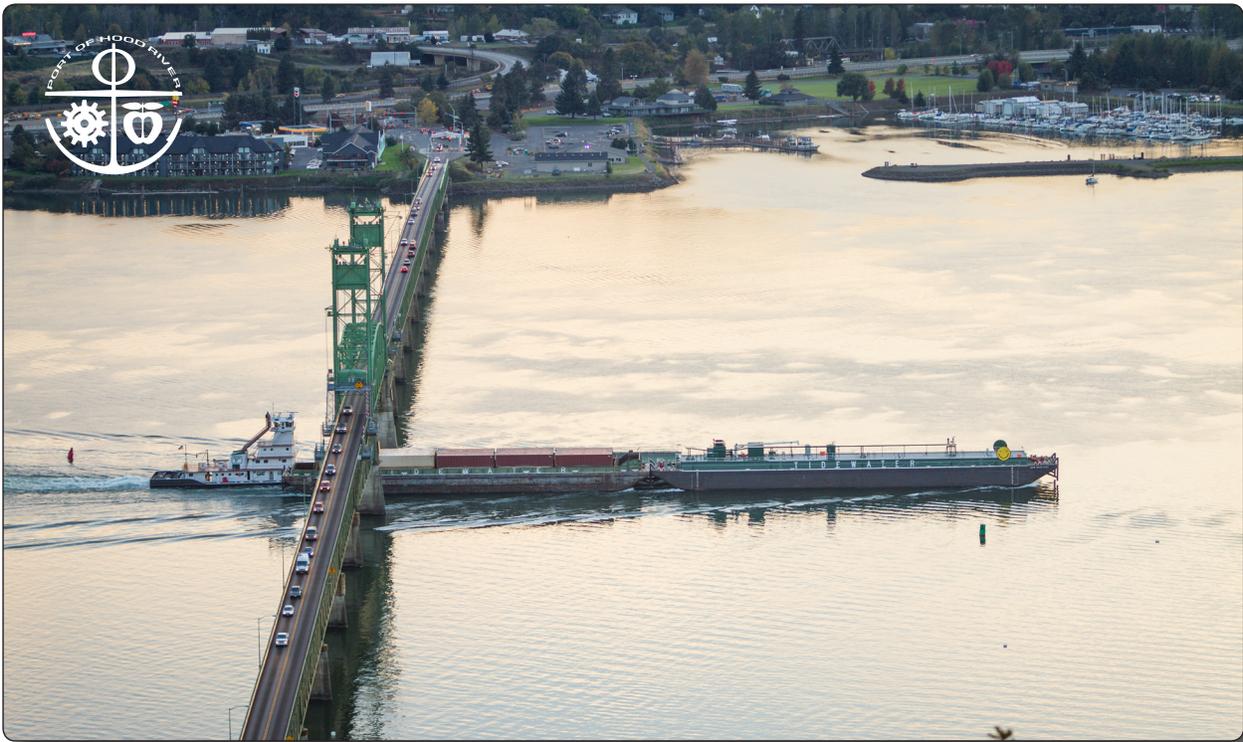


<b>HOOD RIVER INTERSTATE BRIDGE REPLACEMENT PROJECT PRE-CONSTRUCTION PHASE 1(B)</b>	
Was a FASTLANE application for this project submitted previously?	NO
If yes, what was the name of the project in the previous application?	N/A
<i>Previously Incurred Project Cost</i>	\$1.761 million (Phase 1(A))
<i>Future Eligible Project Cost</i>	\$308.5 million (Construction Complete)
Total Project Cost	\$8,416,800
FASTLANE Request	\$5,050,080
Total Federal Funding (Including FASTLANE)	\$5,050,080
Are matching funds restricted to a specific project component?	NO
Is the project or a portion of the project currently located on National Highway Freight Network?	YES (Connects to I-84, designated as a Critical Rural Freight Network facility in Washington)
Is the project or a portion of the project located on the NHS? - Does the project add capacity to the Interstate system? - Is the project in a National Scenic Area?	YES YES YES
Do the project components include a railway-highway grade crossing or grade separation project?	NO
Do the project components include an intermodal or freight rail project, or freight project within the boundaries of a public or private freight rail, water (including ports), or intermodal facility?	NO
If answered yes to either of the two components questions above, how much of requested FASTLANE funds will be spent on each of these projects components?	N/A
State(s) in which project is located	Oregon & Washington
Small or large project	Small (Phase 1(B))
Urbanized Area in which project is located, if applicable	N/A
Population of Urbanized Area	N/A
Is the project currently programmed in the: - TIP - STIP - MOP Long Range Transportation Plan - State Long Range Transportation Plan - State Freight Plan?	NO

*Summary of Changes: This application has not been previously submitted.*

# Hood River Interstate Bridge Replacement Pre-Construction Phase 1 (B)



## 2017 FASTLANE II Grant Application

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## Project Narrative

### PROJECT DESCRIPTION

The Port of Hood River seeks \$5.05 million in NSFHP (“FASTLANE”) grant funding to complete pre-construction planning and project development activities associated with the construction of a new interstate bridge in the Columbia River Gorge National Scenic Area. This final phase of pre-construction activities will include a Final Environmental Impact Statement (FEIS), preliminary engineering for construction of a new, replacement bridge and needed right-of-way acquisitions. Local match for this project will be \$3.366 million (40%). Previously incurred project costs total \$1.761 million since 1999. Future eligible project costs (for construction phase activities to completion) is expected to be \$308.5 million.



*In this view looking downstream of the Columbia River federal waterway, a typical barge tow navigates the narrow span of the Hood River Interstate Bridge.*

This FASTLANE request will fund the following components of pre-construction Phase 1(B) activities:

1.	Final Environmental Impact Statement	- \$3,438,000
2.	Preliminary Engineering (30%)	- \$1,740,000
3.	Right of Way Acquisitions	- \$ 120,000
4.	Project Administration/Legal/Contingency	- <u>\$3,118,800</u>
	<b>Total Project Cost</b>	<b>- \$8,416,800</b>
	<b>NSFHP Request</b>	<b>- \$5,050,080</b>
	<b>Applicant Match</b>	<b>- \$3,366,720 (40%)</b>

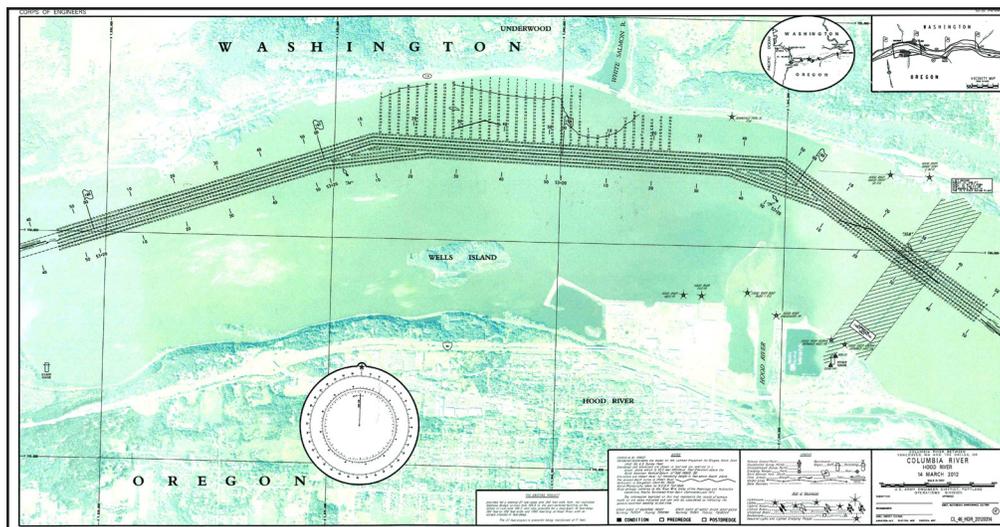
## REGIONALLY AND NATIONALLY SIGNIFICANT / IMPROVES NHS

The Hood River Interstate Bridge Replacement Project is regionally and nationally significant because the bridge provides one of only three Columbia River crossings in the **Columbia River Gorge National Scenic Area (NSA)**. The Columbia River Gorge NSA encompasses an 85-mile stretch of the Columbia River in Oregon and Washington. The region is served by **two east-west National Highway System (NHS) corridors: Interstate-84 in Oregon and SR-14 in Washington**. The two highways and 28 communities along the river are connected by three bridges, each located more than 20 miles apart, with the Hood River Bridge situated centrally. This project will significantly improve performance of the NHS system by completing the pre-construction work associated with replacing the Hood River Interstate Bridge. Annually, 4 million vehicles cross the bridge and there has been more than 3.5% annual traffic growth in recent years<sup>1</sup>. The current bridge spans an **Inland Federal Waterway** and constrains this important federal navigation channel. Over 9 million tons of commercial cargo traveled under the bridge in 2012, representing at least 30% of the total cargo barged for import/export on the inland navigation route from Portland/Vancouver to Lewiston, Idaho<sup>2</sup>.

## PROJECT NEED

The 92 year old steel truss bridge is structurally deficient, functionally obsolete with sufficiency rating of 49.8, and is nearing the end of its serviceable life. The potential failure or closure of the bridge would “...have severe social and economic impacts on the interdependent, bi-state communities” of the Columbia River Gorge National Scenic Area, as stated in the Summary to the Draft EIS of the SR-35 Columbia River Crossing Study completed in 2003<sup>4</sup>.

The current bridge’s 246 foot navigational channel under the lift span is poorly aligned, insufficient and dangerous for the commercial cargo barges navigating the federal inland waterway. The current bridge presents one of the most challenging navigational passages on the inland Columbia/Snake River System for barge operators. Only one vessel can navigate the bridge span at a time. Meanwhile, barge traffic on the lower Columbia River continues to grow with barge operators annually hauling more than 3 million tons of wheat and barley, and millions of barrels of petroleum products, logs and wood chips.



*This illustration shows the narrow navigational channel approaching and through the bridge.*

## EMERGENCY RESPONSE

Weather related closures of Interstate 84 near Hood River occur on average twice a year. Rock slides and landslides have caused significant closures in recent years as well. When these closures occur, the bridge becomes essentially part of the Interstate highway, accommodating detoured freeway traffic in both directions. During the June 3, 2016 oil train derailment in nearby Mosier, Oregon that resulted in a fire and a 12-hour full closure of Interstate 84 at Exit 64 in Hood River, the bridge accommodated detoured freeway traffic in both directions for nearly 12 hours. The narrow, shoulder-less travel lanes on the bridge created a choke point that backed up traffic for miles in all directions on both sides of the river (as far away as Cascade Locks on the Oregon side and Dallesport on the Washington side) as large trucks and emergency response vehicles had to carefully negotiate their crossings, coming within inches of each other<sup>3</sup>. For a first-person account of the bridge crossing difficulty for emergency responders, please see the YouTube video posted at <https://www.youtube.com/watch?v=iYLugyWEI4w>.



*View to the smoke of the oil train fire through the Bridge lift span. Photo credit: Oregon Public Broadcasting*



*Detoured traffic on the Bridge. Photo credit: Hood River News*



*Large trucks, busses, and passenger vehicles crossing within inches of each other.*



*The Bridge carried detoured freeway traffic for nearly 12 hours.*



*The truck on the right scrapes the guardrail while negotiating a crossing with another truck approaching.*

## PROJECT PURPOSE

The purpose of the project is to improve safety, seismic resiliency, alleviate congestion, improve river navigation, and provide a new multi-modal transportation link across the Columbia River between the Bingen and White Salmon, Washington and Hood River, Oregon communities. The overall need for the project is to rectify current and future transportation inadequacies and deficiencies associated with the existing Hood River/White Salmon Interstate Bridge. Specific needs addressed by the project are related to capacity, system linkage, transportation demand, social demands, economic development, modal interrelationships, navigational conflicts, safety, and existing bridge, bridge roadway, and navigational deficiencies.

Planning for bridge replacement has been underway since 1999 with scoping for a bridge replacement feasibility study conducted by lead agencies Southwest Washington Regional Transportation Council (RTC), the Oregon Department of Transportation (ODOT), and the Washington State Department of Transportation (WSDOT). This effort culminated in a NEPA scoping phase led by the Federal Highway Administration (FHWA); a completed feasibility study and draft Environmental Impact Study (DEIS) including a Record of Decision in 2003<sup>4</sup>; and a Type, Size and Location Study (TS&L) in 2011<sup>5</sup>. This portion of the pre-construction planning process will be referred to as Phase 1(A) in this application<sup>6</sup>.

The Port of Hood River has owned and operated the bridge since December 12, 1950. Over the last two decades, despite the broadly accepted need to replace the bridge with a multi-modal transportation facility, the Port has needed to invest over \$24 million to keep the bridge open and operational. The Port now seeks FASTLANE grant funding for completion of the Final EIS, preliminary engineering for construction of a new, replacement bridge, and needed right-of-way acquisitions. This portion of the pre-construction process will be referred to as Phase 1(B) in this application. Construction activities, including SR-14 and I-84 intersection improvements will be referred to as Phase 2.

## PROJECT GOALS

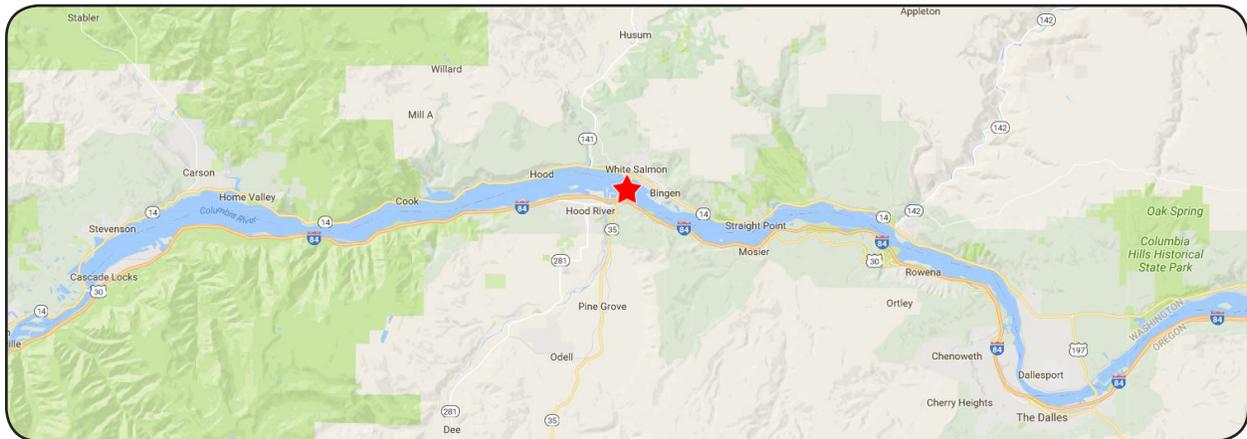
By completing the pre-construction phases of the project and securing needed right-of-way for the new bridge, this project will successfully address the project needs first stated in the 2004 SR-35 Columbia River Crossing Feasibility Study Final Report to *“rectify current and future transportation inadequacies and deficiencies associated with the current Hood River Bridge.”*

- *Alleviate current and future congestion at the bridge termini, on the bridge itself and the access road to and from the bridge (SR-35), and congestion related to diverted traffic due to severe weather conditions or incidents on Mount Hood, I-84, or SR-14;*
- *Provide a cross-river linkage to the transportation system;*
- *Accommodating the increase in cross-river demand while also providing for bicycle and pedestrian travel across the Columbia River; [...]*
- *Satisfy social demands and economic needs for cross-river flow of goods and people;*
- *Accommodate river navigation by providing a horizontal clearance which meets current standards while also providing intermodal and multimodal connections across the river; and*
- *Addressing and improving upon safety and current substandard design of the current bridge.”*

## Project Location

The Hood River Interstate Bridge is a critical freight and commuter link in the heart of the Columbia River Gorge National Scenic Area, spanning the federal waterway at river mile 169 between Oregon and Washington. The Oregon landing is located at GPS coordinates 45.713223,-121.500499.

The 4,418 foot long bridge connects the rural communities of White Salmon and Bingen, Washington with Hood River, Oregon serving as an essential link to the local communities, the region, and interstate movement of freight, commuters, and visitors. The preliminary preferred alternative selected during the Phase 1(A) Draft EIS sited the new bridge directly west of the current bridge, with approaches at or just west of their current location.

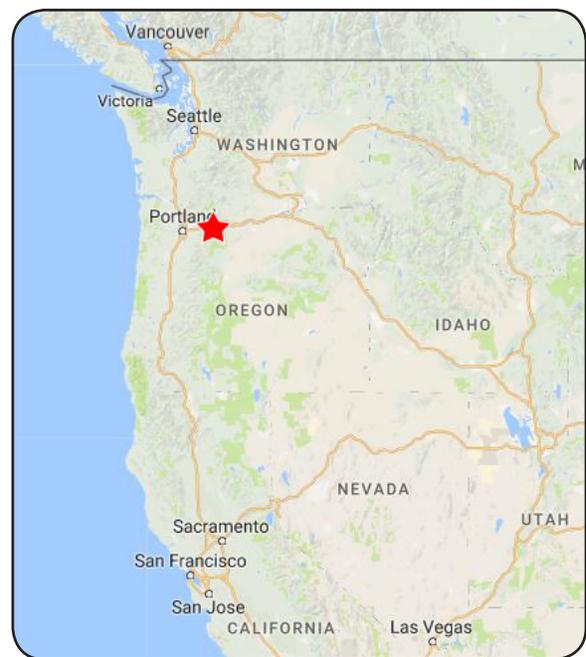


The Hood River/White Salmon Interstate Bridge provides the only connection between Interstate 84 and Washington SR 14 for over forty miles between Cascade Locks and The Dalles. Other important routes connected by the bridge are Oregon Hwy 35 and 30 and Washington SR 141, as well as the soon to be completed Historic Columbia River Highway State Trail.

The project is located in Oregon Congressional District 2 and Washington Congressional District 3.

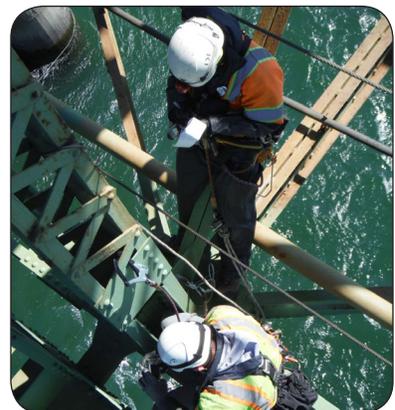
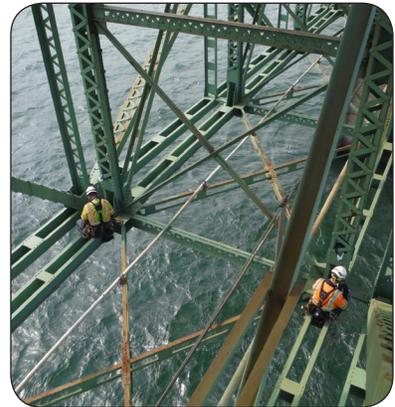
### CURRENT CONDITIONS

Originally built in 1924 and extensively renovated in 1938 and 1950, the steel deck bridge is structurally deficient for vehicle freight crossings, having only two very narrow (9' 4.75" wide), shoulder-less lanes. The bridge is weight restricted to 80,000 lbs. The bridge structure is also insufficient for the marine barge tow freight navigating the mere 246 feet horizontal span on this important inland waterway for U.S. wheat, soy, wood products and mineral bulk exports. The bridge is not seismically



retrofit, is functionally obsolete and weight and dimensionally restricted for large trucks. Yet, it still remains a primary freight route on the National Highway System and the Critical Rural Freight Network. The Bridge carries natural gas, fiber, and electric utilities across the Columbia River.

Over the past 20 years, the Port has invested over \$24 million in repairs and capital upgrades, including a Phase One Seismic Retrofit and span strengthening, approach widening, bridge redecking, lower (fracture critical) chord painting, pier concrete assessments, toll system upgrades, and extensive deck welding. A pictorial sample of this work appears below.



The Bridge has no bicycle/pedestrian facilities and cannot support the addition of such facilities. This is particularly problematic since it prohibits bicycle commuting between Washington and Oregon and also fails to serve the recreational interests of cyclists and pedestrians drawn to the NSA. The Draft EIS completed in 2003 estimated the current bridge's serviceable life to be approximately 30 years. Residents and commuters who live in economically disadvantaged Klickitat County, Washington that work, shop, and receive services in Oregon are concerned about the safety and service life of the bridge. The nearest alternate crossings of the Columbia River are located more than 20 miles away in each direction to the east and west.



## Project Parties

### PHASE 1(B) PROJECT PARTIES

By completing the pre-construction phases of the project and securing needed rights-of-way for the new bridge, this project will build upon the work completed by the Port and partner Oregon and Washington agencies to rectify current and future transportation inadequacies and deficiencies associated with the current bridge.

The proposed Phase 1(B) activities will be led by the Port of Hood River but will include participation from all entities involved in the Phase 1(A) listed below. In addition, the Port intends to invite private sector stakeholders such as agriculture and wood product businesses and organizations, vehicle and marine freight companies, and regional aviation technology and other manufacturing companies to participate on the Local Advisory Committee.

Renewed outreach to tribal representatives including direct in-person meetings with each of the four treaty tribes (Yakama Nation, Confederated Tribes of Warm Springs, Confederated Tribes of the Umatilla Reservation, and the Nez Perce Tribes) will also be a major element in the public outreach process for Phase 1(B), especially in collecting needed commentary on the established Area of Potential Effects (APE) in the FEIS.

### REGIONAL PARTNERS & PLANNING ALREADY COMPLETE

A multi-jurisdictional effort has been underway since 1999 for the long term replacement of the existing bridge. This planning effort began with scoping for a bridge replacement feasibility study conducted by lead agencies Southwest Washington Regional Transportation Council (RTC), the Oregon Department of Transportation (ODOT), and the Washington State Department of Transportation (WSDOT). This effort culminated in a NEPA scoping phase led by the Federal Highway Administration (FHWA); a completed feasibility study and draft Environmental Impact Study (DEIS) including a Record of Decision in 2003; and a Type, Size and Location Study (TS&L) in 2012. This multi-year study effort included the involvement of local counties, cities, ports, Gorge Commission,

businesses and citizens as participants on a Local Advisory Committee<sup>6</sup>.

Since then, the FEIS for replacement of the Hood River Interstate Bridge has been identified as the #1 priority in the 2016 Comprehensive Economic Development Strategy (CEDS) <sup>7</sup> of the Mid-Columbia Economic Development District, which states:

*“Matching funding to support completion of an Environmental Impact Statement for a new Hood River White Salmon Interstate Bridge [...] is a vital step in the process of securing a replacement bridge, a critical transportation facility in the mid-Columbia Region.”*

The 2014 Regional Transportation Plan for Klickitat County, Washington<sup>8</sup> also ranks the FEIS and design for the bridge replacement project as a #1 priority.

Hood River County’s Zoning Ordinance Article 75 (National Scenic Area Ordinance) anticipates the bridge replacement project, with recommendations on the Visual Quality, Historic Design Elements, and recommendations for Recreation and Pedestrian/Bicycle Access for the new bridge. The bridge replacement project is included in the County’s next update to the Transportation Safety Plan (TSP), as well as that of the City of Hood River. The need for the bridge replacement is also expected to be included in the next comprehensive plan update for Klickitat County and City of White Salmon.

## **AFFECTED COMMUNITIES**

Both Klickitat County in Washington and Hood River County in Oregon are rural areas with 2015 populations of 21,026 and 23,137 respectively. The cities of Bingen and White Salmon together comprise a local population of 3,064 and the City of Hood River has 7,624 residents. Together, these communities constitute a single bi-state community and the economic well-being of this region is dependent on the Bridge. The entire Columbia River Gorge region is home to more than 82,000 residents commuting across state and county lines for employment, creating a truly bi-state regional economy. The Columbia River Gorge National Scenic Area is a national treasure, and host to over 2 million visitors each year.

## **COMMUTERS: NO VIABLE ALTERNATE ROUTE TO WORK**

The Hood River/White Salmon area is truly a single, bi-state community with the bridge providing a critical route to work and services for residents on both sides of the river. In 2014 there were 12,444 jobs in Hood River County. Of those jobs, 5,435 were held by workers who lived outside of the County. Nearly six percent (736 jobs) of Hood River County’s jobs were held by residents of Klickitat County (White Salmon, Bingen primarily) and 2.5% (315 jobs) were held by Skamania County residents (Stevenson, North Bonneville primarily)<sup>9</sup>. Alternate routes across the river would require an additional 45-60 minutes drive time, as the nearest alternate crossings of the Columbia are more than 20 miles away in each direction. Thus, the bridges of the Gorge, especially the Hood River/White Salmon Interstate Bridge, provide essential routes to work, school, health care, and other services for working families throughout the region.

## KEY INDUSTRY SECTORS

Key industry clusters in the region include agricultural production worth over \$300 million annually; high tech/advanced manufacturing focused on unmanned aerial vehicles (UAV) generating over \$450 million in annual revenue with 1200 employees in both states; value added ag/food production clustered around wineries, breweries, and distilleries; and tourism recognizing the region as an international destination for outdoor recreation in all seasons. Beyond workforce commuting, the value of freight crossing the Hood River Interstate Bridge is estimated to be \$75 million, not including high-value UAV components<sup>10</sup>.

Studies conducted by Parsons Brinckerhoff and HNTB on the Hood River Interstate Bridge conclude that cumulative spending to maintain the bridge in its current deficient, constrained/limited access condition could grow to \$30 million over the next 25 years. The Summary of the Draft EIS describes the impact of bridge closure if the current bridge reaches the end of its serviceable life and has to be closed to all vehicular traffic:

*“This closure would have severe social and economic impacts on the interdependent, bi-state communities. In particular, Bingen, White Salmon and nearby rural areas would lose their direct connect to I-84. Residents and business-related traffic would need to travel 20 miles east or west before being able to cross the Columbia River at The Dalles or Cascade Locks. This severed direct connection could be detrimental to the long-term economic development of the Washington communities as well as an adverse effect to Hood River businesses and service providers that depend on the workforce and client base that Washington residents supply.”<sup>4,10</sup>*

## AFFECTED INDUSTRY SECTORS:

### MANUFACTURING, AGRICULTURE, FORESTRY, TOURISM

Bingen, Washington is the home of Insitu, an independent subsidiary of Boeing and one of the largest manufacturers of unmanned aerial vehicles (UAVs) in the United States. The Bridge is a critical shipping route for Insitu UAVs, components, and parts, but even more important as a commuter link for the company’s more than 1000 employees who live and work on both sides of the river.



Photo credit: Insitu

The Hood River Valley is a world leader in production of Anjou pears and other winter pear varieties. Together, Oregon and Washington produce 84% of the nation’s fresh pear crop. According to the Columbia Gorge Fruit Growers Association, over 225,000 tons of apples, pears, and cherries are annually produced in the Mid-Columbia area. The current bridge is structurally deficient for vehicle freight crossings, with only two very narrow (9’ 4.75” wide), shoulder-less lanes. The preliminary preferred alternative calls for a roadway consisting of two 12-foot travel lanes, two 8-foot shoulders, and one 16-foot pedestrian/bike facility on one side.

The Bridge has no bicycle/pedestrian facilities and cannot support the addition of such facilities. This is particularly problematic since it prohibits cycle commuting between Washington and Oregon and also fails to serve the recreational interests of cyclists and pedestrians drawn to the NSA.

Since 1986, Oregon DOT has invested over \$73 million in federal and state funding to redevelop the Historic Columbia River Gorge Highway- \$56 million of that on the HCRH Bicycle and Pedestrian facility. 63 of the original 73 miles of the Historic Columbia River Highway are now open to travel either by motor vehicle (Historic Highway or connecting county roads) or by foot and bicycle (State Trail). This facility is drawing tens of thousands of cyclists and pedestrians to the NSA, yet the lack of cycling and pedestrian access on the Hood River Interstate Bridge presents a significant and unfortunate gap in non-motorized connectivity in the NSA.



*This illustration from the SR-35 Columbia River Crossing Study shows the recommended 12' wide bike/ped facility with viewpoints.*

An October 2012 study by HNTB<sup>11</sup> concluded that while there is significant interest and broad support from area stakeholders in adding safe pedestrian and bicycle crossings to the current bridge, there are significant structural and mechanical barriers that make such a project unfeasible and cost-prohibitive. The study concluded that:

- The steel trusses have a limited reserve structural capacity to support added loads.
- The lift span would require significant mechanical and electrical equipment upgrades and structural retrofit or full replacement to support the added loads and configuration.
- The steel trusses would require full engineering evaluation and structural strengthening to support added loads.
- If a ped/bike facility is added to the bridge the bridge may need to be load limited for vehicles.
- The substructure (piers) and subaqueous (underwater) foundations have an unknown ability to support additional vertical and lateral loading and require further investigation.

The Summary of the Draft EIS notes that a result of the construction of the preliminary preferred alternative design would be that, “Recreational opportunities would be expected to increase with a bridge crossing that has multi-modal facilities and would enable bi-state connections to trails and sidewalks.”

## VEHICLE FREIGHT IMPACTS

The current bridge is weight restricted to 80,000 lbs. A fully loaded fruit truck hauling fresh pears for processing weighs on average 105,500 lbs. A 2015 report by Columbia River Port Engineers<sup>12</sup> notes that, “Detours either upstream or downstream from the HR Bridge could involve trips of 45

miles or more. The toll at the Hood River Bridge is a bargain as compared to the costs incurred in diverting to the Bridge of the Gods (which is weight limited at 80,000#), I-205, the bridge at The Dalles or at Biggs Junction.” (The Hood River Bridge assesses tolls for trucks based on the axle count of the vehicle combinations. A typical tractor and trailer with five axles will pay \$5.00. Each additional axle is assessed at \$1.00 per axle.)



*Narrow, shoulder-less lanes present distinct problems for large trucks.*

The Benefit Cost Analysis (See Attachment) calculates over \$200 million in savings from reductions in vehicle delays and over \$65 million in reduced vehicle O&M costs in a 75-year analysis.

## MARINE FREIGHT IMPACTS

The current bridge’s 246 foot navigational channel under the lift span is poorly aligned, insufficient, and dangerous for the commercial cargo barges navigating the federal inland waterway. The preliminary preferred alternative calls for a minimum navigational channel of 450 feet, and also recommends a re-alignment of the channel, stating that *“The channel alignment should also allow tugs and barges to be aligned with the westerly winds that now hit on the diagonal and cause control problems, especially for tows with empty barges.”*



*The current lift span is more than 200' narrower than the minimum recommendation.*

In his testimony to the Oregon state legislature on January 25, 2016<sup>13</sup>, Eric Burnette, Executive Director of the Oregon Board of Maritime Pilots described the unique and significant challenges barge pilots face when approaching and navigating under the bridge [excerpt]:

*“... When configured as a unit, these 4 barges and one towboat form a large vessel that by itself, is slightly over 1/10 of a mile long. It requires precise and skillful navigation. The practical impacts of these combined factors on navigational safety are significant. A tug/barge headed upriver will typically favor the south side of the channel as it passes the While Salmon River Delta, and then quickly shift to the north side of the channel to avoid the Hood River Delta. Once clear of the Hood River Delta it must then immediately get into position to pass under the lift span of the Hood River Bridge.*

*A down-bound vessel faces a different set of challenges. Lacking the obstacles found on the downstream side of the Hood River Bridge, a tug/barge approaching from upstream will have more time and room to get into proper alignment to pass under the Hood River Interstate bridge. However, once under the bridge, that tug/barge must negotiate both the Hood River and then the While Salmon River Deltas with the current coming from behind. This following current only accelerates the vessel’s speed over*

*the bottom and reduces the time available to make the necessary course corrections as it passes both deltas.”*

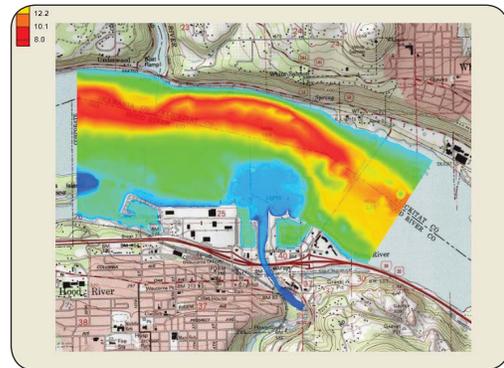
In an email to the Port of Hood River on April 11, 2016, Port Captain Fred Harding describes the experience thusly<sup>14</sup>:

*“Many gray hairs have been produced by the current span on many a crew. Over the 30+ years I have been watching the Columbia River this bridge has been known to be struck more than all other obstacles on the entire river system. Due to the narrowness of the bridge and the weather in the area of the bridge. If you add into the mix the wind surfers and kite boarders the difficulty again increases. If it were to be enlarged to 450 feet at the navigation span and the river to under side of the bridge were to be 80 feet I believe much of the stress of the transit would be reduced.”*

Over 9 million tons of commercial cargo traveled under the bridge’s lift span in 2012, at least 30% of the total cargo barged for import/export on the inland navigation route from Portland/Vancouver to Lewiston, Idaho. Barge traffic on the lower Columbia River continues to grow with barge operators annually hauling more than 3 million tons of wheat and barley, and millions of barrels of petroleum products, logs and wood chips.



*Port of Hood River Executive Director pilots a barge through the navigation channel, courtesy of Shaver Transportation.*



*Illustration of the Hood River Delta’s intrusion into the navigation channel.*

## ENVIRONMENTAL IMPACTS & BENEFITS

At the project location, the Columbia River is host to ESA salmon and steelhead species, lamprey, and migratory birds and other sensitive species. The Summary to the Draft EIS<sup>4</sup> details the immediate environmental benefit to the Columbia River with the removal of the steel deck bridge:

*“The new bridge would benefit water quality, as compared to the existing bridge, because road runoff from the bridge deck would be collected and treated prior to discharge to the Columbia River. Currently, all oil, grease, metals, and sediments from vehicle may enter the river directly through the grated bridge decking.”*

The DEIS also notes the expected improvements related to an increased speed limit on the new bridge, stating *“Each of the build alternatives would improve energy consumption of traffic [...] range[ing] between 8 and 15 percent less than No Action as a result of the higher operating speed....”*

## Project Scope & Schedule

Phase 1(B) will result in completion of the following tasks associated with completion of a Final Environmental Impact Statement, Permitting, Feasibility Analyses, Financial Modeling, and Preliminary Engineering and Design to 30%.

*Note: Cost classifications listed here are intended to align with those of Form SF-424C: Budget Information - Contructions Programs.*

### A. ADMINISTRATIVE & LEGAL EXPENSES (Form SF-424C Row 1)

#### Task 1. Project Management and Coordination

- 1.1 Project Management and Quality Assurance
- 1.2 Project Invoices and Progress Reports
- 1.3 Monthly Project Management Team Coordination Meetings

#### Task 2. Public Involvement

- 2.1 Restart public outreach and public comment process; re-establishment of advisory committees, including local city and county governments and transportation planning authorities as well as Oregon and Washington Departments of Transportation and the Columbia River Gorge Commission. Private sector stakeholders such as fruit, wood product, and mineral freight companies and inland barge tow companies will also be represented.
- 2.2 Renewed outreach to tribal representatives including direct in-person meetings with each of the four treaty tribes (Yakama Nation, Confederated Tribes of Warm Springs, Confederated Tribes of the Umatilla Reservation, and the Nez Perce Tribes).
- 2.3 Continued tribal consultation during the Section 106 process, including opportunity to comment on the established Area of Potential Effects (APE) and the results of the archaeological surveys conducted for the FEIS, effects to resources, and any needed mitigative strategies.

### B. LAND, STRUCTURES, RIGHTS-OF-WAYS, APPRAISALS (Form SF-424C Row 2)

#### Task 1. Rights of Way

- 1.1 Rights of Way negotiation and acquisition
- 1.2 Rights of Way negotiation- legal services

### C. OTHER ARCHITECTURE AND ENGINEERING (Form SF-424C Row 5)

#### Task 1. Environmental

- 1.1 Discipline Reports: Update discipline reports with new information, environmental conditions, and regulatory changes
  - a. Soils and Geology
  - b. Fish (*Address any changes to threatened and endangered species listings, critical habitat designations, and other relevant regulatory changes*)
  - c. Wildlife (*Address any changes to threatened and endangered species listings, critical habitat designations, and other relevant regulatory changes*)
  - d. Vegetation
  - i. Wetlands (*Conduct a wetland delineation*)
  - e. Waterways/Water Quality (*Stormwater*)

- f. Land Use
- g. Social and Economic Elements
- h. Relocations
- i. Visual Resources
- j. Noise
- k. Air Quality
- l. Energy
- m. Hazardous Materials

## 1.2 Reevaluation of the Draft Environmental Impact Statement (DEIS)

- a. Prepare a Reevaluation Memorandum
- b. Determine NEPA roles and responsibilities of each agency and respective state division (*e.g., FHWA Washington and Oregon Divisions, Southwest Washington Regional Transportation Council, Washington State Department of Transportation, Oregon Department of Transportation, Port of Hood River*)

## 1.3 Final Environmental Impact Statement (FEIS)

- a. Prepare FEIS document
- b. Prepare for and participate in pre-signatory and signatory briefings with Washington State Department of Transportation (WSDOT) and coordinate with the Oregon Department of Transportation (ODOT) and Federal Highway Administration (FHWA) to obtain signatures
- c. Prepare Record of Comments, which shall include point-by-point responses to each comment received on the DEIS
- d. Prepare Record of Decision (ROD)
- e. Prepare legal ads announcing availability of FEIS and ROD; prepare statute of limitations
- f. Update Administrative Record through the signature of the ROD

## 1.4 Mitigation Plan

- a. Prepare a detailed mitigation plan that addresses project impacts to shoreline habitat, in stream habitats, wetlands, and water quality

## 1.5 Section 106 of the National Historic Preservation Act

- a. Determine the Area of Potential Effects (APE)
- b. Conduct archaeological surveys
- c. Make a finding of effect for any historic properties and archaeological resources that are eligible for listing on the National Register of Historic Places
- d. If any resources are found to be adversely affected, develop mitigation measures and prepare a Memorandum of Agreement (MOA)
- e. Coordinate with Oregon and Washington State Historic Preservation Officers, Port of Hood River, and other historic preservation groups or interested agencies/parties
- f. Prepare a Cultural Resources Discipline Report

## 1.6 Tribal Coordination

## 1.7 Biological Assessment

## 1.8 Section 4(f) of the US Department of Transportation Act

1.9 Environmental Streamlining

- a. Prepare an Agency Coordination Plan in compliance with federal transportation authorizations including SAFETEA-LU, MAP-21 and FAST

**Task 2. Preliminary Engineering**

- 2.1 2011 Crossing Study Validation
- 2.2 Drainage
- 2.3 Survey
- 2.4 Bi-State Coordination
- 2.5 Geotechnical Studies
- 2.6 Hydraulic modeling
- 2.7 Wind load analysis
- 2.8 Utility coordination
- 2.9 Right of way acquisition plans for bridge, access road, stormwater facilities, and environmental impact mitigation

**Task 3. Transportation**

- 3.1 Update traffic modeling results for the design year;
- 3.2 Prepare traffic forecasts for analysis of potential tolling policies and other financing strategies

**Task 4. Tolling Financial Feasibility Study**

- 4.1 Update Financial Feasibility Technical Memorandum

**D. ARCHITECTURE AND ENGINEERING (Form SF-424C Row 4)**

**Task 1. Design & Engineering**

- 1.1 Roadway Design
- 1.2 Stormwater Design
- 1.3 Bridge Design
- 1.4 Environmental Compliance
- 1.5 Utility Coordination
- 1.6 Traffic Engineering
- 1.7 Traffic Control
- 1.8 Engineers Estimate

Upon notification of award in 2017, the Port will issue formal public bid Requests for Proposals for:

1. Updates to the Draft EIS and TS&L studies and completion of the Final EIS
2. Preliminary Engineering and Design to 30%
3. Rights-of-Way Negotiations and Acquisitions

The Port would award these contracts no later than Q2 of 2018. All Phase 1(B) activities proposed in this application would be complete by Q3 of 2020.

## Detailed Project Budget

The following table provides detailed budget information for tasks outlined in the Project Scope & Schedule above. Tasks are organized to be aligned with the Cost Classification fields available in Standard Form SF-424C, "Budget Information for Construction Programs."

Cost Classification / Task	Total Cost	% of Total Cost	Notes
<b>A. ADMINISTRATIVE &amp; LEGAL EXPENSES</b>			SF-424C Row 1
- Port Project Management Staff & Expenses	\$ 120,000		
- Contracted Project Management Expenses	\$ 300,000		
- Intergovernmental Coordination	\$ 96,000		
- Project Legal	\$ 150,000		
- Traffic/Toll Revenue Estimates	\$ 270,000		
- Regulatory / Permit Scoping	\$ 108,000		
- Evaluate Project Delivery Alternatives	\$ 150,000		
- Financial Modeling/Finance Plan Preparation	\$ 210,000		
- Public/Private RFI	\$ 192,000		
- Feasibility Report	\$ 120,000		
<b>SUBTOTAL</b>	<b>\$ 1,716,000</b>	<b>20%</b>	
<b>B. LAND, STRUCTURES, RIGHTS-OF-WAYS, APPRAISALS</b>			SF-424C Row 2
- ROW Engineering/Appraisals	\$ 72,000		
- ROW Legal	\$ 48,000		
<b>SUBTOTAL</b>	<b>\$ 120,000</b>	<b>1.4%</b>	
<b>C. OTHER ARCHITECTURAL &amp; ENGINEERING FEES</b>			SF-424C Row 5
-Supplemental Draft EIS	\$ 90,000		
- Update TS&L (Includes items listed below)	\$ 210,000		
- Bridge Design			
- Topographic Survey			
- Hydraulic Study			
- River Users Study			
- Schematic Roadway Design	\$ 180,000		
- Preliminary Cost Estimate	\$ 60,000		
- Wind Analysis	\$ 216,000		

Cost Classification / Task	Total Cost	% of Total Cost	Notes
Final EIS			
- Archeological Investigation	\$ 348,000		
- Biological Assessment	\$ 186,000		
- Section 4(f) Consultation	\$ 30,000		
- Public Outreach & Involvement	\$ 108,000		
- Tribal Coordination	\$ 48,000		
- Stormwater and Water Quality	\$ 90,000		
- Final EIS Documentation/Report	\$ 1,236,000		
<b>SUBTOTAL</b>	<b>\$ 3,438,000</b>	<b>40%</b>	
<b>D. ARCHITECTURAL &amp; ENGINEERING DOCUMENTS</b>			SF-424C Row 4
- 30% Engineering Design/Build Bid Set	\$ 1,680,000		
- Risk Assessment	\$ 60,000		
<b>SUBTOTAL</b>	<b>\$ 1,740,000</b>	<b>21%</b>	
<b>TOTAL</b>	<b>\$ 7,014,000</b>		
CONTINGENCY (20%)	\$ 1,402,800	<b>17%</b>	
<b>GRAND TOTAL</b>	<b>\$ 8,416,800</b>		

### Benefit Cost Analysis for Bridge Replacement

The spreadsheet analysis of the project costs and benefits for the full scope of bridge replacement is included in the **Attachment “Benefit Cost Analysis.”** The Benefit Cost Analysis (BCA) examines the full project costs to replace the bridge including the Phases 1(A) and 1(B) pre-construction activities and the Phase 2 construction costs, and shows a Total Benefits Value of \$1,128,778,273. This is a 4:1 Benefit Cost ratio for the total project cost of \$308,500,000.

### Sources and Uses of Project Funding

The future eligible project costs of Phase 2, the construction phase of the project, are anticipated to be \$308.5 million. Thus, the maximum NSFHP may not exceed 60% or \$183 million.

The Port of Hood River anticipates that if it is awarded the currently requested NSFHP funds, the local match of \$3.366 million will be funded through bridge parity debt obligations secured by tolls.

Due to the unique ownership of this interstate transportation facility, federal funding is required for completion of this and all remaining phases of work to achieve meaningful progress toward

bridge replacement. While both the Oregon and Washington state Departments of Transportation acknowledge the need to replace the Bridge, and are supportive of the Port's efforts to bring the project through Phase 1(B), by offering staff time and expertise and consultation participation in project development, state budget allocations for roads and bridges not owned by the states are difficult to secure. While the Port will submit formal funding requests to the Washington and Oregon legislatures, the need for federal funding support for Phase 1 (B) is most appropriate at this time and essential to achieve project timeline goals.

The Port of Hood River as part of its fiscal policies maintains an annual debt coverage ratio of 2.0 or higher and strives to maintain a reserve equal to 10% of the depreciable assets in its 10 year financial forecast. The toll bridge attributes 60% of the revenue mix for the Port while the remainder is made up of lease revenues from industrial/commercial properties and marina slips and airport hangar rentals. Due to this revenue mix, the Port generates over \$1 million of net operating cash flow that can be used toward discretionary capital projects or related debt within the guidelines of the fiscal policies. This annual amount can be adjusted, if necessary, as in the case with this grant application, with bridge tolls increasing to cover the local match. Currently, the Port also has \$6.2 million in reserves to call upon if such a direction is needed to be used.

***Contingency Reserves:***

The Port of Hood River plans to issue debt for the \$3.366 million dollar local match; secured by the bridge tolls which will increase to support the additional indebtedness the Port will incur. The Audited Annual Financial Report of June 30, 2015 depicts an Unrestricted Net Position of \$3.9 million and a corresponding level of Cash and Investments of \$3.6 million. As of March 31, 2016, the cash and investments amount to \$6.2 million.

***Evidence of the financial condition of the project sponsor:***

The Port of Hood River uses a 10 year financial forecast to guide its budget process as well as its capital and debt requirements. The Port uses its financial guidelines under its fiscal policies of having a debt coverage ratio of 2.0 or higher and maintaining an adequate reserve equal to 10% of the depreciable assets. The 10 year financial forecast monitors the level of revenue generation that can reasonably be expected as well as the level of expenditures that can be incurred. The toll bridge contributes 60% of the revenue mix for the Port while the remainder is made up of lease revenues from industrial/commercial properties and marina slips and airport hangar rentals. Due to this revenue mix, the Port generates over \$1 million of net operating cash flow to use toward discretionary capital projects or related debt service. As of June 30, 2015, the debt coverage ratio was 2.74.

***Evidence of the grant recipient's ability to manage grants:***

The Port of Hood River is the owner of a general aviation airport, which receives Federal Aviation Administration grants for runway improvements, safety enhancements and master plan efforts. Over the last four years the Port of Hood River has managed over \$3.6 million in grants from the Federal Aviation Administration and another \$689,000 from the State of Oregon for park and trail improvements.

Additionally, in 2001 and again in 2004, the Port managed federal grant monies for capital improvements to the existing bridge, each of over \$1 million. These grants were matched by the Port and funded mechanical and electrical upgrades and bridge redecking.

## Endnotes: Hyperlinks to Supporting Documentation

1. Port of Hood River Bridge Traffic and Revenue Report, Quarterly:  
<http://portofhoodriver.com/wp-content/uploads/2016/12/BRIDGERE06302016-Revised.xlsx>
2. Pacific Northwest Waterways Association Fact Sheet:  
<http://www.pnwa.net/factsheets/CSRS.pdf>
3. YouTube Video “Oil Train Derailment I Was There” (Bridge crossing segment begins at minute 4:00):  
<https://www.youtube.com/watch?v=iYLugyWEI4w>
4. Draft Environmental Impact Study 2003:  
<http://www.rtc.wa.gov/studies/sr35/docs/deis-es.pdf>
5. Type, Size and Location Study 2011:  
<http://www.rtc.wa.gov/studies/sr35/docs/sr35Report20111007.pdf>
6. List and Links to All Studies Completed in Phase 1(A):  
<http://www.rtc.wa.gov/studies/sr35/>
7. Mid-Columbia Economic Development District Comprehensive Economic Development Strategy:  
<http://www.mcedd.org/reports/CEDS.htm>
8. 2014 Regional Transportation Plan for Klickitat County Washington:  
<http://www.rtc.wa.gov/reports/rtp/rtp2014klickitat.pdf>
9. Data provided by Oregon Employment Department Regional Economist, Dallas Fridley.  
Phone: (541) 645-0005 Email: Dallas.W.FRIDLLEY@oregon.gov
10. EcoNorthwest Economic Analysis of the Hood River Interstate Bridge 2010:  
<http://www.rtc.wa.gov/studies/sr35/docs/sr35EconomicAnalysisFinal.pdf>
11. HNTB Study of Structural Considerations for Pedestrian Crossing on the Existing Bridge:  
<http://portofhoodriver.com/wp-content/uploads/2016/04/Bridge-Pedestrian-Crossing-Study.pdf>
12. Columbia River Port Engineers Study on Heavy Truck Use of Hood River Interstate Bridge:  
<http://portofhoodriver.com/wp-content/uploads/2016/12/c.Attachment.PoHR-Report-20150902.pdf>
13. Eric Burnette, Executive Director of Oregon Board of Marine Pilots testimony to the Oregon state legislature January 25, 2016:  
<https://olis.leg.state.or.us/liz/2016R1/Downloads/CommitteeMeetingDocument/86771>
14. Email comments from Captain Fred Harding, Port Captain, Shaver Transportation Company:  
<http://portofhoodriver.com/wp-content/uploads/2016/12/EmailCaptainFredHarding.jpg>