trucks per day. D. Reliability. There are only 4 bridges across the Puyallup River. Keeping all bridges open increases reliability of freight schedules to the Port. E. Economic. Keeping the Port accessible with open transportation corridors allows freight volumes to increase and thus increases economic output.  <i>(Additional Information Available)</i>	City of Tacoma	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  Six Year Comprehensive Transportation Plan	X
231	Title: Stewart Road Bridge  Plan Reference: TIP	Begin Location: Butte Avenue E. Pacific  End Location: 142nd Avenue E. Sumner	Pierce	This bridge would replace the existing 2-lane bridge. It will be two unequal length spans. The width will be 74 feet to accommodate 4 lanes, a sidewalk on one side, and trail crossing on the other.	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input checked="" type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	By increasing the number of lanes from two to four, the bridge will not be a bottleneck thereby reducing travel time, thereby reducing the operating cost and the emissions caused by idling trucks. The bridge improvements include raising the bridge which should eliminate the potential for flooding on the bridge. By doing so, the reliability and resiliency will be increased. With the addition of the extension of the regional trail and sidewalks across the bridge, safety will be improve by eliminating conflicts with vehicular traffic. With four lanes instead of two, large and over-dimensional trucks would be able to utilize the bridge.  <i>(Additional Information Available)</i>	City of Sumner	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  TIP at: <a href="http://www.ci.sumner.wa.us/Documents/Public%20Works/TIP.pdf">www.ci.sumner.wa.us/Documents/Public%20Works/TIP.pdf</a>	X
232	Title: Tacoma Rail East End Yard Reconfiguration  Plan Reference: Port of Tacoma Strategic Plan 2012-2022	Begin Location: 47° 14'54.50" N Tacoma  End Location: 122° 23'30.35" W Tacoma	Pierce	East End Yard Reconfiguration	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	1. Reducing: A. Travel time C. Diesel and carbon emissions  2. Increasing: D. Reliability E. Economic output I. Intermodal connectivity	Port of Tacoma	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input checked="" type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT <input checked="" type="checkbox"/> Rail Plan	For more information including project budget please see:  Port of Tacoma Strategic Plan 2012-2022 at: <a href="http://www.portoftacoma.com/strategic-plan">http://www.portoftacoma.com/strategic-plan</a>	X
233	Title: Tacoma Rail Classification Yard West-end Reconfiguration  Plan Reference: Port of Tacoma Strategic Plan 2012-2022	Begin Location: 47° 14'54.80" N Tacoma  End Location: 122° 24'18.20" W Tacoma	Pierce	West End Reconfiguration Project	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	1. Reducing: A. Travel time  2. Increasing: D. Reliability E. Economic output I. Intermodal connectivity	Port of Tacoma	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input checked="" type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT <input checked="" type="checkbox"/> Rail Plan	For more information including project budget please see:  Port of Tacoma Strategic Plan 2012-2022 at: <a href="http://www.portoftacoma.com/strategic-plan">http://www.portoftacoma.com/strategic-plan</a>	X

## Exhibit 10.4L: Freight Unfunded Investments - Local

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
234	Title: Wind River Road Intersection  Plan Reference: Skamania County Regional Transportation Plan	Begin Location: MP 47.40 Stevenson  End Location: MP 47.55 Stevenson	Skamania	Intersection improvements to improve westbound access from SR14.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Reducing: A) Travel time - No measurable impact to through truck traffic, but with potential closures of Hot Springs Avenue, the intersection improvements could reduce the travel time for more than 100 daily truck trips into Carson by 15 minutes per trip by avoiding the detour into Stevenson. B) Direct freight carrier operating cost - Significant operating cost reductions for the Carson truck traffic would be realized with the intersection improvements. C) Diesel and carbon emissions - Significant reductions would occur with the elimination of the 10-mile detour round trip for the Carson truck traffic.  <span style="color: red;">(Additional Information Available)</span>	Skamania County	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  Skamania County Regional Transportation Plan at: <a href="http://www.rtc.wa.gov/programs/#RTP">http://www.rtc.wa.gov/programs/#RTP</a>	X
235	Title: 100th Street SE Connector  Plan Reference: PSRC: Transportation 2040	Begin Location: -122.223272; 47.907421 Everett  End Location: -122.207007; 47.907278 Everett	Snohomish	Arterial access improvements to SR 527; a bridge or underpass, at 100th Street will relieve congestion at the SR99/I-5/SR526/SR527 intersection which is a major aerospace freight corridor.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	This proposed project would reduce truck delay by 542 hours/day and general traffic delay by another 4,167 hours/day.	City of Everett	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf">http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf</a>	X
236	Title: Everett Arterial Access Improvements  Plan Reference: PSRC: Transportation 2040	Begin Location: Just North of I-5 Everett Ave Half Interchange (Exit 194) Everett  End Location: Just South of I-5 Pacific Ave Half Interchange (Exit 193) Everett	Snohomish	Arterial access improvements to US 2 and I-5 in Everett to reconfigure the downtown Everett interchanges along I-5 by constructing one-way frontage roads between Everett Avenue and Pacific Avenue, simplifying access routes for drivers.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	It is difficult to quantify the travel time savings of this project without conducting sophisticated modeling and developing a series of assumptions. It is assumed that this project would improve traffic operations in the project vicinity, as traffic would not need to "condense" at the existing single access locations leading to the freeway ramps, because there would be one-way frontage access between Pacific and Everett Avenues with direct access to I-5. Queuing should also be reduced by elimination of circuitous routes to ramps.	City of Everett	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf">http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf</a>	X
237	Title: E. Everett Ave Overpass  Plan Reference: PSRC: Transportation 2040	Begin Location: -122.180326 /47.981671 Everett  End Location: -122.175520 /47.981584 Everett	Snohomish	Everett Avenue Grade Separation; construct an unobstructed grade divided railroad overcrossing off the end of Everett Avenue to the Railroad Ave River Point area, eliminating potential vehicle / train conflicts	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input checked="" type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	This proposed project would reduce truck delay by 770 hours/day over the next ten years and general traffic delay by another 3,300 hours/day. This will lead to a reduction of queuing by 75 vehicles per lane. The volume to capacity ratio for this proposed project is 0.83	City of Everett	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf">http://www.psrc.org/assets/4889/T2040_AppendixM_FINAL.pdf</a>	X

## Exhibit 10.4L: Freight Unfunded Investments - Local

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
238	Title: Hardeson Road Interchange at SR 526  Plan Reference: PSRC: Transportation 2040	Begin Location: -122.243854 /47.923575 Everett  End Location: -122.237106 /47.923525 Everett	Snohomish	Arterial access improvements to SR 526; construct access ramps on SR 526 at Hardeson Road to improve traffic flow on SR 526 and local streets within the SW Everett industrial area.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	Over the next ten years, this project is expected to reduce truck delay by 815 hours/day and general traffic delay by 4,000 hours/day. The project is also expected to reduce queues by 75 vehicles per lane. The volume to capacity ratio for this proposed project is 0.83.  The proposed project will construct access ramps on SR 526 at Hardeson Road to improve traffic flow on SR 526 and local streets within the SW Everett industrial area. Access will be provided for SR 526 traffic movements heading to and from the east.  <i>(Additional Information Available)</i>	City of Everett	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/assets/9488/T2040ProjectUpdates20130411.pdf">http://www.psrc.org/assets/9488/T2040ProjectUpdates20130411.pdf</a>	X
239	Title: Phase I -Re-designation of SR 529 & Improvements  Plan Reference: PSRC: Transportation 2040	Begin Location: 122.210632; /47.963269 Everett  End Location: -122.214237; /47.976429 Everett	Snohomish	Arterial access improvements from Port of Everett to I-5; signal improvements, expanded turn lanes and radii at key intersections to better accommodate over-dimensional freight traffic	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	The current truck route experiences steep grade conditions and traffic congestion along Pacific Ave. and on the entrance ramps at I-5 and Pacific causing 1,000 trucks a day to use Everett Avenue to access I-5. Everett Avenue bisects the Central Business District. Speed reliability will improve as the new route has lower traffic congestion, less signal controlled intersections, lower pedestrian movements, and more gradual grade changes. This action will improve reliability, speed, and result in increased capacity. The proposed intersection work will improve the geometrics to accommodate truck movement.	City of Everett	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  PSRC: Transportation 2040 at: <a href="http://www.psrc.org/assets/9201/Appendix_A.pdf">http://www.psrc.org/assets/9201/Appendix_A.pdf</a>	X
240	Title: Snohomish River Federal Navigation Channel Minor Replacement  Plan Reference: 2013 Capital Improvement Program	Snohomish River Navigation Channel stations: 328+50-340+50 Everett	Snohomish	The Snohomish River Navigation Channel includes two settling basins, 6.3 miles of navigation channel and more than 13,000 feet of training dikes. The existing lower settling basin, located just west of the Port's North Marina and boat launch facilities is 1,200 feet long, 700 feet wide and is maintained to a depth of -20 feet (MLLW) between stations 333+50 and 345+50. It should be noted the Port of Everett also owns the nearby Jetty Island; an important habitat for Endangered Species Act listed salmonids, and other important raptors and water fowl. The Jetty Island dock is immediately adjacent to the lower settling basin.  <i>(Additional Information Available)</i>	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	The federally-maintained Snohomish River Navigation Channel is a critical commerce link handling the movement of more than 1.3 million tons of cargo annually for commercial interests. Over sedimentation of the channel could impact operations at Naval Station Everett and local search and rescue missions.	Port of Everett	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input checked="" type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  Capital Improvement Program: <a href="http://www.portofeverett.com/docs/resolution_no._9766.pdf">http://www.portofeverett.com/docs/resolution_no._9766.pdf</a>	X
241	Title: South Terminal Wharf Expansion/Strengthening  Plan Reference: 2013 Capital Improvement Program	NE Point: 47° 58' 17.51" N, 122° 13' 43.33" W SE Point: 47° 58' 24.59" N, 122° 13' 48.06" W NW Point: 47° 58' 34.30" N, 122° 13' 30.46" W SW Point: 47° 58' 32.70" N, 122° 13' 24.00" W	Snohomish	The existing wharf at South Terminal is a concrete deck superstructure supported on concrete piling. The wharf was constructed in the late 1970s by the Weyerhaeuser Co., and was designed to support 500 pounds per square foot (PSF) live load. Modern cargo operations, particularly in bulk/breakbulk operations, typically require 1,000 PSF live load or greater. Some of the concrete beams supporting the superstructure are showing their age with cracking and spalling. This project will reconstruct the existing dock structure to support a 1,000 PSF live load, which will allow the Port to fully utilize mobile cranes, reachstackers, top-picks, and other modern cargo-handling equipment on the wharf. The project will also construct a "heavy-lift" section on the dock rated to 1,500 PSF live load capacities to handle heavy cargoes.  <i>(Additional Information Available)</i>	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	The Port of Everett's current operations generate nearly 34,000 jobs for our region. The long-term economic benefits of the south terminal Intermodal Freight Project would create a projected 1,619 direct, indirect, and induced jobs in a five year period. This number jumps to 2,475 in a 20 year horizon. The firms employing the 524 direct jobs are projected to make \$23.1 million of local purchases, which in turn are estimated to support 209 indirect jobs. These indirect job holders are projected to earn \$8.6 million in wages and salaries annually.  <i>(Additional Information Available)</i>	Port of Everett	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input checked="" type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  Capital Improvement Program: <a href="http://www.portofeverett.com/docs/resolution_no._9766.pdf">http://www.portofeverett.com/docs/resolution_no._9766.pdf</a>	X

## Exhibit 10.4L: Freight Unfunded Investments - Local

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
242	Title: Bigelow Gulch Projects 2-6  Plan Reference: HORIZON 2040: The Metropolitan Transportation Plan for the Spokane Metropolitan Planning Area	Multiple Project Locations  (Additional Information Available)	Spokane	Bigelow Gulch Rd. Project 2 - urban boundary to East Weile Road Widen to four lanes with center turn lane Bigelow Gulch Rd. Project 3 - East Weile to Jensen Widen to four lanes with center turn lane Bigelow Gulch Rd. Project 4 - Old Argonne Rd to Evergreen Rd Widen to four lanes with center turn lane Bigelow Gulch Rd. Project 4A - Forker Connector Bigelow Gulch overpass at Forker Rd Bigelow Gulch Rd. Project 5 - Forker Connector Widen Forker from Progress to Bigelow Gulch Rd to four lanes with center turn lane Bigelow Gulch Rd. Project 6 - Forker Connector Widen Forker to four lanes with center turn lane from Evergreen to Wellesley, including intersection improvements at Wellesley and Sullivan	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input checked="" type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	The proposed Bigelow Gulch projects will improve performance by reducing travel time to/from Interstate 90 and important regional freight facilities. Reducing the delay due to truck freight traversing urban roads will improve air quality while increasing reliability and intermodal connectivity. The proposed Bigelow Gulch project is designed to straighten and widen existing Bigelow Gulch and Forker Roads to: reduce congestion; improve traveler safety; provide additional capacity; and, accommodate existing and future freight and commuter travel demands.	Spokane Regional Transportation Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  HORIZON 2040: The Metropolitan Transportation Plan for the Spokane Metropolitan Planning Area at: <a href="http://www.srtc.org/mtp_2040.html">http://www.srtc.org/mtp_2040.html</a>	
243	Title: Sullivan Road Bridge  Plan Reference: HORIZON 2040: The Metropolitan Transportation Plan for the Spokane Metropolitan Planning Area	Sullivan Road over SR290 and BNSF railroad tracks. Lat: 47.69569746 Lon: 117.1968643	Spokane	Sullivan Road Bridge – construct new bridge over Trent (SR290) and BNSF railroad tracks.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input checked="" type="checkbox"/> Environmental Impact Reduction <input checked="" type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	The Sullivan Road Bridge serves not only the City of Spokane Valley but also numerous industrial and manufacturing businesses that contribute significantly to the economy of the region. A substantial amount of economic activity is located in or near the Sullivan Road corridor. The Sullivan Road Bridge is also a critical part of the corridor that connects Interstate 90 with the northern areas of the City of Spokane and Spokane County. The Sullivan Road corridor connects Interstate 90 and the commercial district anchored by the Spokane Valley Mall with the Spokane Industrial Park, which includes the Kaiser Trentwood aluminum rolling plant, Honeywell and many other industrial and commercial businesses.  (Additional Information Available)	Spokane Regional Transportation Council	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  HORIZON 2040: The Metropolitan Transportation Plan for the Spokane Metropolitan Planning Area at: <a href="http://www.srtc.org/mtp_2040.html">http://www.srtc.org/mtp_2040.html</a>	
244	Title: Elderberry Road Upgrade  Plan Reference:	Begin Location: SR 12 MP 45.20/Elderberry Centralia  End Location: Elderberry/196th Ave SW Centralia	Thurston	Widen Elderberry Road from existing 3 lane section to 5 lanes plus a double south bound left turn lane at SR512.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	The WSDOT approved access and operation study fir future year 2025 intersection SR/12/Elderberry/Old Hwy 99 for the as-built network has LOS (Delay)-D(44) and volume to capacity of 1.16 with the proposed improvements that the project is part of haws the LOS (Delay)-C(24) and the volume capacity ratio of 0.93.  The project also provides access to gravel and concrete suppliers. Currently there is a contract to haul one million + cubic yards of gravel on the project for an I-5 widening contract. The intersection with SR12 that this project is part of also serves most of the north bound I-5 traffic from near by industrial area of the Port of Centralia.	Thurston County	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:	
245	Title: Modify channelization and signal operations  Plan Reference: City of Ferndale Transportation Element	Begin Location: Intersection Main Street and LaBounty Drive Ferndale  End Location: Intersection Main Street and LaBounty Drive Ferndale	Whatcom	Modify channelization and signal operations.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	During peak periods, the currently signalized intersection can back up to the Interstate 5 right of way. Installation of a roundabout, where traffic can move continuously, will allow for faster clearing of the intersection, thereby reducing travel time and fuel expense for freight carriers, as well as reduce emissions caused by idling and stop/starts.  The LaBounty Drive intersection was last improved in 1999. Identified as an Intersection/Operation improvement project within the Transportation Element of the City's Comprehensive Plan, the project is needed to resolve future deficiencies on this route providing access to Interstate 5.  (Additional Information Available)	City of Ferndale	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  City of Ferndale Transportation Element at: <a href="http://www.cityofferndale.org/cdd/planning/transportation/transportationplan/FerndaleFINALTE.pdf">http://www.cityofferndale.org/cdd/planning/transportation/transportationplan/FerndaleFINALTE.pdf</a>	X

## Exhibit 10.4L: Freight Unfunded Investments - Local

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
246	Title: Slater Road/I-5 Plan Reference: City of Ferndale Transportation Element	Begin Location: Slater Road at Interstate 5 (Exit 260) Ferndale End Location: Slater Road at Interstate 5 (Exit 260) Ferndale	Whatcom	Implement ramp terminal improvements at Slater Road interchange. These improvements would include lengthening the ramps and making improvements to the ramp terminal interchange. * 2011 Transportation Element description to be updated as design work subsequent to publication of the Comprehensive Plan identified installation of a roundabout immediately west of Interstate 5 at the southbound on/off ramps to correct deficiencies at this intersection as a more favorable alternative for the projected growth in this area.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	<p>During peak periods, intersection becomes congested. Installation of a roundabout, where traffic can move continuously, will allow for faster clearing of the intersection, thereby reducing travel time and fuel expense for freight carriers, as well as reduce imissions caused by idling and stop/starts.</p> <p>Identified as an Intersection/Operation improvement project within the Transportation Element of the City's Comprehensive Plan, the project is needed to resolve current and future deficiencies on this access point to Interstate 5. This project will improve safety and operation of the uncontrolled intersection by installing a roundabout. This will greatly reduce the potential for right angle collisions (t-bone collisions).</p> <p style="color: red;">(Additional Information Available)</p>	City of Ferndale	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  City of Ferndale Transportation Element at: <a href="http://www.cityoferndale.org/cdd/planning/transportation/transportationplan/FerndaleFINALTE.pdf">http://www.cityoferndale.org/cdd/planning/transportation/transportationplan/FerndaleFINALTE.pdf</a>	X
247	Title: South Union Gap Beltway Plan Reference: Six Year Transportation Improvement Plan	Begin Location: Longfibre Road/West Ahtanum Road End location: I-82/US 97 on/off ramps	Yakima	Routing analysis and design for construction of four lanes with center median, curb, gutter, sidewalk, controlled intermediate accesses and functional classification change.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	<p>Based on the assumptions stated herin and the results of the Truck Travel Timing Study, it was determined there will be at a minimum approximately 31.3 hours of truck travel saved per day by the use of the Beltway route (Figure 4) over the current routing (Figure 3) through Union Gap.</p> <p>As more trucking volumes increase from areas west of Union Gap and development along the Beltway, the truck travel time saved will also increase. As more commercial development along Valley Mall Boulevard increases the more congestion and delays will be realized at the VMB interchange with I-82 making the Beltway route even more economical. The trucks choosing to use the Beltway will also make the Union Gap Middle School Zone along Ahtanum Raod safer.</p> <p style="color: red;">(Additional Information Available)</p>	City of Union Gap	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  Six Year Transportation Improvement Plan at: N/A	X

## Exhibit 10.5L: Freight Unfunded Investments - Waterway

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
248	MCR Jetties Rehab (new start)	Benefits both deep draft Lower Columbia River counties, as well as the inland barging system beginning as far east as Clarkston, WA.		FY2014 request: Jetty "A" P&S/modeling (\$979K); surveys (\$300K); N Jetty P&S/modeling (\$600K); N Jetty head stabilization (\$550K); Jetty "A" stone acquisition (\$21.621M); N Jetty stone acquisition (\$23.050M)	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	The three rubble mound jetties at the MCR are in need of major rehabilitation. This project will cost a total of \$257M. These structures not only help maintain the depth and orientation of the navigation channel, they also provide protection for ships of all sizes (both commercial and recreational) entering and leaving the estuary. If a breach of the jetties occurred and the MCR silted in, it could essentially block any traffic from leaving or entering the Columbia Snake River System.	U.S. Army Corps of Engineers  Pacific Northwest Waterways Association	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  <a href="http://www.pnwa.net/pnwa-fact-sheets-and-backgrounders/">http://www.pnwa.net/pnwa-fact-sheets-and-backgrounders/</a>	
249	Kalama Turning Basin, WA (CAP Section 107) Design & construction		Cowlitz	Potential new turning basin at Kalama, WA	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	This project is waiting final approval at Corps Headquarters in DC. If approved and constructed, this new turning basin would allow the Columbia River Pilots to safely turn larger, deeper drafting vessels coming into or leaving the system. This is a critical piece of smaller infrastructure needed to support the efficiency and safety of the entire Columbia Snake River System.	U.S. Army Corps of Engineers  Pacific Northwest Waterways Association	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  <a href="http://www.pnwa.net/pnwa-fact-sheets-and-backgrounders/">http://www.pnwa.net/pnwa-fact-sheets-and-backgrounders/</a>	
250	Columbia River at the Mouth (MCR), OR/WA	Benefits both deep draft Lower Columbia River counties, as well as the inland barging system beginning as far east as Clarkston, WA.		FY2014: annual dredging (\$18.773M); ocean disposal SMMP (\$300K); sand island pile dikes (\$350K); North Jetty Lagoon fill (\$10.32M) & critical repairs (\$13.25M)	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Annual dredging at the MCR is required to ensure the authorized depth of -55'. This is imperative to ensure vessels are able to fully load, and that safe passage of the bar is maintained. Maintenance of the MCR Jetties, which is separate from the major rehabilitation project, is also vital to ensuring natural scouring in that location and that wave action is limited at this dangerous bar crossing.	U.S. Army Corps of Engineers  Pacific Northwest Waterways Association	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  <a href="http://www.pnwa.net/pnwa-fact-sheets-and-backgrounders/">http://www.pnwa.net/pnwa-fact-sheets-and-backgrounders/</a>	
251	Columbia & Lower Willamette below Vancouver & Portland (C&LW), OR/WA	Benefits both deep draft Lower Columbia River counties, as well as the inland barging system beginning as far east as Clarkston, WA.		FY2013 needs include additional annual dredging (\$18.328M) to maintain 43' in nav channel FY2014: annual dredging (\$38.115M); US Moorings piling removal (\$5.0M); contract dredge (\$5.772M); Essayons dredge (\$1.845); pile dike safety markers (\$1.522M); dredging at Old Mouth of the Cowlitz (\$1.208M); Albina turning basin sediment sampling (\$1.080M) and maintenance dredging (\$11.107M); pile dike major maintenance report (\$350K); Astoria turning basin dredging (\$1.634M); Westport Slough dredging (\$1.149M); DMMP for side channels (\$90K); Hammond Boat Basin breakwater evaluation (\$300K); Lake River sediment evaluation (\$105K); Portland Harbor sediment sampling/analysis (\$135K)	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Dredging for this deep draft navigation channel near the Ports of Vancouver, Kalama and Longview is essential to maximizing the newly deepened 43' channel. With cargo such as grain moving into the lower river by barge and rail, a fully maintained channel will continue to ensure our just in time delivery system is able to operate most efficiently and move the maximum amount of commercial cargo.	U.S. Army Corps of Engineers  Pacific Northwest Waterways Association	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  <a href="http://www.pnwa.net/pnwa-fact-sheets-and-backgrounders/">http://www.pnwa.net/pnwa-fact-sheets-and-backgrounders/</a>	
252	Columbia River between Vancouver & The Dalles, OR/WA	Benefits both deep draft Lower Columbia River counties, as well as the inland barging system beginning as far east as Clarkston, WA.		FY2014: annual dredging (\$1.289M); pile dike report (\$350K); pile dike repair (\$894K)	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Dredging for this deep draft navigation channel near the Ports of Vancouver, Kalama and Longview is essential to maximizing the newly deepened 43' channel. With cargo such as grain moving into the lower river by barge and rail, a fully maintained channel will continue to ensure our just in time delivery system is able to operate most efficiently and move the maximum amount of commercial cargo.	U.S. Army Corps of Engineers  Pacific Northwest Waterways Association	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  <a href="http://www.pnwa.net/pnwa-fact-sheets-and-backgrounders/">http://www.pnwa.net/pnwa-fact-sheets-and-backgrounders/</a>	

## Exhibit 10.5L: Freight Unfunded Investments - Waterway

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
253	Seattle Harbor, WA		King	FY2014: comprehensive survey & completion of environmental documents for FY2015 dredging cycle	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		U.S. Army Corps of Engineers  Pacific Northwest Waterways Association	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  <a href="http://www.pnwa.net/pnwa-fact-sheets-and-backgrounders/">http://www.pnwa.net/pnwa-fact-sheets-and-backgrounders/</a>	
254	Tacoma Harbor, WA		Pierce	maintenance dredging	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		U.S. Army Corps of Engineers  Pacific Northwest Waterways Association	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  <a href="http://www.pnwa.net/pnwa-fact-sheets-and-backgrounders/">http://www.pnwa.net/pnwa-fact-sheets-and-backgrounders/</a>	
255	Grays Harbor, WA		Grays Harbor	FY2014: inner & outer harbor dredging, options (\$6M) for increased dredging of entire channel to accommodate larger vessels	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		U.S. Army Corps of Engineers  Pacific Northwest Waterways Association	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  <a href="http://www.pnwa.net/pnwa-fact-sheets-and-backgrounders/">http://www.pnwa.net/pnwa-fact-sheets-and-backgrounders/</a>	
256	Bonneville Lock & Dam	Benefits entire CSRS barging system including Asotin, Garfield, Columbia, Walla Walla, Benton, Klickitat, Skamania, Clark and Cowlitz Counties. Many other counties in Washington State ship goods through the lock and dam system as well.		FY2014 request: routine O&M (\$5.902M); management of ESA listed species (\$1.304M); sea lion harassment monitoring & evaluation (\$74K); Bradford Island feasibility study & ROD (\$325K); spillway major rehab report (\$1.030M)	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Proper maintenance of our 8 locks and dams on the Columbia Snake River System (CSRS) ensures the continued viability of not only the inland portion of the CSRS, but the entire system and the region. Barging is the least cost, most fuel efficient mode of transportation and allows goods to move from eastern Washington Ports like Clarkston, Walla Walla, Whitman County and the Tri-Cities to the Lower Columbia River ports like Vancouver, Kalama and Longview. A viable barge system and fully maintained 14' inland navigation channel allows Eastern Washington Farmers and paper products manufacturers to compete globally in the world market.	U.S. Army Corps of Engineers  Pacific Northwest Waterways Association	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  <a href="http://www.pnwa.net/pnwa-fact-sheets-and-backgrounders/">http://www.pnwa.net/pnwa-fact-sheets-and-backgrounders/</a>	
257	The Dalles Lock & Dam	Benefits entire CSRS barging system including Asotin, Garfield, Columbia, Walla Walla, Benton, Klickitat, Skamania, Clark and Cowlitz Counties. Many other counties in Washington State ship goods through the lock and dam system as well.		FY2014 request: routine O&M (\$2.588M); D/S gate inspection (\$1.1M); E&D for navlock control system (\$300K); E&D for U/S gate replacement (\$500K); fish passage mitigation (\$570K)	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Proper maintenance of our 8 locks and dams on the Columbia Snake River System (CSRS) ensures the continued viability of not only the inland portion of the CSRS, but the entire system and the region. Barging is the least cost, most fuel efficient mode of transportation and allows goods to move from eastern Washington Ports like Clarkston, Walla Walla, Whitman County and the Tri-Cities to the Lower Columbia River ports like Vancouver, Kalama and Longview. A viable barge system and fully maintained 14' inland navigation channel allows Eastern Washington Farmers and paper products manufacturers to compete globally in the world market.	U.S. Army Corps of Engineers  Pacific Northwest Waterways Association	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  <a href="http://www.pnwa.net/pnwa-fact-sheets-and-backgrounders/">http://www.pnwa.net/pnwa-fact-sheets-and-backgrounders/</a>	

## Exhibit 10.5L: Freight Unfunded Investments - Waterway

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
258	John Day Lock & Dam	Benefits entire CSRS barging system including Asotin, Garfield, Columbia, Walla Walla, Benton, Klickitat, Skamania, Clark and Cowlitz Counties. Many other counties in Washington State ship goods through the lock and dam system as well.		FY2014 request: routine O&M (\$2.872M); fish hatchery operation mitigation (\$1.874M)	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input checked="" type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements	Proper maintenance of our 8 locks and dams on the Columbia Snake River System (CSRS) ensures the continued viability of not only the inland portion of the CSRS, but the entire system and the region. Barging is the least cost, most fuel efficient mode of transportation and allows goods to move from eastern Washington Ports like Clarkston, Walla Walla, Whitman County and the Tri-Cities to the Lower Columbia River ports like Vancouver, Kalama and Longview. A viable barge system and fully maintained 14' inland navigation channel allows Eastern Washington Farmers and paper products manufacturers to compete globally in the world market.	U.S. Army Corps of Engineers  Pacific Northwest Waterways Association	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  <a href="http://www.pnwa.net/pnwa-fact-sheets-and-backgrounders/">http://www.pnwa.net/pnwa-fact-sheets-and-backgrounders/</a>	
259	McNary Lock & Dam	Benefits entire CSRS barging system including Asotin, Garfield, Columbia, Walla Walla, Benton, Klickitat, Skamania, Clark and Cowlitz Counties. Many other counties in Washington State ship goods through the lock and dam system as well.		FY2014 request: routine O&M (\$8.382M); D/S mitre gate interim repair (\$300K)	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Proper maintenance of our 8 locks and dams on the Columbia Snake River System (CSRS) ensures the continued viability of not only the inland portion of the CSRS, but the entire system and the region. Barging is the least cost, most fuel efficient mode of transportation and allows goods to move from eastern Washington Ports like Clarkston, Walla Walla, Whitman County and the Tri-Cities to the Lower Columbia River ports like Vancouver, Kalama and Longview. A viable barge system and fully maintained 14' inland navigation channel allows Eastern Washington Farmers and paper products manufacturers to compete globally in the world market.	U.S. Army Corps of Engineers  Pacific Northwest Waterways Association	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  <a href="http://www.pnwa.net/pnwa-fact-sheets-and-backgrounders/">http://www.pnwa.net/pnwa-fact-sheets-and-backgrounders/</a>	
260	Ice Harbor Lock & Dam	Benefits entire CSRS barging system including Asotin, Garfield, Columbia, Walla Walla, Benton, Klickitat, Skamania, Clark and Cowlitz Counties. Many other counties in Washington State ship goods through the lock and dam system as well.		FY2014 request: routine O&M (\$4.630M); U/S gate trunnion hubs (\$400K); P&S for dolphin repair (\$400K)	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Proper maintenance of our 8 locks and dams on the Columbia Snake River System (CSRS) ensures the continued viability of not only the inland portion of the CSRS, but the entire system and the region. Barging is the least cost, most fuel efficient mode of transportation and allows goods to move from eastern Washington Ports like Clarkston, Walla Walla, Whitman County and the Tri-Cities to the Lower Columbia River ports like Vancouver, Kalama and Longview. A viable barge system and fully maintained 14' inland navigation channel allows Eastern Washington Farmers and paper products manufacturers to compete globally in the world market.	U.S. Army Corps of Engineers  Pacific Northwest Waterways Association	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  <a href="http://www.pnwa.net/pnwa-fact-sheets-and-backgrounders/">http://www.pnwa.net/pnwa-fact-sheets-and-backgrounders/</a>	
261	Lower Monumental Lock & Dam	Benefits entire CSRS barging system including Asotin, Garfield, Columbia, Walla Walla, Benton, Klickitat, Skamania, Clark and Cowlitz Counties. Many other counties in Washington State ship goods through the lock and dam system as well.			<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Proper maintenance of our 8 locks and dams on the Columbia Snake River System (CSRS) ensures the continued viability of not only the inland portion of the CSRS, but the entire system and the region. Barging is the least cost, most fuel efficient mode of transportation and allows goods to move from eastern Washington Ports like Clarkston, Walla Walla, Whitman County and the Tri-Cities to the Lower Columbia River ports like Vancouver, Kalama and Longview. A viable barge system and fully maintained 14' inland navigation channel allows Eastern Washington Farmers and paper products manufacturers to compete globally in the world market.	U.S. Army Corps of Engineers  Pacific Northwest Waterways Association	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  <a href="http://www.pnwa.net/pnwa-fact-sheets-and-backgrounders/">http://www.pnwa.net/pnwa-fact-sheets-and-backgrounders/</a>	

## Exhibit 10.5L: Freight Unfunded Investments - Waterway

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
262	Little Goose Lock & Dam	Benefits entire CSRS barging system including Asotin, Garfield, Columbia, Walla Walla, Benton, Klickitat, Skamania, Clark and Cowlitz Counties. Many other counties in Washington State ship goods through the lock and dam system as well.			<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Proper maintenance of our 8 locks and dams on the Columbia Snake River System (CSRS) ensures the continued viability of not only the inland portion of the CSRS, but the entire system and the region. Barging is the least cost, most fuel efficient mode of transportation and allows goods to move from eastern Washington Ports like Clarkston, Walla Walla, Whitman County and the Tri-Cities to the Lower Columbia River ports like Vancouver, Kalama and Longview. A viable barge system and fully maintained 14' inland navigation channel allows Eastern Washington Farmers and paper products manufacturers to compete globally in the world market.	U.S. Army Corps of Engineers  Pacific Northwest Waterways Association	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  <a href="http://www.pnwa.net/pnwa-fact-sheets-and-backgrounders/">http://www.pnwa.net/pnwa-fact-sheets-and-backgrounders/</a>	
263	Lower Granite Lock & Dam	Benefits entire CSRS barging system including Asotin, Garfield, Columbia, Walla Walla, Benton, Klickitat, Skamania, Clark and Cowlitz Counties. Many other counties in Washington State ship goods through the lock and dam system as well.		FY2014 request: routine O&M (\$3.183M); contract for channel maintenance (\$6.5M); navlock sill plate repairs (\$684K)	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Proper maintenance of our 8 locks and dams on the Columbia Snake River System (CSRS) ensures the continued viability of not only the inland portion of the CSRS, but the entire system and the region. Barging is the least cost, most fuel efficient mode of transportation and allows goods to move from eastern Washington Ports like Clarkston, Walla Walla, Whitman County and the Tri-Cities to the Lower Columbia River ports like Vancouver, Kalama and Longview. A viable barge system and fully maintained 14' inland navigation channel allows Eastern Washington Farmers and paper products manufacturers to compete globally in the world market.	U.S. Army Corps of Engineers  Pacific Northwest Waterways Association	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  <a href="http://www.pnwa.net/pnwa-fact-sheets-and-backgrounders/">http://www.pnwa.net/pnwa-fact-sheets-and-backgrounders/</a>	
264	Swinomish Channel (Port of Skagit & Port of Anacortes)		Skagit	There is no FY2014 request for the Swinomish Channel since it was just recently received federal funding for maintenance dredging in FY2012. This navigation channel requires maintenance dredging every three to four years, so there will be future funding requests coming down the pike.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Maintenance dredging is critical to ensuring a fully maintained 12' channel on the Swinomish. Marine related businesses at the Port of Skagit alone generate \$92.6M annually, and produce 1,045 maritime-related jobs in boat building, maintenance and repair; log towing; fishing; dry boat operations; and recreational boating. The Swinomish and Upper Skagit tribal fishing fleets also utilize this channel.	U.S. Army Corps of Engineers  Pacific Northwest Waterways Association	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  <a href="http://www.pnwa.net/pnwa-fact-sheets-and-backgrounders/">http://www.pnwa.net/pnwa-fact-sheets-and-backgrounders/</a>	
265	Columbia River at Baker Bay (Port of Ilwaco)		Pacific	Maintenance dredging	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	The entrance channel to the Port of Ilwaco requires annual maintenance dredging. A fully maintained channel is required for efficient and safe passage of the commercial fishing fleets that homeport in this location. Approximately 30 million lbs. of fish were at the Port of Ilwaco in 2012, with an est. value of \$25 million. They not only have an 850 slip marina and commercial and recreational fishing, but also seafood processing and light industrial activities.	U.S. Army Corps of Engineers  Pacific Northwest Waterways Association	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  <a href="http://www.pnwa.net/pnwa-fact-sheets-and-backgrounders/">http://www.pnwa.net/pnwa-fact-sheets-and-backgrounders/</a>	
266	Columbia River b/t Chinook & Sand Island (Port of Chinook)		Pacific	Maintenance dredging	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	The entrance channel to the Port of Chinook requires annual maintenance dredging. A fully maintained channel is required for efficient and safe passage of the commercial fishing fleets that homeport and process fish and crab in this location. There are 15 port dependent business that rely on a fully dredged channel, including seafood processors processing 3.6M lbs. of crab estimated at \$8.5M annually.	U.S. Army Corps of Engineers  Pacific Northwest Waterways Association	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input checked="" type="checkbox"/> State FAC <input type="checkbox"/> WSDOT	For more information including project budget please see:  <a href="http://www.pnwa.net/pnwa-fact-sheets-and-backgrounders/">http://www.pnwa.net/pnwa-fact-sheets-and-backgrounders/</a>	

## Exhibit 10.6L: Freight Unfunded Investments - Rail Plan

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
267	PCC Freight Rail Preservation	Eastern WA Legislative Districts: 07, 09, 12		Series of projects including the systems two priority projects: CW Line Rail Relay & Rehabilitation - Phase I which will Replace worn rail, rebuild right-of-way and improve aged at-grade highway/rail grade crossings along 6.9 miles of the CW Branch of the PCC Rail System. Will enable load-bearing weight capacity up to 315,000 pounds and allow 25 miles-per-hour over the rebuilt rail segment. The P&L Bridge Replacement & Repair - Phase II will coordinate with \$21 million plus private investment in new grain terminal by McCoy Grain Terminal LLC to replace or repair 15 bridges along the first 32 miles of the P&L branch of the PCC Rail System.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Provides a 10-year investment to preserve the state-owned PCC railroad by replacing worn ties, ballast, and track; preserving selected bridges throughout the rail line; and improving at grade road crossings.	WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
268	Freight Rail Grants	Local Rail Statewide		Provides funding for additional rail grants to support the preservation and improvement of short lines across the state.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		WSDOT	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input checked="" type="checkbox"/> WSDOT	For more information including project budget please see:  WSDOT 2013 Unfunded System Investments at: <a href="http://www.wsdot.wa.gov/Funding/SystemInvestments.htm">http://www.wsdot.wa.gov/Funding/SystemInvestments.htm</a>	
269	Seattle to Kent Third Main Track	City of Seattle Freight Mobility Strategic Action Plan, June 2005	King, Pierce	Complete full third track between Seattle and Tacoma to increase capacity and reduce conflicts.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		City of Seattle	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT <input checked="" type="checkbox"/> Rail Plan		
270	Cheney Siding Extension	Washington State 2010-2030 Freight Rail Plan, UP	Spokane	Extend Siding Track - increase fluidity	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Union Pacific	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT <input checked="" type="checkbox"/> Rail Plan		
271	Fife Siding Extension	Union Pacific	Pierce	Extend Siding Track - increase fluidity	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Union Pacific	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT <input checked="" type="checkbox"/> Rail Plan		

## Exhibit 10.6L: Freight Unfunded Investments - Rail Plan

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
272	CTC Islands - Ayer Subdivision	Union Pacific	Franklin, Adams, Lincoln, Spokane	Increase fluidity by installing Centralized Traffic Control	<input type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Union Pacific	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT <input checked="" type="checkbox"/> Rail Plan		
273	Seattle Sub - Phase III	Union Pacific	King	Make improvements to infrastructure to increase fluidity	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Union Pacific	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT <input checked="" type="checkbox"/> Rail Plan		
274	Sun Harbor Siding	Union Pacific	Franklin	Build a new passing siding near Wallula	<input checked="" type="checkbox"/> Construction, rehabilitation <input checked="" type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Union Pacific	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT <input checked="" type="checkbox"/> Rail Plan		
275	Port of Grays Harbor Rail Car Storage	CWCOG Metropolitan Region Transportation Plan	Grays Harbor	Design and construction of a rail car storage yard to relieve rail conflicts in downtown Aberdeen from train switching movements across at-grade street crossings. Construct two new rail sidings.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input checked="" type="checkbox"/> Truck bottleneck improvements		CWCOG	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT <input checked="" type="checkbox"/> Rail Plan		
276	Sumner Connection	Port of Seattle Century Agenda	Pierce	Construct connection between the UP and BNSF main lines in the Sumner area using partial existing right-of-way. Allows UP trains to operate over BNSF for the full distance between Black River and Reservation (Tacoma). BNSF trains to and from the Tideflats would operate over UP between Fife Yard and Sumner, and UP could directly access Stampede Pass. Requires agreement between BNSF and UP to permit co-production over their respective lines.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Port of Seattle	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT <input checked="" type="checkbox"/> Rail Plan		

## Exhibit 10.6L: Freight Unfunded Investments - Rail Plan

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
277	Big Pasco Rail Rehabilitation	RTPO's/Forward Washington	Pasco	Reconstruct 5 miles of rail at Big Pasco, an industrial center, to help improve access to agricultural and industrial shippers which can in turn attract business to the port. A 4 Phase intermodal facility improvements project was completed in 2010.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Port of Pasco	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT <input checked="" type="checkbox"/> Rail Plan		
278	Port of Vancouver USA North Connection	BNSF/Port of Vancouver USA	Clark	After selection of a preferred route, this project will construct a north connection between Port of Vancouver USA and BNSF's Seattle Subdivision to improve operational flexibility.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input checked="" type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		Port of Vancouver	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT <input checked="" type="checkbox"/> Rail Plan		
279	Yew Street Grade Separation	City of Kelso	Cowlitz	Provide safe crossing of busy BNSF rail line. Benefits will mostly accrue to roadway users, but there may be community and rail safety benefits from the grade separation.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input checked="" type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		City of Kelso	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT <input checked="" type="checkbox"/> Rail Plan		
280	Barker Road/BNSF Grade Separation	FMSIB/City of Spokane Valley	Spokane	This project reconstructs Barker Road to pass over three BNSF tracks and SR 290. This will allow the City to petition to close Flora Rd crossing. Benefits will mostly accrue to roadway users, but there may be rail safety benefits from the grade separation.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input checked="" type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		SRTC	<input checked="" type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT <input checked="" type="checkbox"/> Rail Plan		
281	Relocate Terminal	City of Wenatchee	Chelan	Relocate terminal from south of Orondo Street to Appleyard. Reduces blocking of at-grade crossings in the city.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements		City of Wenatchee	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT <input checked="" type="checkbox"/> Rail Plan		

### Exhibit 10.7L: Freight Unfunded Investments - Air

Ref # (Internal Only)	Project Title	Location	County	Project Description	MAP-21 freight project eligibility: Freight Strategies	Project Benefits: How the proposed project will lead to improvement performance in the state freight system	Organization	Priority	Project Budget Information	Map
282	Cargo 2 West hardstand	Sea-Tac International Airport	King	Construct Cargo hardstand improvements for aircraft loading/unloading.	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Increases Cargo 2 capabilities to improve safety and loading/unloading capability.	Sea-Tac International Airport	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input checked="" type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT		
283	FBO-Customs Ramp Rehabilitation	Spokane International Airport	Spokane	Construct Customs ramp improvements	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Improves Custom ramp to improve safety and improve loading/unloading capability.	Spokane International Airport	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input checked="" type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT		
284	Aircraft Ron Parkng - USPS Site	Sea-Tac International	King	Construct Aircraft Remain-Over-Night Parking-USPS Site	<input checked="" type="checkbox"/> Construction, rehabilitation <input type="checkbox"/> ITS <input type="checkbox"/> Environmental Impact Reduction <input type="checkbox"/> Rail-highway grade separation <input type="checkbox"/> Interchange improvements <input type="checkbox"/> Truck-only lanes <input type="checkbox"/> Truck climbing and runaway truck lanes <input type="checkbox"/> Truck parking facilities <input type="checkbox"/> Real-time traffic information system <input type="checkbox"/> Intermodal connector improvements <input type="checkbox"/> Truck bottleneck improvements	Increases space for cargo aircraft to remain over-night to increase loading/unloading capability.	Sea-Tac International Airport	<input type="checkbox"/> MPO/RTPO <input type="checkbox"/> Tribe <input checked="" type="checkbox"/> Port <input type="checkbox"/> State FAC <input type="checkbox"/> WSDOT		

# CHAPTER 11: IMPLEMENTATION PLAN

This section outlines current funding sources at both the federal and state level for freight transportation projects, as well as potential future funding sources. Additionally, this section discusses the “Next Steps” for WSDOT’s freight planning efforts and the update cycle for the Washington State Freight Mobility Plan.

## Existing Freight Revenue Sources – Federal

At the Federal level, the main source of funding for transportation is the Federal Gasoline Tax; other sources include the Federal Diesel Tax, the Federal Vehicle Taxes, air passenger excise taxes, aviation fuel taxes, and appropriations from the General Fund. Exhibit 11.1 below is a summary of current revenue sources and anticipated revenue.

**Exhibit 11.1 Summary of Current Federal Revenue Sources**

Highway Trust Fund Revenue Sources	Description	Revenue FFY 2010 <sup>86</sup>	Revenue FFY 2012 <sup>87</sup>	Projected Revenue FFY 2015 <sup>88</sup>
Federal Gasoline and Gasohol Tax	18.4 cents/gal, with 15.44 cents going to the Highway Account of the HTF, 2.86 cents going of the Transit Account of the HTF, and 0.10 cent going to the Leaking Underground Storage Tank Trust Fund	\$24.8 billion (\$21.0 billion Highway Account, \$3.8 billion Transit Account)	\$25.5 billion (\$21.5 billion Highway Account, \$4.0 billion Transit Account)	\$23.7 billion (\$19.9 billion Highway Account, \$3.8 billion Transit Account)
Federal Diesel Tax	24.40 cents/gal, with 21.44 cents going to the Highway Account of the HTF, 2.86 cents going to the Transit Account of the HTF, and 0.10 cent going to the Leaking Underground Storage Tank Trust Fund	\$9.1 billion (\$8.1 billion Highway Account, \$1.1 billion Transit Account)	\$9.8 billion (\$8.6 billion Highway Account, \$1.2 billion Transit Account)	\$9.3 billion (\$8.2 billion Highway Account, \$1.1 billion Transit Account)

<sup>86</sup> FHWA Table FE-10, Highway Statistics Series FFY 2010

<sup>87</sup> FHWA Table FE-10, Highway Statistics Series FFY 2012

<sup>88</sup> Congressional Budget Office

Federal Vehicle Based Taxes	Includes a tax based on tire weight, a retail tax on trucks weighing more than 33,000 pounds, and a heavy vehicle use tax	\$2.8 billion	\$5.9 billion	\$5.2 billion
General Fund Transfers	Transfers of General Fund money to maintain solvency in the HTF	\$14.7 billion	\$0.00	\$0.00
Leaking Underground Storage Tank Trust Fund (LUST) Transfers	Transfers of LUST Fund money to sure up the HTF	\$0.00	\$2.4 billion	\$0.00

Source: WSDOT Budget and Financial Analysis.

It can be noted that a portion of both Federal Gasoline and Diesel Taxes are diverted away from the Highway Account to other purposes, primarily the Transit Account with a small portion of the funds diverted to the Leaking Underground Storage Tank Trust Fund. Freight needs are funded primarily through the Federal Highway Account. In the last several years Congress has also authorized transfers from the General Fund to the Highway Trust Fund in order to fund public transportation as well as to help this fund remain solvent.

On August 8, 2014 President Obama signed into law the Highway and Transportation Funding Act of 2014, a \$10.8 billion temporary funding bill for highway and transit construction. Temporary money approved by Congress bought some time for the Highway Trust Fund, but the threat of a shortfall in 2015 remains a harsh reality according to the Congressional Budget Office. The CBO projects that the highway balance will fall about \$2 billion short in 2015 and drop even lower without action by Congress to keep it afloat. Current law requires the trust fund to carry a minimum balance – projected at \$4 billion – to make sure it can pay for transportation projects as the price tags come due. That keeps enough money in the fund to cover the hundreds of millions of dollars that are paid out each day while waiting for receipts from fuel taxes and other user fees that are transferred into the fund twice each month. Current law prohibits the fund from going into the red even though it's been dangerously close a few times in recent years. Congress passed a bill to inject \$10.8 billion into the Highway Trust Fund this summer, with the money projected to last through May 2015. After that, the fund will tick down below the minimum \$4 billion balance and head for a possible zero balance by September. The short-term nature of the extension puts pressure on Congress to act again.

### **Fuel Taxes**

Fuel taxes are the most significant revenue source used to fund transportation at the Federal level. Fuel taxes are collected from all states in the form of federal fuel and other truck related taxes. Revenue from these taxes goes to the federal Highway Trust Fund, established in 1956, to provide a dedicated funding source for Federal-Aid Highway Program. [Exhibit 11.2](#) provides a summary of the current taxes and rates.

### Exhibit 11.2 Federal Fuel and Truck Taxes

Tax Type	Tax Rate
Gasoline and Gasohol fuels	18.4 cents
Diesel and Kerosene fuels	24.4 cents
Alternative fuels	
Liquefied Petroleum Gas	18.3 cents
Liquefied Natural Gas	24.3 cents
Other Special Fuels	18.4 cents
Compressed natural gas	18.3 cents
Tires (based on maximum load rated capacity)	
0-3500 pounds	No Tax
Over 3500 pounds	9.45 cents per each 10 pounds in excess of 3500
Truck and Trailer Sales	12 percent of retailer's sales price for tractors and trucks over 33,000 pounds gross vehicle weight (GVW) and trailers over 26,000 pounds GVW.
Heavy Vehicle Use	Annual tax: trucks 55,000-75,000 pounds GVW, \$100 plus \$22 for each 1,000 pounds (or fraction thereof) in excess of 55,000 pounds trucks over 75,000 pounds GVW, \$550

Source: FHWA Highway Statistics, NCFRP, Report 15, Dedicated Revenue Mechanisms for Freight Transportation Investment, p. A-3.

It can be noted that these federal tax rates are flat rates that are not indexed to inflation and remain constant unless action is taken by Congress to change them. The current tax rates on fuel are too low to meet the long term needs for service improvements and congestion relief on the Federal Aid Highway System. As vehicles become more fuel efficient and drivers are able to go further using less fuel, less fuel tax revenues are collected from states further exacerbating the Highway Trust Fund solvency problem. Taxes on tires, truck and trailer sales, and heavy vehicles are levied on oil companies, tire manufacturers, truck and trailer retailers, and the owners of heavy vehicles. Highway users, including operators of freight vehicles, generally pay these types of taxes indirectly, as they become part of the purchase price of the taxed items.

## Existing Freight Revenue Sources – State

At the state level, Washington has been very successful over the past decade at passing fuel tax increases, with the 5 cent Nickel Package passed in 2003 and the 9.5 cent Transportation Partnership Package passed in 2005. Since July 1, 2008 the total fuel tax rate in Washington State has remained at 37.5 cents. Exhibit 11.3 below shows how the 37.5 cents per gallon Washington State fuel tax is distributed. Nickel and TPA funds are supporting 421 transportation projects with 355 of them being currently completed.

**Exhibit 11.3 Distribution of Washington State Fuel Tax**

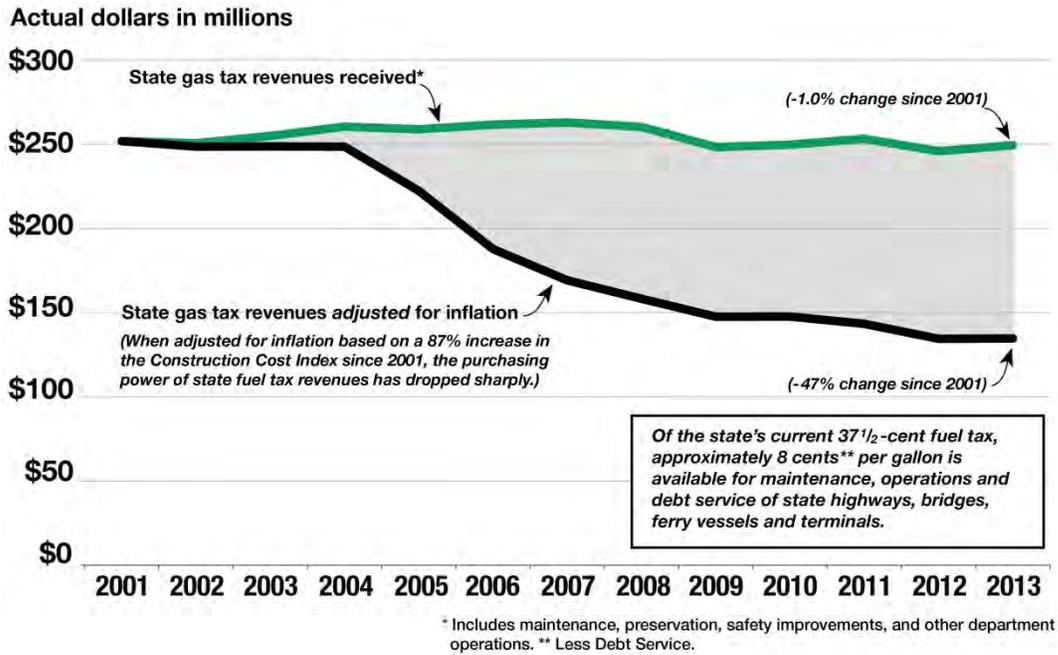
Tax Breakdown	Description
37.5 cents per gallon	Washington fuel tax rate as of July 1, 2008
9.5 cents per gallon	2005 Transportation Partnership Projects*
5 cents per gallon	2003 Nickel Package Projects
23 cents per gallon	Base gas tax
11 cents per gallon	Supports cities and counties for local roads
4 cents per gallon	Supports debt service to reduce bond debt that funded past highway and ferry projects
8 cents per gallon	Remains for maintenance and operations, as well as preservation, safety improvements, and congestion-relief projects for state highways and ferries

\* Of the 9.5 cents, 8.5 cents is used by the state for highway projects, 1 cent goes to cities and counties for improvements to streets and roads.

Source: WSDOT Budget Office.

State transportation revenues are limited, committed, and don't keep up with inflation and growing demands on the system. Current funding levels are not adequate to meet basic maintenance and operation needs in Washington State. Fuel tax revenues buy less than they used to. As illustrated Exhibit 11.4, when adjusted for inflation, the purchasing power of state fuel tax revenues has decreased significantly over the past decade.

### Exhibit 11.4 Washington State Fuel Tax Purchasing Power



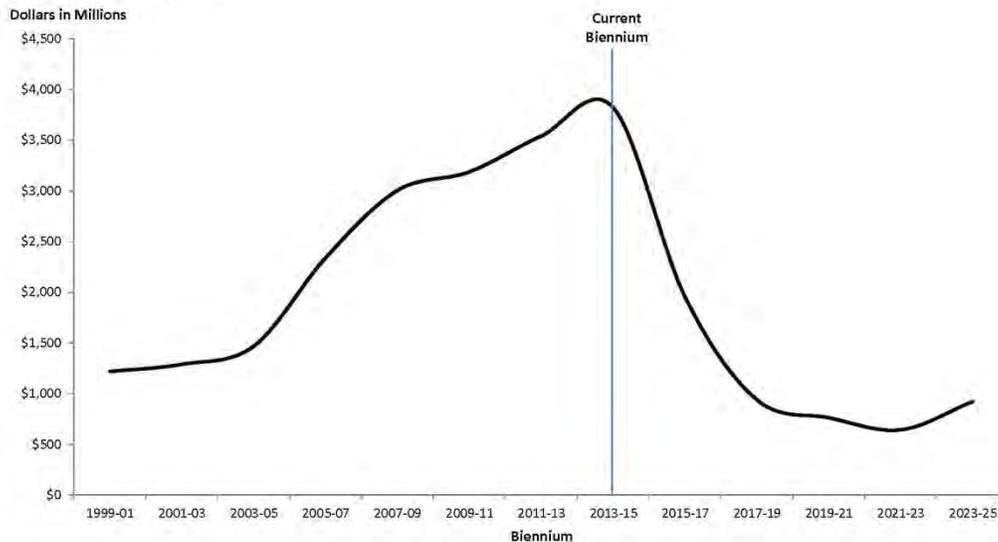
Source: WSDOT Budget Office.

Additionally, without new investment or transportation taxes the amount of funds that are available for transportation projects continues to decline (exhibit 11.5), especially as larger amounts are put toward debt service.

### Exhibit 11.5 WSDOT Highway Construction Program

#### 2014 Governor's Supplemental Budget Request - Highway Construction Program Program Total

*(Excludes sub-program 16 and 17)*



Source: WSDOT Capital Project Development & Management Office.

## Funding for Freight Projects in Washington

WSDOT funds transportation capital projects, including those with freight benefits, from both the improvement and preservation programs commonly referred to as the “I” and “P” programs respectively. Within each of these programs there are several sub programs. Additionally, projects with freight benefits can be funded through local programs referred to as the “Z” program. Exhibit 11.6 shows some of the subprograms in the Improvement, Preservation, and Local Programs that are relevant to funding projects with freight benefits.

**Exhibit 11.6 Selected Programs and Subprograms**

Improvement Program (I)		Approximate Freight Project Value (Millions of \$’s)	
		2013 – 2015	2015 – 2017
I1	Mobility	\$2,659	\$1,135
I2	Safety	\$49.2	\$4.9
I3	Economic Initiatives	\$139.8	\$113.9
Preservation Program (P)			
P1	Roadway Preservation	\$218.9	\$196.5
P2	Structures Preservation	\$219.2	\$64.1
P3	Other Facilities	\$17.2	\$3.6
Local Programs (Z)			
Z8	FMSIB Projects	\$14.2	\$14.2
Rail Program (Y)			
Y5	Essential Rail Assistance and Banking	\$15.3	\$13.7

Source: Transportation Executive Information System (TEIS), Version 14DOT000. Projects with freight benefits are defined as those located on WSDOT’s T-1 and T-2 truck freight economic corridors, including those that are located partially on these corridors.

Traditionally, the I3 Economic Initiatives subprogram is reserved for “freight projects” or projects that are thought to primarily benefit freight. These include projects that build passing lanes on major truck freight corridors, projects to complete ITS upgrades in areas with high truck volumes, and projects to complete various improvements in the vicinity of ports where there is heavy truck traffic.

In many cases, projects that benefit freight also benefit all vehicles. Both the I1 Mobility and I2 Safety subprograms do not specifically fund projects with freight benefits but it is safe to say that many of these projects provide benefits to freight vehicles as well as passenger vehicles. The same can be said of the P1 Roadway Preservation (pavement projects), P2 Structures

Preservation (bridge projects), and P3 Other Facilities (this includes, among other things, funding for safety rest areas, weigh stations, and slope stabilization) subprograms.

The Z8 subprogram is reserved for funding FMSIB projects. FMSIB selects freight projects to be funded and WSDOT administers the funds through the Z8 subprogram.

## Future Revenue Options for Funding Freight Infrastructure – Federal

NCFRP, Report 15, Dedicated Revenue Mechanisms for Freight Transportation Investment explored a variety of revenue sources for future funding of the nation’s freight transportation needs. The analysis assumed that the current federal fuel and excise tax system remains in place and that dedicated revenue mechanisms would be used to fund a national infrastructure program similar to the Highway Trust Fund.

Some of the major options that were evaluated include a fuel tax surcharge, vehicle miles traveled (VMT) fees, and federal vehicle registration fees. Some of the options that were excluded due to both feasibility and applicability to freight infrastructure include international trade fees, ton-mile fees, freight value-added taxes, waybill taxes, and carbon taxes.

### ***Potential Funding Mechanisms***

#### Fuel Tax

One of the fuel tax options evaluated as part of the study was a diesel fuel tax with non-freight refunds. This option would target freight highway users through an increase in the diesel fuel tax along with an increase in tax refunds or credits for non-freight vehicles. This fuel tax surcharge could be collected through the existing system with no incremental cost. Another option evaluated was diesel and gas taxes with non-freight refunds. This option would more equitably cover all types of highway freight vehicles. With increased vehicle coverage, the cost of compliance would also increase. The third option evaluated was a diesel fuel tax with vehicle ID. An electronic monitoring device could be placed on freight vehicles so that they could be identified at fueling locations. The implementation cost as well as the collection and enforcement costs for this type of tax system would be significant. The final fuel tax surcharge option that was considered was a diesel and gas tax with vehicle ID. This would require the tagging of all vehicles in order to distinguish between freight and non-freight vehicles so that the appropriate tax rates could be levied at fueling stations.

#### Vehicle Miles Traveled (VMT) Fees

VMT fees are a way to charge vehicle drivers based on the number of miles that are driven on the highway system. Two basic types of VMT fees were evaluated, distance/vehicle VMT fees and time/location VMT fees. Distance/vehicle VMT fees would vary by vehicle class and drivers would be charged by the number of miles driven. Fees would correlate directly with mileage consistent with a user fee. Time/location VMT fees could also incorporate congestion pricing and other demand management into the fee structure.

#### Federal Registration Fees

Expanded federal registration fees for all freight trucks would be a relatively simple and effective means to generate revenue for a dedicated freight infrastructure fund. Fees could be

set according to a trucks weight and class in order to recoup the fees based on the impact certain type of trucks are expected to have on highway infrastructure. This type of tax would be easy to collect with existing systems with relatively small increases in labor and electronic processing capabilities.

## Washington State Freight Mobility Plan: Next Steps

### Update Schedule

WSDOT plans to update the Washington State Freight Mobility Plan on a five year cycle, with an update to the project list every two years. Additionally, other elements such as the freight forecast may be updated more frequently on an as needed basis dependent on changing economic conditions.

**Exhibit 11.7 State Freight Mobility Plan Update Schedule**

Elements	Update Frequency	Next Update
State Freight Mobility Plan	Every five years	2019
Freight project list	Every two years	2016
Freight forecast and other elements	More frequently on an as needed basis	As needed

### Future Issues to be Addressed

Over the course of development of this Freight Plan, WSDOT has identified a number of topic areas for continued development and improvement in future editions:

- **At-Grade Crossing Prioritization Criteria:** Working with partners and stakeholders, develop criteria to determine which at-grade crossing issues are of most concern now and in the future.
- **Benefit/Cost Analysis:** Continue to refine the truck freight benefit evaluation methodology developed as a part of this Plan. Develop a benefit evaluation methodology for other freight modes such as rail, water, and intermodal. When tested, incorporate a multimodal freight benefit evaluation into WSDOT’s existing (non-freight) benefit/cost evaluation process.
- **Critical Rural Corridors:** As required by MAP-21, work with stakeholders to designate and identify critical rural corridors in Washington State. Analyze critical rural corridors in order to identify specific needs.
- **Economic Impact Analysis:** Implement economic impact analyses for a group of highway, highway package, and multimodal project analyses in 2015-16.

- **Environmental Issues:** Diesel emissions are a known health hazard near the State’s Freight Economic Corridors. Work with the U.S. EPA to explore and identify tools to locate high impact freight related diesel emissions locations in Washington State, when tested. Investigate the impact of climate change on freight.
- **Freight Rail Performance Measures:** Further develop meaningful freight rail performance measures.
- **Preservation Issues:** Work with Tribes to continue to evaluate tribal pavement and bridge data in order to identify specific locations on the state’s Truck Freight Economic Corridors in a poor state of good repair. Identify local bridge condition issues on the state’s first and last mile connector routes.
- **Process Improvement:** Work with stakeholders and customers to simplify and improve the processes used to develop the State Freight Plan, for example the process used by MPOs, RTPOs, Tribes and ports to submit freight priority projects for inclusion in the Plan.
- **Safety Issues:** Develop methods to identify locations with truck safety hazards on the state’s highways. Continue to work with the Washington State Patrol to reduce driver behavior related safety issues in line with Target Zero. In addition, analyze serious and fatal truck collision information, and examine truck related incidents in congested areas that result in property damage.
- **Truck Freight Performance Measures:** Upon publication of USDOT truck freight performance measures, work with stakeholders to set performance targets. Example freight performance measures include delay and reliability metrics. Take into account proximate land use patterns and community needs in the process for setting performance targets for freight corridors, particularly for highways that function as community main streets.