

# 2011 TIGER Discretionary Grants Program Application

## I-90 Snoqualmie Pass East Project

Phase 2A – Safety and Capacity Improvement Project



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**Submitted to:**

Office of the Secretary of Transportation

**Submitted by:**

Kittitas County Department of Public Works  
411 N. Ruby Street, #1  
Ellensburg, WA 98926



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## I. Project Description

### Interstate 90 Snoqualmie Pass East Corridor Improvement Program Overview

Interstate 90 (I-90) crosses the United States from Seattle to Boston, MA. In Washington State, I-90 spans 300 miles from the Port of Seattle to the Washington/Idaho border. The Snoqualmie Pass portion of I-90 (elevation 3,022 feet) is located in Kittitas County and is the most heavily traveled east-west highway crossing in the state. Washington State is improving the condition of this transportation system by increasing safety, reducing traffic congestion, reducing adverse impacts on the environment, minimizing collision risks, and employing innovative technology.

Due to the I-90 Corridor Program's size and complexity, improvements are being completed through a phased approach. As such, the request for TIGER III funds focuses on one phase of the I-90 Corridor Improvement Program – the Phase 2A Safety and Capacity Improvement Project. Kittitas County is requesting TIGER III Federal funds to supplement the state's partial funding of Phase 2.



Without Federal assistance, Kittitas County believes the state will not be able to readily and efficiently complete the construction of all Phase 2 projects. Therefore, Kittitas County is requesting TIGER III funds to construct the Phase 2A – Safety and Capacity Improvement Project to close the gap in funding from Phase 1C and Phase 2B (see further project description on Pg. 4).

As the main east-west transportation corridor across the state, I-90 Snoqualmie Pass is the critical link connecting western Washington's large population centers, businesses and ports with the rural communities, agricultural industries, and recreational opportunities of central and eastern Washington. Safe and reliable travel over I-90 Snoqualmie Pass is essential to the economic vitality and livability of the entire state. For Kittitas County in particular, interstate closures due to avalanches extreme weather and rock fall can cripple the local economy because when I-90 is closed, large portions of the county are rendered unreachable.

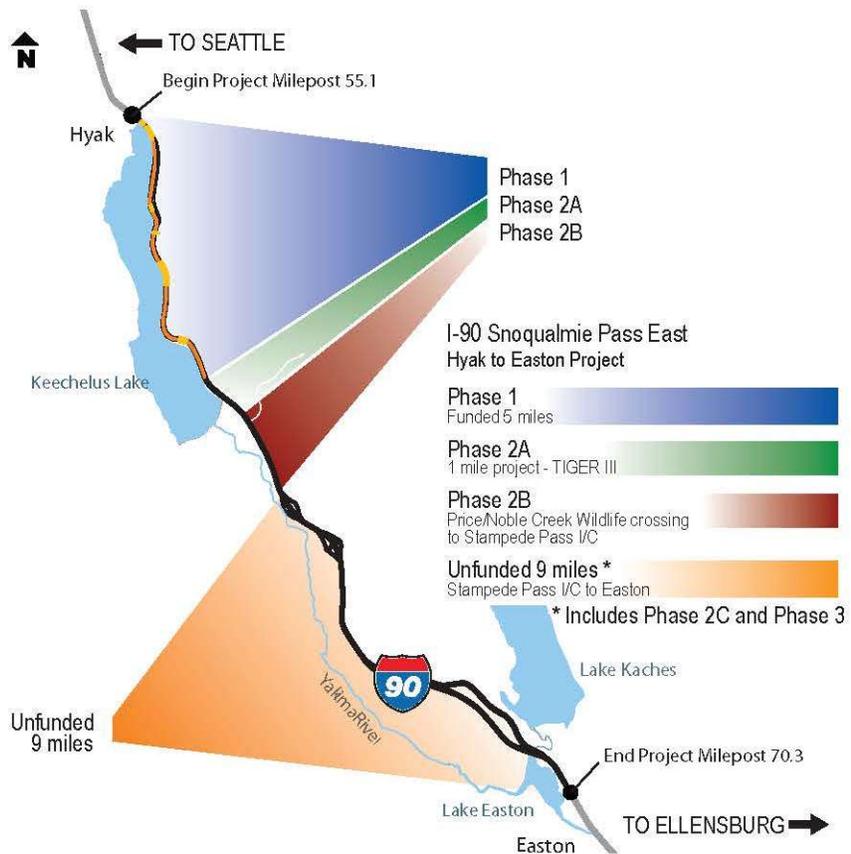
The I-90 Corridor at Snoqualmie Pass is threatened every year by increasing congestion, increasing traffic volumes and temporary closures from avalanches, rock slides and extreme weather conditions. The I-90 Corridor Improvement Program aims to remedy these threats to Washington State's livability and economic vitality by improving a 15-mile portion of I-90 east of Snoqualmie Pass from Hyak (milepost 55) to Easton (milepost 70). The three-phased construction project (Phase 1, Phase 2, and Phase 3) features the following corridor improvements: widening I-90 Snoqualmie Pass from four to six lanes to increase capacity and reduce congestion; stabilizing rock slopes to prevent rock fall hazards; replacing deteriorated concrete pavement for a smoother, safer ride; rebuilding the Lake Keechelus Snowshed (a large concrete shed covering the roadway) to prevent avalanches from

reaching the interstate and the associated interstate closures; adding and extending chain up / off areas for freight and passenger vehicle movement; straightening sharp roadway curves for visibility and to reduce collisions; replacing low-clearance interchanges for freight mobility; adding truck climbing lanes; and rebuilding and adding new bridges and culverts for aquatic and terrestrial wildlife connectivity and to minimize wildlife/vehicle collisions.

NEPA and SEPA processes for the I-90 Corridor Program are complete, and regulatory permits are secured, such as Section 4(f) identifying that the project will have no more than a de minimis impact on the project area; section 106 of the National Historic Preservation Act; Clean Water Act; Clean Air Act; Endangered Species Act, and other state and local requirements.

Construction of this rural project, located in the economically distressed Kittitas County, is underway and will continue to infuse the economy with much needed construction-related jobs for years to come.

Project phasing: The I-90 Corridor Program is appropriately capitalized upfront. The Washington State Legislature funded design and construction of Phase 1 of the project, or the first five miles, from Hyak (milepost 55) to Keechelus Dam Vicinity (milepost 60), through the 2005 Transportation Partnership Account. Current funding for Phase 1 is \$551 million. Phase 1 was divided into smaller construction contracts for construction feasibility. Phase 1A is complete. Construction of Phase 1B started in 2010. Construction of Phase 1C began this year. Other smaller contracts for wildlife fencing, vegetative planting, and stormwater retrofit will be completed as project milestones are met. Construction of Phase 1 is scheduled for completion in 2017. (For more information on Phase 1 of the I-90 Corridor Program, please visit the project [web page](#).)



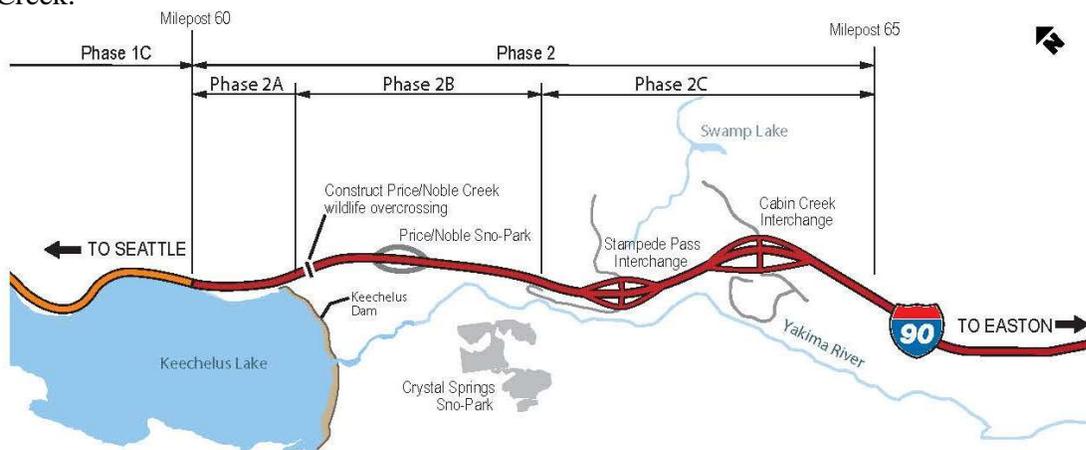
Phase 2 is a 5 mile segment of the I-90 Corridor Program that begins where Phase 1 ends. It starts near Resort Creek (Keechelus Dam vicinity, milepost 60) and ends past the Cabin Creek Interchange

(milepost 65.5). The 2011 Transportation Budget has provided the Washington State Department of Transportation (WSDOT) with up to \$8 million in project savings recognized from a favorable bidding and construction environment in Phase 1 to design Phases 2A, 2B, and 2C, or the first two miles of Phase 2 from Resort Creek to the Stampede Pass Interchange (milepost 62). WSDOT started designing Phases 2A, 2B, and 2C this summer.

The 2011 Transportation Budget also approved the use of any additional project savings realized in Phase 1 to be used in the corridor for Phase 2 construction projects. WSDOT plans to use a large portion of these project savings to construct Phase 2B – Price/Noble Wildlife Crossing Structure, which has an estimated price tag of \$17 million.

**TIGER III Project:** Kittitas County is requesting TIGER III Federal funds to supplement the state’s partial funding Phase 2. Without Federal assistance, Kittitas County believes the state will not be able to readily and efficiently complete the construction of all Phase 2 projects. Therefore, Kittitas County is requesting TIGER III funds to construct the Phase 2A – Safety and Capacity Improvement Project to close the gap in funding from Phase 1C and Phase 2B.

Phase 2A is a one-mile project that begins where Phase 1 of the project ends (Resort Creek/ Keechelus Dam Vicinity, milepost 60) to the Price Creek area (milepost 61), which is the location of the wildlife overcrossing in the Phase 2B Project. (Beginning latitude/ longitude: 47 20 24.989943 N, 121 21 19.940261W; ending latitude/longitude: 47.19 40.325805 N, 121 20.12.677477 W). Phase 2A improvements include adding capacity by widening the interstate from four to six lanes; creating a smoother, safer ride by replacing deteriorating concrete pavement; improving visibility, sight distance, and motorist reaction time by realigning the roadway to reduce sharp curves; and improving freight and passenger vehicle safety during wintertime driving conditions by adding a new chain-up area. The project also improves the ecological permeability of the highway for aquatic systems, fish, and wildlife through the installation of two new box culverts at Townsend Creek and Unnamed Creek.



This project has very tangible safety, economic, and environmental benefits that will impact the nation, state, and region over the medium and long term. For example, adding capacity by widening the interstate from four to six lanes, replacing the deteriorated concrete of existing lanes, straightening sharp roadway curves, and adding a chain-up area for improved winter time driving conditions and safety will have a significant effect on reducing the costs of transporting national and local export cargoes to Washington Ports. The project will also have immediate short-term benefits

through job creation and stimulus in the economically distressed Kittitas County. Kittitas County's economy is dependent on I-90. The integrity of this lifeline must be maintained for the county to thrive.

Therefore, Kittitas County is requesting \$22.5 million in Federal TIGER funds for this project. Phase 2A, based on WSDOT engineering estimates, will cost \$36 million to construct. WSDOT has agreed to contribute matching funds of \$13.5 million toward the project if TIGER III funds are received. Even though not required for a rural project, WSDOT's contribution exceeds the 20% matching requirements. (Please see Appendix A for the signed match funds letter from WSDOT).

## II. Project Parties

Kittitas County Commissioners are empowered to set county policy, adopt laws, implement them, and, except for the responsibilities of other elected officials, carry out day-to-day operations of the county.

The Kittitas County Public Works Department reports to the County Commissioners. Kittitas County Public Works is the departmental unit within County Government seeking the TIGER III grant. Other project parties include:

- WSDOT
- Central Washington University
- I-90 Wildlife Bridges Coalition
- Federal Highways Administration
- U.S. Forest Service (land owner)

Kittitas County Demographics (according to 2010 U.S. Census Bureau):

Land area: 2,297.19  
Persons per square mile: 17.8  
Population: 40,915  
Labor force: 21,560  
Unemployment rate: 8.5%  
Median household income: \$41,563  
Per capita income: \$22,451  
Families below poverty: 20.6%  
Legislative: District 13  
Congressional: District 4



Kittitas County description: Located in the geographic center of the state, Kittitas County is ideally situated at the crossroads of two of the Northwest's major interstate highways (I-90 and US-97). Encompassing the beauty of central Washington, Kittitas County features a blend of timbered mountainous and grazing land and is home to a major state university.

Comprising a geographic area of 2,297 square miles, Kittitas County ranks eighth in land area size among Washington counties. As such, it accounts for almost 3.5% of the state's total land mass.

The topography of Kittitas County is fairly straightforward. As part of the southern extension of the Wenatchee National Forest, the terrain in the county’s northwest corner is rugged and heavily forested wilderness. However, at higher elevations, one also discovers a series of major rivers carrying precipitation and snow-melt out of the Cascades and into the Kittitas Valley. This rural, geographically discrete area is sparsely populated with an average of 17.8 people residing per square mile (Washington state’s average is 101.18 people/square mile).

Fifty-seven percent of Kittitas County residents live in incorporated areas, with 43 percent living in unincorporated areas. State government, retail trade, accommodation & food services, and local government are the county’s top four job sectors.

### III. Use of TIGER III discretionary Grant funds

#### I-90 Snoqualmie Pass Corridor Funding (15 miles)

Action	Funding Amount	Funding Source	Project Percentage	Funding Status
Phase 1	\$571 million	State	57.1%	Secured
Phase 2 Design	\$8 million	State savings	0.8%	Secured
Phase 2A	\$36 million (22.5 TIGER + 13.5 State)	TIGER III & State	3.6%	Pending
Phase 2B	\$58 million	State savings	5.8%	Secured
Future Phases	\$327 million	TBD	32.7%	Exploring sources for funding
<b>Total Funding</b>	<b>\$1.0 billion</b>	<b>Mixed</b>	<b>100%</b>	

#### TIGER III Grant Funds Cost Summary for Phase 2A

Action	Total Cost	TIGER III	WSDOT Matching Funds
Construction	\$36 million	\$22.5 million	\$13.5 million

### IV. Selection Criteria

#### a. Long-term outcomes

I-90 Snoqualmie Pass is the land bridge connecting eastern and western Washington with each other, the nation, and the rest of the world. Approximately 10 million freight trucks carrying \$500 billion worth of interstate, import, and export goods use this pass on an annual basis. Up to 65,000 motorists use I-90 Snoqualmie Pass on weekends for recreational purposes, and over 4,000 commuters use the pass on a daily basis for employment. Thousands of others use I-90 Snoqualmie Pass for access to medical services on both the western and eastern side of the state. I-90 Snoqualmie Pass is also

Kittitas County's lifeline to the rest of the state and beyond. Access into and out of the county is via I-90.

Kittitas County has reviewed the TIGER III grant selection criteria describing the long-term grant outcomes and is confident the Phase 2A – Safety and Capacity Improvement Project aligns with each criterion in the following ways:

***i. State of Good Repair***

The current condition of the Phase 2A Project area presents a number of threats, impacts, and poor conditions that affect passenger and freight mobility. Completion of the Phase 2A Project addresses road conditions affecting safety and our economy in the following ways:

- **Structural Deficiencies:** The existing concrete roadway pavement in the Phase 2A Project area is approximately 50 years old, far exceeding its 20-year design life, and continues to rapidly deteriorate. WSDOT has used dowel bar retrofits and asphalt overlays to patch together areas of crumbling concrete, but due to the area's harsh winter weather conditions, these repairs are only temporary solutions. If the concrete is not replaced, continued deterioration of the roadway will result in unsafe driving conditions, increased vehicle damage, travel delay, repeated maintenance efforts and costs, and eventual failure of the roadway. Plans include replacing the existing concrete pavement with new concrete with a 45-year design life. Additionally, WSDOT will straighten sharp roadway curves that do not accommodate current speed limits, create visibility issues, and can lead to collisions.
- **Traffic volumes / Capacity:** Currently, 28,000 vehicles traverse I-90 Snoqualmie Pass daily; on weekends and holidays, over 65,000 vehicles cross I-90. Capacity issues were evident during Memorial Day Weekend 2011. During that weekend, approximately 181,000 vehicles traveled on both directions of I-90 Snoqualmie Pass, according to WSDOT. These heavy traffic volumes created a 27-mile backup on westbound I-90 on Monday afternoon, leading to three to four hours of added travel time for motorists. More frequent 27-mile back-ups could be glimpse into the future for drivers across I-90 Snoqualmie Pass because the current four-lane interstate does not have the capacity to accommodate busy travel weekends and the estimated increase in traffic volumes. (WSDOT traffic engineers estimate average daily traffic and weekend traffic will increase by about 2.1% every year). The Phase 2A Project calls for increasing capacity by adding a new lane in each travel direction (for a total of six lanes) and installing intelligent transportation systems that give drivers real-time travel information from the road. The six-laning of Phase 2A ties in with the six-laning of the Phase 1 portion of the project.
- **Winter driving conditions:** During winter snow and ice storms, freight and passenger vehicles must install tire chains on their vehicles to maintain traction while traversing the steep Snoqualmie Summit. Currently, there is not a chain-up area in the Phase 2A Project limits. Despite this fact, many vehicles still pull off onto the narrow shoulders in the project area to install tire chains. This is because the roadway at this location begins making a steady ascent to the summit. Oftentimes, the shoulders become so full of freight truck and passenger car drivers chaining up that motorists are forced to stop in the right-hand lane of the interstate to chain up under live traffic. This poses a significant safety risk to all motorists on the road due to people exiting their vehicles under live traffic and vehicles parked on the interstate. The Phase 2A Project adds a 20 foot-wide chain-up area on I-90 westbound that will increase safety and efficiency for motorists during winter driving conditions.

- **Ecological Connectivity:** The I-90 Corridor Program is located on U.S. Forest Service land. WSDOT has gone to great lengths to ensure ecological connectivity goals of the entire project align with U.S. Forest Service land management goals as well as non-governmental conservancy goals. Federal land management plans have documented that I-90 across Snoqualmie Pass forms a barrier to wildlife movement and the need to increase ecological connectivity across the highway. Improving ecological connectivity via wildlife crossing structures advances federal land management goals by reducing fish and wildlife isolation. Wildlife crossing structures also improve motorists' safety by reducing wildlife / vehicle collisions. For the Phase 2A Project, oversized box culverts (a 15-foot culvert at Unnamed Creek and a 25-foot culvert at Townsend Creek) will be incorporated at the two stream crossings to promote aquatic, fish, and wildlife connectivity and mobility under the Interstate.
- **Overall Reliability and Safety:** Freight carriers rely on I-90 Snoqualmie Pass to transport goods across Washington State and beyond. Commuters and recreationalists also rely on I-90 to reach their destinations in a timely manner. The Phase 2A Project improvements equate to overall reliability and safety of the highway.

Relative to asset management, in the 2009-2011 biennium, WSDOT provided \$7.6 million in funding to cover I-90 Snoqualmie Pass winter maintenance operations, including the application of anti-icer materials, snow removal and avalanche control. The current operation and maintenance (O&M) activities budget for I-90 Snoqualmie Pass is \$6.1 million. This is 20% less than previous biennia due to the downturn in the state's economy.

Completing Phase 2A Project will help reduce unanticipated long-term operation and maintenance (O&M) activities, allowing scarce state resources to be available for other use. For example, WSDOT engineers estimate that if Phase 2A is not constructed, this one-mile portion of I-90 Snoqualmie Pass will cost the state \$491,926 in the 2011-2013 biennium to operate and maintain. This does not include any restorative measures, such as asphalt overlays, which would add millions of dollars to that figure.

## **ii. Economic competitiveness – over the medium to long term**

The Phase 2A – Safety and Capacity Improvement Project will contribute to the economic competitiveness of the nation, Washington State, and Kittitas County.

National and International Ports: Washington sits astride a great international trade route; its 75 ports link the state to the world's economy. In concert with the state's transportation system, Washington ports provide:

- Family wage jobs, especially in industrial and agricultural sectors
- Transport of commercial goods at substantially reduced cost
- Cost-effective access to global markets

Washington's ports handle seven percent of U.S. exports and six percent of all imports, with \$70 billion of goods flowing through the Port of Seattle and Port of Tacoma alone. The Ports handle slightly more than 54.0 million short tons of cargo, including 13.2 million tons of domestic cargo (containers, breakbulk, liquid bulks); 17.4 million tons of imports (containers, automobiles, steel); and 23.3 million tons of exports (containers, grain, wood chips).

Products shipped through Washington reach more than 200 countries worldwide, with one-third of Washington-grown products shipped overseas. The Ports of Seattle and Tacoma combined are the third largest container complex in North America and are 1.5 days closer to the Asian market than any other U.S. port. Washington ranks third in bulk cargo and container shipping to and from the Asian market, with one in four jobs in the state related to trade.

Exports through the Ports of Seattle and Tacoma are largely comprised of products grown and/or manufactured in Washington State, and account for 70 percent to 80 percent of total exports by weight and between 35 percent and 50 percent by value. Major exports through the Ports include agricultural products, food products, machinery, petroleum products, waste/scrap, paper, chemicals, transportation equipment, other forestry products, and fish and seafood products. Much of the export cargo for Puget Sound ports is generated east of the mountains, and most of this traffic crosses I-90 Snoqualmie Pass.

Locally, Kittitas County is Washington's largest producer of grass hay, primarily timothy, and oats for grain. Kittitas County timothy hay is known worldwide. Approximately 70 percent of the annual production of timothy hay is exported, principally to Japan. Mark Anderson, president of Kittitas County's Anderson Hay & Grain – one of the nation's leading exporters of hay and straw products – said at a recent transportation summit that central Washington-based businesses like Anderson Hay “live and die by I-90.” I-90 is truly Kittitas County's lifeline.

Trucks currently account for approximately 57 percent of total container tonnage and dominate in the export sector, while rail dominates imports. According to Washington Ports, containerized traffic moved by truck is projected to increase from 12.5 million tons in 2007 to 27.6 million tons in 2030, representing an average rate of growth of 3.5 percent per year.

According to Washington Port Forecasts 2009, a report produced by Washington Ports, an efficient transportation system that integrates road, rail and waterway transportation is essential to meeting the state's present and future trade opportunities. Heavy, mid, and light trucks are important to cargo movement and goods distribution, and the functionality and reliability of the system for truck transport must be protected. Continued economic growth is dependent on road capacity development.

A solid, reliable roadway transportation system will also help combat increased competition from other states and counties. For example, when the Panama Canal expansion is completed in 2014, the route's vessel capacity will double. This will allow more ships to bypass the West Coast entirely, choosing instead to take their cargo directly to East Coast ports in closer proximity to major U.S. population centers. “The key to maintaining and expanding our place in the global economy is to continue investing in our trade route. Our state's participation in trade brings with it thousands of jobs and greater collective wealth, but it also requires investment. If we make wise choices now, our state stands to benefit from the growth on the horizon for Washington's port transportation system,” (Washington Ports Forecast 2009).

Many agree that strategic transportation investments in I-90 Snoqualmie Pass are vital to maintaining a competitive port transportation system. Port Commission President Bill Bryant said in an article in the *Yakima Herald Republic* that ongoing maintenance of I-90 Snoqualmie Pass and working with communities on all-weather roads would create a more effective statewide transportation network to

transport freight to port. "The only way we can compete and keep jobs in Washington State is to have a transportation system that meets the needs of manufacturers and agriculture companies," he said.

Freight and movement of goods/services: Washington's transportation system supports the highest per capita trade in the nation. More than 446 million tons of freight moves to, from and through Washington State each year. Trucks carry most of the freight, both in tonnage (59 percent) and value (64 percent).

I-90 Snoqualmie Pass is the critical link in moving this freight along the east-west commerce route. Thirty-five million tons of freight cargo, which equates to \$500 billion in value, crosses I-90 each year. Other freight statistics, according to the Eastern Washington Intermodal Transportation (EWIT) Study conducted by Washington State University in concert with WSDOT, include:

- I-90 supports the movement of the diverse range of cargo across the state. Food and kindred products represent nearly one-fifth of all freight movements, followed by agricultural crops (15 percent), and lumber and wood products and general freight (each 10 percent).
- Approximately two-thirds of the total truck trips originating from eastern Washington counties are carrying cargo. Agriculture and wood products are among the largest generators of freight traffic on eastern Washington highways. Western Washington freight trucks are more likely to be carrying retail merchandise and high valued manufactured goods.
- Truck motor freight is the dominant mode of transportation used by eastern Washington manufacturing firms with over 75 percent of these firms relying on this mode of transport.
- Other types of firms rely on truck transport either for delivering or receiving supplies or to transport to another mode of shipment. Therefore, public highway investment facilitating the efficient operation of truck freight is most critical for new manufacturing, retail, and service business development in eastern Washington.
- Approximately 400 truck trips originating from eastern Washington are destined for Seattle each day.
- Approximately one-third of all truck trips originating in eastern Washington are destined for other states, with destinations reported in 44 states, six Canadian provinces, and Mexico.
- In western Washington, King County is by far the largest single generator of freight truck traffic, with over 6,000 truck trips each day originating from ocean ports, warehouses, and businesses located in the county. Approximately 3,000 and 2,000 trips per day originate from Pierce and Snohomish counties, respectively.
- Approximately one-quarter of all truck trips originating in western Washington are destined for other states or Canada. Oregon, British Columbia, and California are the primary out-of-state destinations for trucks originating from western Washington.
- On average, almost 7,000 trucks enter the state of Washington daily from a diverse array of out-of-state origins.
- Among the nearly 7,000 truck trips originating outside the state's borders each day, over 4,000 are destined for western Washington communities, with King County being the single largest destination. An average of 1,560 freight trucks from out-of-state origins are destined for eastern Washington communities each day.

Based on this data, the EWIT study concludes that "Washington State economic vitality is dependent on the efficient in-state movement of truck freight. Twenty-three percent of all truck trips originating in western Washington and 35 percent of trucks originating in eastern Washington are destined for out-of-state locations. Given this linkage, both national and international cooperation concerning

inter- and intrastate transportation is needed. Important linkages between highway freight and other modes of transportation (water ports, air, and rail) also need to be considered.”

In less than 20 years, the number of freight trucks using I-90 Snoqualmie Pass on a daily basis will reach over 10,000, making improvements to this route a pivotal investment in the state and nation’s domestic and international trade systems. Several Washington State Senators and Representatives signed letter of support for this exact reason. “(The Phase 2A Project) will have a significant effect on reducing the costs of transporting national and local export cargos by adding roadway capacity, replacing the deteriorated concrete pavement of existing lanes (preserving our nation’s infrastructure), straightening sharp roadway curves, and adding chain up/off areas for improved winter time driving conditions and safety,” their letter said. The Senators and Representatives also noted “The Snoqualmie Pass portion of I-90 is a strategic freight corridor due to the international, domestic, and intrastate trade that it carries. Over \$500 billion worth of goods travel across I-90 Snoqualmie Pass each year – making a state and federal investment in the corridor the right thing to do.” (To view the letters, see Appendix C)

Movement of people, goods, services: On a more local level, Kittitas County, classified as an economically distressed county with an unemployment rate of 8.5% (according to the 2010 U.S. Census Bureau), will benefit exponentially from the Phase 2A Project and entire I-90 Corridor Program, as improvements will ease the movement of workers.

According to the Economic Development Group of Kittitas County, in 2006, more commuters began traveling to and from the county for work. Today, more than 4,000 Kittitas County residents work outside of the county; two out of five of the county’s outbound commuters travel to and return from King County (located west of Kittitas County across Snoqualmie Pass, with its largest city being Seattle) each day. This breaks down to 1,775 traveling to King County; 779 Traveling to Yakima County; 356 traveling to Snohomish County; 274 traveling to Grant County; and 192 traveling to Spokane County.

More than 4,000 jobs located in Kittitas County are held by non-county residents. This breaks down to 1,428 traveling from Yakima County; 1,107 traveling from King County; 348 traveling from Piece County; 310 traveling from Snohomish County; and 176 traveling from Spokane County.

Phase 2A improvements will increase the safety and reliability of I-90 and help ensure commuters reach their destinations with piece of mind and in a timely fashion.

Economic productivity of land, attracting talent, and supporting Central Washington University: Productivity of land - Kittitas County is known for its agricultural production. Agriculture, at present, consists largely of the production of grass hay, cereal grain, and livestock. Kittitas County is home to the largest producers of grass hay, primarily timothy, and oats for grain in Washington. Kittitas County timothy hay is known worldwide. Approximately 70 percent of the annual production of timothy hay is exported, principally to Japan. Timothy hay is the single-largest cash crop in Kittitas County, grown commercially by an estimated 200 to 250 farmers on between 25,000 to 30,000 acres of land. The economic impact of this industry on the county is estimated to have an annual value of more than \$30 million.

In addition to agriculture, Kittitas County is known for its livestock production. Kittitas County has the fourth largest beef cow inventory in Washington. The sheep industry fills up a unique niche in the county, as sheep are used to clean up crop aftermath and for consuming poorer quality hay, causing the county to rank third in the state for sheep inventory.

While Kittitas County will continue to rely on its agricultural roots, the Kittitas County Economic Development Group has identified priority target sectors for recruiting new business to the county, including renewable energy, professional services, agriculture and natural resources, light industrial, and transportation and logistics. Kittitas County's central location in the state and its geographic location, including proximity to the Puget Sound area, make it an ideal, low-cost option for attracting recruiting new businesses to the region.

The condition of I-90 affects all sectors and is fundamental to the movement of goods. A more accessible, reliable, safe, and freight-friendly I-90 Corridor that includes additional capacity, new pavement, better alignment, and new chain-up area will aid in attracting new economic development to the county.

A strong example of Kittitas County's commitment to growing its target sectors for new business is evident in its rapidly increasing renewable energy business. The region is a hot spot for the wind energy industry because wind speeds east of Snoqualmie Pass consistently reach the desired average of 16 miles per hour or more. This clean, renewable energy source will benefit the entire state by reducing air pollution, our dependence on foreign oil, the use of petroleum, and create jobs for Washington citizens. Other clean energy sources such as solar, biomass, and hydroelectric can also be found in the county. The recently constructed Renewable Energy Center at Puget Sound Energy's Wild Horse Wind and Solar Facility (located about 15 miles east of Ellensburg on the Vantage Highway) is one of only a handful of wind energy visitor centers in the nation.

- With 149 wind turbines, Wild Horse has the capacity to produce 273 megawatts of electricity. One megawatt of electricity provides for the electrical needs of 225 to 300 homes.
- 2,408 solar panels rest atop the ridgeline at Wild Horse with maximum capacity to produce 500 kilowatts of power.
- The facility provides 25 jobs and has 40,000 visitors boosting area tourism dollars.

Further examples of the county's commitment to the renewable energy industry include the 75 megawatt (MW) Teanaway Solar Reserve Project, Invenergy's 75 MW Vantage Wind Project, and Enexco's 190MW Desert Claim Wind Project. These renewable energy projects provide millions of dollars in new tax revenue and other economic benefits to Kittitas County, as well as provide clean energy to hundreds of thousands of homes in the state's fastest-growing areas.

Attract talent - Another priority of the Economic Development Group is to attract new talent to the area, as well as leverage the talent already in the county and retain those that pass through Central Washington University (CWU).

One strategy for attracting talent is to leverage the county's already booming tourism industry and tourism-related marketing techniques. (The tourism industry alone generates 1,570 jobs and \$133.8

million in the county's economy.) Kittitas County is known for its natural beauty, open space, small-town character, historic downtown, and recreation/outdoor activities. Capacity improvements to I-90 play a vital role in this strategy.

Heavy weekend and holiday traffic volumes on I-90 and the resulting lengthy backups and added travel times can detract from the enjoyment of traveling / touristic activities. Increasing capacity by adding a new lane in each direction will accommodate these increases in traffic volumes for decades to come, therefore aiding Kittitas County's efforts to attract tourism and talent to the region.

Kittitas County is home to Central Washington University (CWU), a comprehensive, four-year public university. CWU is the prime economic force driving the local economy. CWU has a student body of over 11,400 students at the main campus in Ellensburg (Kittitas County's government seat) and six centers located in western and central Washington to serve place-bound students. Of the 11,400 students, approximately 10,000 reside in Ellensburg, supported by about 1,500 university faculty and staff. CWU's direct economic impact on Kittitas County is tremendous. In addition to offering educational opportunities for existing residents, CWU provides social and political capital to the county and delivers entertainment and recreation options for the local and regional population. Equally important is the university's role as a conduit for bringing young, educated people to the region. (In a report produced by CWU, CWU produces \$370 million in economic output statewide for FY 2006, and \$251 million in Kittitas County.

I-90 is the primary transportation corridor for employees, students and their families to access the university. Corridor improvements to improve safety are essential for student's and employees' year-round access to the college.

In summary, the Phase 2A Project benefits Washington's economic competitiveness by increasing traveler safety and reducing the extra costs of transport passed on to consumers. By having a reliable, safe cross-state transportation corridor, the agricultural industries of eastern Washington have a direct link for selling their goods to the large businesses and populations centers of western Washington and the rest of the world via Ports. Conversely, western Washington can take advantage of the abundant recreational opportunities and touristic activities of eastern Washington.

### ***iii. Livability - fostering livable communities***

Several rural communities located in Kittitas County and along the I-90 Project Corridor (e.g. Hyak, Easton, Roslyn, Cle Elum, and Ellensburg) are large farming and agricultural communities serving as vital economic drivers for central and eastern Washington.

These rural communities also explode on weekends due to the region's vast year-round recreational opportunities. Conversely, Snoqualmie Pass serves as the eastern gateway to the large metropolitan business centers, university research hospitals, and service industries of western Washington. Every day, thousands of trips are made across Snoqualmie Pass by central and eastern Washington residents for business, shopping, professional sports, or access to advanced health care found only in population centers.

A project of this magnitude can cause both economic and social impacts. The highly supported Phase

2A Project will positively contribute to the social and livable conditions of Kittitas County and the entire state by providing a reliable, safe, and efficient cross-state route. By easing weekend and holiday travel delays through added capacity and smoother pavement, more travelers can reach their destination safely, on time, and stress free. Additional social benefits include reducing driver frustration, (including the 4,000 daily commuters) due to traffic backups, and increasing access to health care and recreational areas. Increasing habitat connections in the project area is also an important social value. Efforts to restore aquatic, fish, and wildlife mobility along the corridor is an important part of the project plans.

Government is the biggest employer in Kittitas County (according to Office of Financial Management). Outside of government, these former rustic mining communities now rely on retail trade, recreation, farming, and tourism as their primary sources of income. Kittitas County, through its Comprehensive Plan, has expressed its desire to further develop the Snoqualmie Pass sub-area for recreation while retaining its rural lifestyle.

Tourism and lodging: Economic sustainability is vital for the rural communities of Kittitas County. Economically, the retail industry in this area is directly related to recreation- and tourism-related expenditures. According to the Economic Development Group of Kittitas County, tourism-generated employment for Kittitas County was 1,570, or 7.6% of 20,750 total employed. Tourism-related revenues for the County are \$133.8 million.

A more solid indicator of the local travel-related economic impact is the total state and local retail sales and the hotel/motel tax collections. Kittitas County visitor-generated taxes accounts for 7.1% of total state sales tax; 13.8% of total local sales tax; and 8.3% of total lodging tax. Hotel/motel tax in 2009 added \$199,206.25 to the cash base. Total local sales and lodging taxes accounted for 13.4% of state receipts, higher than counties much larger than Kittitas. Of significance, the local sales and lodging tax remain in the county.

Property development: Capitalizing on the natural beauty, endless recreation, and rural lifestyle of Kittitas County, developers are building resorts and planned communities along the I-90 Corridor. Suncadia, for example, is a 6,400-acre planned community and all-season destination resort and conference center located between Roslyn and Cle Elum. The mountain community is adjacent to the 2.2 million acre Okanogan-Wenatchee National Forest.

A new winery, Swiftwater Cellars, opened its doors near the Suncadia Resort. The winery is being marketed as Washington's ultimate destination winery featuring dining, golf, and events. It offers tours, concerts, and takes advantage of the close proximity to Suncadia. Swiftwater Cellars has capacity to produce 7,000 cases annually.

In August 2010, the Washington State Horse Park was opened in Cle Elum as a premier equestrian facility in the Northwest serving the recreational, competitive and educational needs of riders and horse enthusiasts in all disciplines, age groups and skill levels. The venue accommodates large horse events and caters to smaller, less formal activities. In addition to providing new opportunities for those involved in equine sports, the Horse Park also will stimulate Washington's economy by creating jobs, increasing demand for goods and services and attracting new tourism.

The only public to access to the aforementioned property developments is from I-90.

Housing development continues as well. Because of the Puget Sound's high cost of living, traffic congestion, and urban lifestyle compromises, the rural communities residing along the I-90 corridor are seeing an increased number of persons working from home and commuting to King County and Snohomish County. Retiring persons are also moving to lower cost rural areas where housing is more affordable and cost of living less

Recreation: I-90 Snoqualmie Pass serves as the western gateway to the winter recreational opportunities in central and eastern Washington, which includes snowmobiling, skiing, snowshoeing, dog sledding, snowboarding, and cross-country skiing. Several ski areas and numerous condos and vacation rentals populate the pass, with shuttle buses running between ski areas. Snoqualmie Pass is also crossed by the popular Pacific Crest Trail, which runs from British Columbia, Canada, through the U.S., to Mexico. Other trailheads abound at the pass or along its approaches. With access to thousands of acres of mountain forest and high country lakes and streams, I-90 Snoqualmie Pass also serves as the gateway to the vast summer activities of the region, including golfing, backpacking, camping, kayaking, whitewater rafting, and fly fishing. Large employers rely on access to such recreational opportunities to recruit and sustain a good quality of life for their employees.

Recreational activities such as hunting and fishing provide substantial economic benefit to the state. According to the Washington Department of Fish and Wildlife, spending by fishers, hunters and wildlife watchers generates more than \$6.7 billion annually for Washington's economy. Also, more than one million people purchased Washington State fishing licenses, hunting license or vehicle-use permits for access to Washington Department of Fish and Wildlife lands each year. Many of these dollars support small businesses and rural communities in Kittitas County. These recreation activities also provide opportunities to educate people on the importance of preserving and protecting our natural resources.

Public services: The Phase 2A Project will have a beneficial impact on public services, especially emergency responders. The project will increase capacity, minimize congestion, and help minimize wildlife/vehicle collisions with enlarged box culverts. KITTCOM, a civilian-staffed 9-1-1 center that serves 17 public safety agencies in Kittitas County, handled approximately 32,095 calls in 2009. Swedish Hospital, the greater Seattle area's largest medical center, purchased property in Cle Elum and has plans for a 2,900-square-foot state-of-the-art physician's clinic. The clinic will be home to a primary care physician and offer advanced medical care, X-ray and laboratory services. A safer, more reliable and less congested I-90 will help improve emergency and area hospital operations and help Kittitas County serve its citizens' health care needs.

In summary, completion of the Phase 2A Project improves the vital link between eastern and western Washington, allowing residents of the state to take full advantage of the diverse landscape and job opportunities Washington has to offer.

*iv. Sustainability – improving energy and environmental sustainability through the I-90 Corridor Program*

Fuel and energy savings: The I-90 Corridor Program will produce long-term fuel savings due to increased traffic speeds and a more efficient chain up facility (compared to the current situation where vehicles and trucks must creep at very slow speeds from congestion and sit idle waiting for space to install tie chains). Additional energy resources will be saved after construction of the project since WSDOT and crews will not have to perform maintenance paving operations every year, which consumes resources and causes traffic delays.

Environmental enhancements: Kittitas County and WSDOT analyzed potential permanent impacts from CO and toxic air pollutants. Kittitas County and WSDOT conducted CO modeling analysis based on the requirements of Washington Administrative Code (WAC) 1733-24 Affected Environment and Consequences 420 and USEPA guidelines. The team used the CAL3QHC air quality dispersion model for estimating CO concentrations. For both existing conditions and future conditions for all of the alternatives, the modeled CO concentrations at all receptors within 500 feet of the highway were much lower than the one-hour state and federal CO standard of 35 parts per million and the eight-hour state and federal CO standard of nine parts per million. Further, the projects would most likely result in lower CO concentrations than current conditions when compared to the “No-Build Alternative” through the projected reduction in traffic congestion. Based on these findings, the team concluded that constructing this project would not produce any adverse air quality impacts from CO. It was concluded in WSDOT’s I-90 Snoqualmie Pass East Final EIS that under any of the build alternatives, federal, state, and regional air quality standards would be met, including the NAAQS and Clean Air Act standards.

Air quality impacts were determined to be most likely during construction activities. Emissions caused by fugitive dust; odors; emissions from construction equipment; and emissions from temporary stationary sources were analyzed. It was determined that emissions from odors, construction equipment and temporary stationary sources were temporary, localized and short-term and would not cause significant impacts or ambient air pollutant concentrations exceeding NAAQS limits.

WSDOT will implement mitigation measures to minimize fugitive dust emissions to a less-than-significant level in compliance with the Washington regulation to minimize fugitive dust emissions. Wood debris generated during construction will be used as habitat features or chipped and mulched whenever possible.

The Phase 2A Project also provides ecological improvements resulting in greater ability for aquatic systems, fish, and wildlife to cross the highway, including both larger, more mobile species such as deer and bear, and smaller, less mobile species such as amphibians. This project includes the construction of two large box culverts at Townsend and Unnamed Creeks (25-foot wide and 15-foot wide, respectively), which are strategic hydrologic connectivity zones.

Other phases of the corridor program call for construction of several crossing structures in the form of bridges and culverts, including the adjoining Phase 2B Project. Phase 2B includes a wildlife

overcrossing structure featuring pre-cast arches that will create a natural earth crossing with an overall wildlife land bridge of approximately 400 feet long. The overcrossing, combined with wildlife fencing, will significantly reduce the number of wildlife / vehicle collisions in this high-road-kill rate area and will improve the north-south migration of wildlife.

***v. Safety: Improving the safety of U.S. transportation facilities and systems***

From 2006 to 2011, 40 collisions were reported in the Phase 2A – Safety and Capacity Improvement Project area, according to a WSDOT Standard Accident History Detail Report. Over half of these collisions occurred during inclement weather conditions where the road surface contained snow, ice, or standing water. A large number of the collisions occurred at night or at dusk, where no streetlights are present. A large number of collisions consisted of overturned vehicles and vehicles running into concrete barriers due to exceeding safe speeds.

To correct these collision situations, the Phase 2A Project will bring this section of I-90 to current FHWA and WSDOT standards by addressing the following high risk factors:

- **Alignment:** Many of the existing horizontal curves do not meet the design standards for rural interstates. The roadway will be reconstructed to WSDOT and FHWA design standards to reduce the chance of a collision within the project limits. Additionally, the sharp curves, inadequate super elevation, and limited sight distance, all contribute to accidents within the project area and will be corrected.
- **Illumination and message signs:** Currently, there is minimal to no illumination in the entire I-90 Corridor Program area, including Phase 2A. At dusk and night, the project area is very dark and visibility is reduced. The Phase 2A project calls for adding illumination (highway lighting systems) for improved visibility and safety. Additionally, variable message signs will be installed to display current roadway information and alert motorists of impending roadway issues, like snow and ice conditions, lane restrictions, and collisions.
- **Deteriorating pavement:** The existing pavement located within the Phase 2A Project area is 50 years old and has far exceeded its service life. Maintenance over time has rehabilitated the pavement through grinding, asphalt overlays, and dowel bar replacement; however today the pavement is at a place of no repair. The cracks, holes, and ruts in the pavement create hazardous driving conditions for freight and passenger vehicles and an uncomfortable rough ride. Replacement of the deteriorating concrete pavement for all existing lanes will create a smoother, safer ride. The new pavement will also help eliminate current issues of standing water on the roadway.
- **New culverts for ecological connectivity:** Two large box culverts will be installed at Townsend Creek and Unnamed Creek in the Phase 2A Project area. The culverts will restore important habitat connections through the freeway for streams, aquatic species and wildlife. The wildlife connections will work to reduce costly and dangerous wildlife-vehicle collisions in the project area.
- **Chain-up area:** The Phase 2A Project includes the creation of chain-up area for wintertime driving conditions. The 20-foot-wide area will give motorists a safe, efficient, and effective place to pull off the road and prepare for adverse roadway conditions. The use of tire chains in adverse conditions help motorists maintain traction on snow and ice and prevent the dangerous related collisions that are prominent in this area.

## **b. Job Creation and economic stimulus**

It's expected that the Phase 2A Project will support approximately 120 total jobs. WSDOT worked with the Governor's Office of Financial Management (OFM) economists to estimate the number of jobs created or saved for each highway construction project. OFM maintains a nationally recognized model that is based on state data—typically updated every 5-10 years—that can be used to estimate the employment impact of highway construction projects. Expenditures and the number of jobs created vary with each phase of the project, such as:

- Preliminary engineering (planning, design, cost estimating)
- Right-of-way purchasing
- Construction

### **Direct, Indirect, and Induced Job Creation by Fiscal Year and Phase**

	FY 2012	FY 2013	FY 2014	FY 2015
PE	60	58	0	0
RW	1	0	0	0
CN	0	32	120	95
Total	61	90	120	95

The total number of jobs created by the project includes construction sector jobs during building of the project itself, businesses sector jobs in the area that would supply goods and services to the project construction (such as equipment suppliers, construction companies and maintenance firms), and jobs in the businesses that supply goods and services to these new direct and indirect workers and their families; examples include retail stores, gas stations, banks, restaurants, and service companies.

The direct impact of this project's job creation to Kittitas County is significant. Current construction of the Phase 1B project, for example, has had dramatic positive impacts on the local economy with many business owners of hotels, restaurants, and convenience stations experiencing an increase in sales and customers due to construction workers frequenting the area's services.

Project Schedule: Design of the Phase 2A Project is underway. Right-of-way acquisition will be complete by March 2013. Final design will be complete by April 8, 2013, with PS&E approval by June 3, 2013. The project will be advertised to contractors by June 15, 2013. This is a 2 season project, which includes a mandatory winter shut down every year from approximately October to April. The project will be operationally complete by June 2015.

Design engineering: April 2011

Project advertisement: June 2013

1st season construction: June 2013 – October 2013

Mandatory winter shutdown: October 2013 – April 2014

2nd season construction: May 2014 – October 2014

Project substantially complete: February 2015

Project operationally complete: October 2015

Equal Opportunity: A public procurement process will be followed that requires contractors to have a program in place to meet or exceed the Executive Order 11246 regarding affirmative action to ensure equal employment and sub-contracting opportunities for women and minorities.

The Phase 2A Project will require the contractor have a program in place that meets the Executive Order 11246 regarding affirmative action to ensure equal employment and subcontracting opportunities for women and minorities. The Program will define the utilization goals and will only support contractors with sound safety and labor practices. The Program will also require certification from contractors that their Disadvantaged Business Enterprise (DBE) sub-contractors are certified in the described work they are named to perform. The Program will instruct bidders to:

- Describe work commitments in the WSDOT DBE Utilization Certification using only those terms that are consistent with the NAICS Code Index Entry contained in the DBE firm's current certification letter.
- Include written confirmation from the DBE firm that it intends to participate in the contract and is in agreement with the bidder's commitment as described in their DBE Utilization Certification.

The Program will employ best practices consistent with our nation's civil rights and equal opportunity laws. The Program will assure full compliance with Title VI of the Civil Rights Act of 1964 prohibiting discrimination based upon race, color, national origin, and sex.

Environmental approvals: NEPA is complete. The I-90 Snoqualmie Pass East Project Final Environmental Impact Statement, issued in August 2008, highlights NEPA and SEPA actions. The Final EIS also includes: Section 4(f); section 106; Clean Water Act; Clean Air Act; ESA, and other state and local requirements.

The environmental documentation, including the Record of Decision (issued in October 2008), is located at the following link: [www.wsdot.wa.gov/Projects/I90/SnoqualmiePassEast/Finaleis](http://www.wsdot.wa.gov/Projects/I90/SnoqualmiePassEast/Finaleis) WSDOT is in the process of re-initiating ESA consultation and revising the Joint Aquatic Resources Permit Application (JARPA). WSDOT anticipates approval prior to receiving TIGER III grant funding.

Legislative approvals: The Washington State Legislature approved funding for Phase 1 (five project miles from Hyak to Keechelus Dam) of the 15-mile Corridor Program subject of this grant application, through its 2005 Transportation Partnership Funding Package (ESSB 6091). The Washington State Legislature, through the 2011 Transportation Budget, approved the use of project savings incurred from a favorable bidding and construction environment in Phase 1 to be used to fund additional phases of the Corridor Program. The budget provided \$8 million for WSDOT to start designing Phase 2. WSDOT will use the remaining cost savings as matching funds to the TIGER III grant, and to construct Phase 2B.

State and local planning: Washington's Growth Management Act (GMA) requires counties and cities to take a comprehensive, cooperative approach to land use planning to avoid unplanned growth, and conserve natural resources, while allowing for economic development. Under the GMA, counties, cities, and towns must classify, designate, and regulate critical areas through Critical Area

Ordinances. The Act also encourages county officials to participate early on in the planning process with project owners, community stakeholders, et al.

Kittitas County was part of the I-90 Corridor Program's Interdisciplinary team (IDT) and cognizant of project characteristics and location. Kittitas County is current in the GMA-required Snoqualmie Pass Sub-Area Plan as incorporated into their Comprehensive Plan approved in 2008.

Under this law (RCW 47.06), WSDOT is responsible for developing a statewide multi-modal transportation plan in conformance with federal requirements "to ensure the continued mobility of people and goods within regions and across the state in a safe, cost-effective manner." The I-90 Corridor Program is included in the WSDOT 20-year long range plan, the six-year STIP, and the Kittitas County GMA Plan, which must be consistent with the state plan.

Technical feasibility: During the NEPA evaluation, four alternatives to minimize economic, environmental and social impacts of the project were considered. The selected design, or Preferred Alternative, will bring the existing I-90 into conformance with current Federal and State Highway design criteria.

FHWA's Record of Decision, issued in October 2008, concludes that, "based on an evaluation of information presented in the Final EIS, the project's purpose and need, interagency coordination, input from the public, and the factors and commitments outlined, that "the Preferred Alternative (Keechelus Lake Alignment Alternative 4) is the alternative that best meets the purpose and need of the project, and will have the least impact to the human and natural environment. The Preferred Alternative is less expensive than the other alternatives, presents less risk, and avoids substantial environmental impact on lands adjacent to I-90 between milepost 55.1 east of the Hyak interchange and milepost 70.3 near Easton."

Construction of the Phase 1 portion of the I-90 Corridor Program, from Hyak to Keechelus Dam, is underway. Phase 1 construction is scheduled for completion in 2017. WSDOT engineers estimate completion of final design plans for Phase 2A by April 2013 and ready for TIGER III funds obligation by June 15, 2013.

Financial feasibility: The I-90 Project team regularly reports financial and schedule information to a variety of audiences and mediums including a Quarterly Project Review, Quarterly Project Reports, and WSDOT's Gray Notebook. WSDOT's quarterly report to the Governor and the Washington State Transportation Commission on transportation programs and department management Quarterly Progress Reports are also posted on the I-90 project website at [www.wsdot.wa.gov/projects/i90/snoqualmiepasseeast](http://www.wsdot.wa.gov/projects/i90/snoqualmiepasseeast).

From the project scoping phase to the start of construction of Phase 1 of the I-90 Corridor Program, continuous communication about the project is made available to the public, using tools such as websites, presentations, e-mail updates, social media tools (blogs, Facebook, Twitter and YouTube), and press conferences. This level of communication including public involvement and reporting efforts will continue to be maintained or exceeded to ensure the Phase 2A Project remains transparent to the public, and demonstrates tax dollars are providing jobs and meaningful transportation improvements.

### **c. Innovation**

The unique location of the Phase 2A Project provides many challenges for design, construction and environmental compliance. The project corridor is located in a mountain pass between steep (1/4:1) rock slopes and near the environmentally sensitive Keechelus Lake. The design and construction of this project must take into account maintenance requirements to remove up to 20 feet of snow in the winter, the presence of three endangered species, and freight and traffic impacts during construction.

The unique location of the Corridor Program presented an opportunity for the development of atypical, out-of-kind mitigation measures. To capitalize on this opportunity, a multi-agency team of biologists and hydrologists were convened to work with the design engineers to develop, review, and deliver a comprehensive mitigation strategy to the I-90 Interdisciplinary Team (see the Partnerships section for more information on this innovative approach). Mitigation strategies were developed by the team to meet the needs of wetlands, groundwater, stormwater, floodplains, and both mega- and microfauna species.

Resource agencies round out the team to identify the most appropriate stormwater treatment Best Management Practices (BMPs). Since space is limited and freezing conditions exist for significant portions of the year, there are few available stormwater BMPs that are effective. An innovative demonstrative approach is present that shows how a typical stormwater BMP, a Media Filter Drain (MFD), can be used to provide effective treatment for highway runoff.

Technologically, the Phase 2A Project incorporates innovations. The new chain-up area will contain three variable message signs to indicate current traction tire requirements and convey the most safe and effective use of the area during adverse conditions. The chain-up area will also include several cameras and two data stations to measure vehicle counts and speeds. All the equipment used to operate the smart chain-up area will also be utilized in augmenting the I-90 Snoqualmie Pass flow map and travel time electronic road signs, which are conveyed to the motoring public via travel time signs through 76 mile corridor and also through electronic media such as the Mountain Pass webpage and the 5-1-1 traveler information line.

Finally, WSDOT hosted a Cost Estimate Validation Process with outside experts to brainstorm and define methods of optimizing design and construction of the project. An in-depth analysis of design and construction was completed to enhance the construction schedule and minimize cost.

### **d. Partnership**

Jurisdictional / stakeholder collaboration: Kittitas County was part of the Interdisciplinary team and cognizant of project characteristics and location. Kittitas County is current in the Growth Management Act / Snoqualmie Pass Sub-Area Plan and it's incorporated into their Comprehensive Plan approved in 2008.

The I-90 Corridor Program is included in the WSDOT 20-year long range plan, the six-year STIP, and the Kittitas County GMA Plan, which must be consistent with the state plan.

Disciplinary integration: The entire I-90 Corridor Program exemplifies the benefits of using the collaborative approach process. Since 1999, the I-90 Project team has worked with dozens of

government agencies and nongovernmental groups to develop a range of potential solutions to meet project needs. Project needs include addressing traditional and nontraditional transportation improvements as they relate to the physical and natural environment. As part of NEPA, the underlying challenge for WSDOT and project partners was to design this interstate improvement project around an unforgiving environment and incorporate meaningful ways to mitigate the project's potential adverse impacts on the Central Cascades' ecosystem and the state's economy.

Even before project scoping, WSDOT and FHWA participated in an extensive and ongoing program of government-to-government consultation with affected Native American Tribes to discuss concerns regarding potential project impacts to traditional resources. Tribes included in this consultation are the Yakama Nation, Snoqualmie, Tulalip, Muckleshoot, Confederated Tribes of the Colville Reservation, and Wanapum Tribes. Those that participated in the consultation process indicated a desire to be consulted on impacts to cultural sites or objects discovered during construction, and impacts to traditional cultural practices, including hunting and fishing. Consultation with the tribes will continue throughout the completion of the project.

In recent years, there have been substantial private and public land conservation efforts to protect old-growth forest, provide larger contiguous blocks of forested habitat, and facilitate habitat connectivity across the I-90 Corridor through the acquisition of private land. The Cascades Conservation Partnership, the Mountains-to-Sound Greenway Trust, the U.S. Fish and Wildlife Service and the U.S. Forest Service have invested more than \$100 million in these efforts during the last seven years. These land purchases, along with the I-90 Land Exchange, have added 75,000 acres (approximately 117 square miles) of land to the National Forest system adjacent to and within I-90 Snoqualmie Pass. Innovative partnerships are in place with university researchers and conservation groups such as the Cascade Land Conservancy, Sierra Club, and Conservation Northwest, to help establish citizen awareness and wildlife monitoring programs and target habitat acquisitions

To ensure that plans align with the objectives of these groups, a multi-agency Interdisciplinary Team (IDT) of biologists and hydrologists was convened in 2000 to determine the types of mitigation measures needed to offset the anticipated impacts to wildlife and aquatic resources from the reconstruction project. WSDOT and FHWA were the lead agencies on the IDT. The original IDT consisted of eight agency members – five voting members and three advisory members. By 2005, the IDT was expanded to include 12 agencies, including WSDOT and FHWA. Partnership agencies included: U.S. Forest Service, U.S. Bureau of Reclamation, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, Environmental Protection Agency, National Marine Fishery Service, Washington Department of Fish and Wildlife, Washington Department of Ecology, Washington State Parks, and Kittitas County.

The IDT accomplished ecological project goals by applying a landscape-level, watershed-based mitigation strategy which allowed consideration of multiple ecological needs in the project design, including connecting habitat, streams, and groundwater across I-90 at various Connectivity Emphasis Areas (CEAs), or ecological linkages.

Transportation-based organizations, associations, and businesses – such as the Washington Trucking Association and Puget Sound Regional Council Freight Mobility Board - were also brought into the project to gain insight into the needs of interstate users.

#### **e. Results of Benefit-Cost Analysis**

Baseline description of current infrastructure: As detailed above, Interstate 90 is a critical transportation corridor, linking Puget Sound and central Washington to eastern Washington and beyond. The I-90 traveler may experience congestion, delays due to avalanche closures, rough pavement conditions, rock slide activity and potential wildlife collisions on the highway. The uninterrupted movement of people, freight and business over Snoqualmie Pass is essential to our quality of life and the economic vitality of Washington State. The current condition of I-90 across Snoqualmie Pass presents a number of threats, impacts, and poor roadway conditions which adversely impact passenger and freight mobility.

The section of I-90 Snoqualmie Pass (milepost 60 to 61) named in this proposal presents challenges to motorists and freight drivers due to seasonal and severe winter driving conditions. Frequently, many of the vehicles traveling over Snoqualmie Pass must install tire chains to maintain traction during winter storms. Existing tire chain-up areas are nonexistent and thus do not accommodate the sheer number and size of vehicles needing stop and put on chains, creating a safety risk to all.

Current roadway configuration includes numerous curves that do not support existing speed limits, create visibility issues, and contribute to collisions.

Traffic volume, both passenger and freight, is increasing 2.1% annually. I-90 Snoqualmie Pass with its current capacity cannot support this level of traffic flow. As example, during Memorial Day weekend 2010 approximately 187,000 vehicles traveled both directions; this heavy traffic volume taxed the aging system and drivers as they found themselves hostage in a twenty-seven mile backup with travel time increases of 3 to 4 hours.

Proposed Project: The proposed project, I-90 Snoqualmie Pass East Project - Phase 2A Capacity and Safety Improvement Project (I-90 Phase 2A), is a continuation of the 15-mile-long I-90 Snoqualmie Pass East Project. I-90 Phase 2A calls for the re-construction of approximately one mile of highway from Resort Creek (milepost 60) to the Price-Noble Creek Wildlife Crossing Structure (milepost 61). Project improvements include adding capacity by widening the interstate from four to six lanes; creating a smoother, safer ride by replacing deteriorating concrete pavement; improving visibility and sight distance by realigning the roadway to reduce sharp curves, and improving freight and passenger vehicle safety during wintertime driving conditions by adding chain up and off areas. The project also improves the ecological permeability of the highway for aquatic systems, fish, and wildlife through the installation of two new box culverts at Townsend Creek and Resort Creek and a new wildlife overcrossing bridge (which will be the first in Washington State) at Price-Noble Creek. Washington State's Department of Transportation's budget approved up to \$8 million to design the first two miles Phase 2 of the project (from Resort Creek to the Stampede Pass Interchange (milepost 62)), and the use of project savings realized from a favorable bidding and construction environment in Phase 1 of the project to be allocated for use to construct Phase 2 improvements.

Project justification: The purpose of the project is to meet projected traffic demands, improve public safety, and meet the identified project needs for a 15-mile stretch of I-90 between the communities of Hyak and Easton, in Kittitas County, Washington. Specifically:

- The pavement on I-90 is beyond its design life and the roadway is rapidly deteriorating. If it

is not repaired or replaced, continued deterioration of the roadway will result in unsafe driving conditions, increased vehicle damage, travel delay, costly reactive roadway fixes, and eventual failure of the roadway.

- Traffic volumes on I-90 are increasing at an estimated rate of 2.1 percent per year and are expected to increase at a similar rate well into the future. Traffic volumes already exceed the highway's design capacity during peak travel periods. The worsening traffic situation may lead to higher numbers of accidents, adverse economic impacts due to delays in freight movement and employees reporting late (or not at all) to work, and increased travel times.
- Straighten a low visibility section of I-90 to increase safe passage for drivers. Per Washington State Department of Transportation, fatal and injury motor vehicle crashes are highest in rural parts of the State. Seventy-three percent of all fatal collisions and 39% of injury collisions occur in rural areas. The greatest percentage of unintentional injury emergency calls to the Kittitas County EMS is due to motor vehicle crashes. The Washington Traffic Safety Commission's 2010 Annual Report indicates in 2009 there were 492 fatalities; of this amount 313 fatalities or 64% occurred on rural roads.

If this project were not built, the section of I-90 between Hyak and Easton would not be improved and critical needs would not be met:

- Risk of avalanches and rock and debris slides from unstable slopes would remain the same. The economic and social cost of closures and accidents would increase as traffic volumes increase.
- Maintenance costs would remain extremely high to keep the highway in a drivable condition. The existing four-lane highway would require frequent resurfacing projects to keep the highway functioning. These resurfacing projects have a short lifespan due to harsh weather conditions.
- Highway safety would continue to deteriorate and congestion would worsen as traffic volumes increase.
- Habitat connections would continue to be inadequate. As traffic volumes continue to increase, habitat fragmentation and wildlife/vehicle collisions also would increase.

The long-term outcome resulting from the completion of the I-90 Snoqualmie Pass East Project - Phase 2A Project is a more efficient six-lane freeway to better handle traffic flow, improved visibility by re-aligning the roadway and curve removal, safer 40-year design pavement, and chain-up capacity for freight and passenger occupied vehicles to use during severe winter conditions. The installation of new bridges and culverts reconnects wildlife habitat on either side of I-90, protecting animals, vehicles and freight passage.

Beneficiaries: The users of the project are personal vehicle operators, freight operators, and businesses who require transportation of goods and services. Because more than 446 million tons of freight moves to, from and through Washington state each year, Washington's transportation system supports the highest per capita trade in the nation. Trucks carry most of the freight, both in tonnage (59 percent) and value (64 percent). I-90 Snoqualmie Pass is the critical link in moving this freight along the east-west commerce route. I-90 connects directly between ports and agricultural industries located in eastern Washington and beyond. Notable facts:

- Thirty-five million tons of freight cargo, which equates to \$500 billion in value, crosses I-90 each year.

- Approximately 28 percent of the freight traffic on I-90 is related to agricultural goods. Prompt delivery of agricultural goods is essential to guarantee quality and freshness.
- Approximately 19 percent is related to industrial materials. Timely delivery of parts to major employers, such as Boeing, ensures they stay on track to deliver a product or supplies.
- By 2028, more than 10,000 trucks will use I-90 daily.

On a more local level, Kittitas County, classified as an economically distressed county in 2009 with an unemployment rate of 8.6% (according to the Office of Financial Management), will benefit exponentially from the entire I-90 Corridor Program, as improvements will ease the movement of workers. In 2006 the Economic Development Group of Kittitas County reported more commuters traveling to and from the county to their workplace. Today, more than 5,400 Kittitas County residents report to their workplace located outside of Kittitas County; specifically, two out of five of the county's outbound commuters travel to and return from King County (located west of Kittitas County across Snoqualmie Pass, with its largest city being Seattle) each day. Kittitas County has the fourth highest VMT per capita of all counties in Washington state, and is ranked twelfth with 39% of small business grown income impacting the total county business income.

The proposed project roadway improvements increase reliability of I-90 for commuters, travelers, and transportation of goods and services needed to promote a healthy economy in Washington.

Key analytical assumptions: Benefits and costs are valued in 2010 dollars to avoid having to forecast future inflation and escalate future values for benefits and costs accordingly. Discount rates of 7.0 percent and 3.0 percent provide an alternative analysis for consideration. The evaluation period for the project is 45 years beyond completion of construction. Land value is not a factor in the analysis, as Kittitas County is one of eleven counties with over 50% of its land base in public land. The BCA focuses on the 1.27 mile segment of I-90 between MP 59.7 to MP 60.9.

Benefits: Relationship to five long-term outcomes: State of Good Repair; Economic Competitiveness; Livability; Environmental Sustainability; and Safety

1. **State of Good Repair.** The analysis looks at the pavement damage and O&M costs for the 45-year design of the proposed road. The project anticipates a 2.1% increase in vehicular travel and takes into account the five year overlay maintenance required on the current road.
2. **Economic Competitiveness.** The number of workers commuting to/from Kittitas County via this one mile road way contributes to the economy. Also, 17% of traffic is freight moving to/from the region.
3. **Livability.** The free flow of vehicles and freight across I-90 is imperative. Because the average commute length is 56 miles or over one hour each way, a roadway free of delay is needed for workers to drive to/from work, and for weekend travelers to feel confident, weather permitting, that their journey will get them quickly and safely to their destination.
4. **Environmental Sustainability.** Increased roadway capacity will result in less idle time due to congestion or accidents. Reducing idle time has a direct correlation to reduced emissions.
5. **Safety.** While the posted speed will increase from 65 MPH to 70 MPH, the roadway corrections made as a result of this project include a straighter path with increased visibility.

Benefits not included: This one mile stretch of interstate roadway is located in a rural county, and as such, major livability benefits such as bicycling and walking are not included in this analysis. These

types of transportation options or alternatives are best suited for urban or densely populated areas, and are not viable for this portion of I-90.

Results in brief: Two case options were considered: assuming a 7% and 3% discount rate. Table 1 presents the summarized results for each option. All benefits and costs were estimated in constant 2010 dollars over an evaluation period extending 45 years beyond system completion in 2015.

Table 1: Benefit Cost Analysis Summary Results

Option	Total Benefits	Total Costs	Net Present Value (NPV)*	Benefit Cost Ratio (B/C)
7% discount rate	\$4,949,644	\$33,202,916	\$(28,253,272)	0.0019717
3% discount rate	\$10,919,797	\$37,131,873	\$(26,212,076)	0.0223922

\*Net Present Value (2010\$) for 2015-2060

While the BCA for this specific section of highway is lower than desirable, it should be noted that this short stretch is best considered within the broader context of the project. Without this specific one mile length of highway, the great amounts of funding already expended will not provide the full intended benefits, and the tremendous impact of the entire project will not be realized. Justification of Benefit Cost Analysis is located in Appendix D.

## V. Project readiness and NEPA

The Phase 2A Project is technically and financially feasible and is ready to move forward quickly. The Final EIS for the entire 15-mile project is complete. FHWA signed the Record of Decision (ROD) in October 2008. The ROD from the FHWA (FHWA-WA-EIS-0501-F) confirmed that the NEPA process was satisfactorily completed. Federal, state, and local permits or agreements were delineated in the Final EIS and the ROD. All of the permits and/or agreements have been received for first contract of Phase 1 with approval obtained prior to start of construction in July 2009. Environmental permits for Phase 2, specifically Phase 2A, will be obtained by June 30, 2013.

The I-90 Snoqualmie Pass East project Final EIS, issued August 2008, highlights NEPA and SEPA actions. The environmental documentation, including the Record of Decision, is located at the following link: [www.wsdot.wa.gov/Projects/I90/SnoqualmiePassEast/Finaleis](http://www.wsdot.wa.gov/Projects/I90/SnoqualmiePassEast/Finaleis) Phase 1 of the corridor program is under construction and is infusing Kittitas County and the State of Washington with much needed jobs. Design of Phase 2A is underway, with advertisement of the project to contractors by June 2013.

## VI. Federal Wage Rate Certification

See Appendix B

## VII. Update to pre-application

The name of the project needs to change to I-90 Snoqualmie Pass East, Phase 2A – Safety and Capacity Improvement Project. It was mistakenly called the Phase 2B project in the pre-application.