

SR 520 Bridge Replacement and HOV Program Update



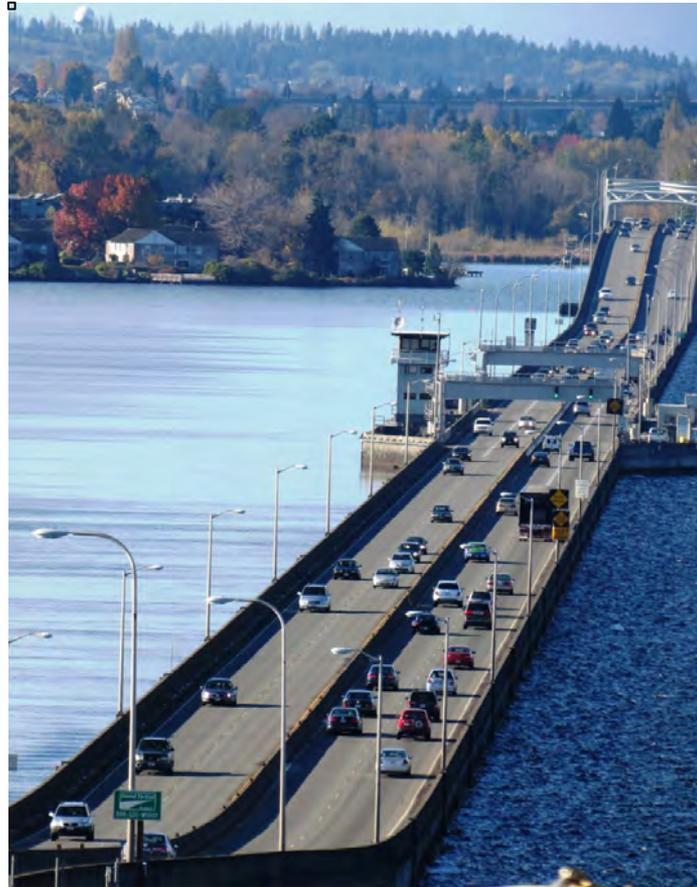
Paula J. Hammond, P.E.
Secretary of Transportation

Steve Reinmuth
Chief of Staff

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SR 520 Program Director

SR 520 Bridge Replacement and HOV Program Presentation Overview

- SR 520 Program overview
- Construction update
- Pontoon update
- West Connection Bridge and West Approach Bridge North
- I-5 to Medina next steps
- Questions



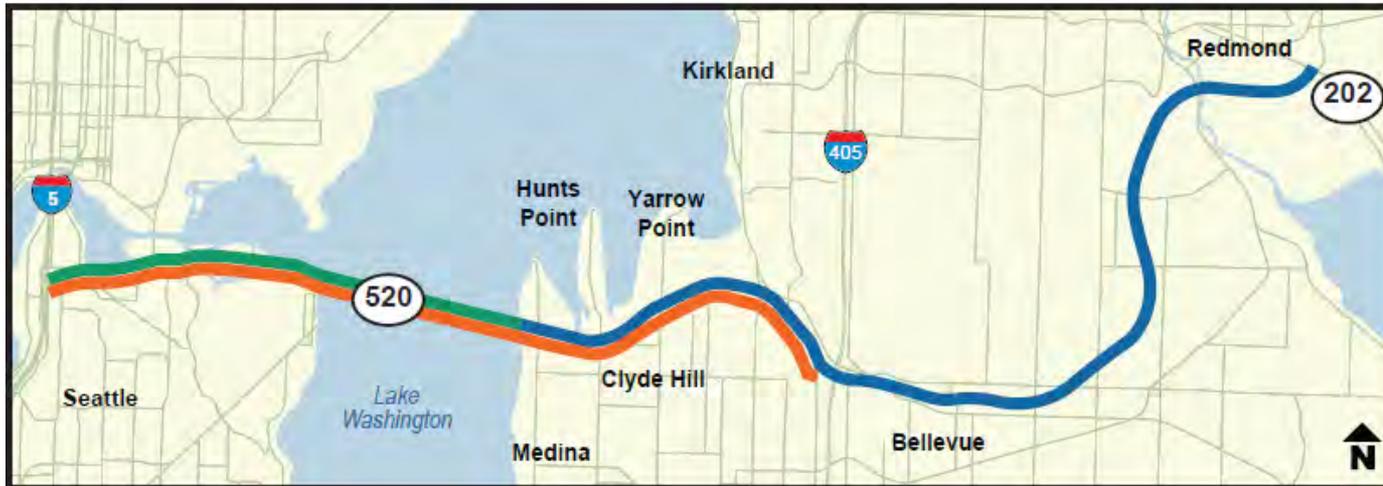
View of the SR 520 floating bridge, looking west from Medina

SR 520 Bridge Replacement and HOV Program

SR 520 Program Description

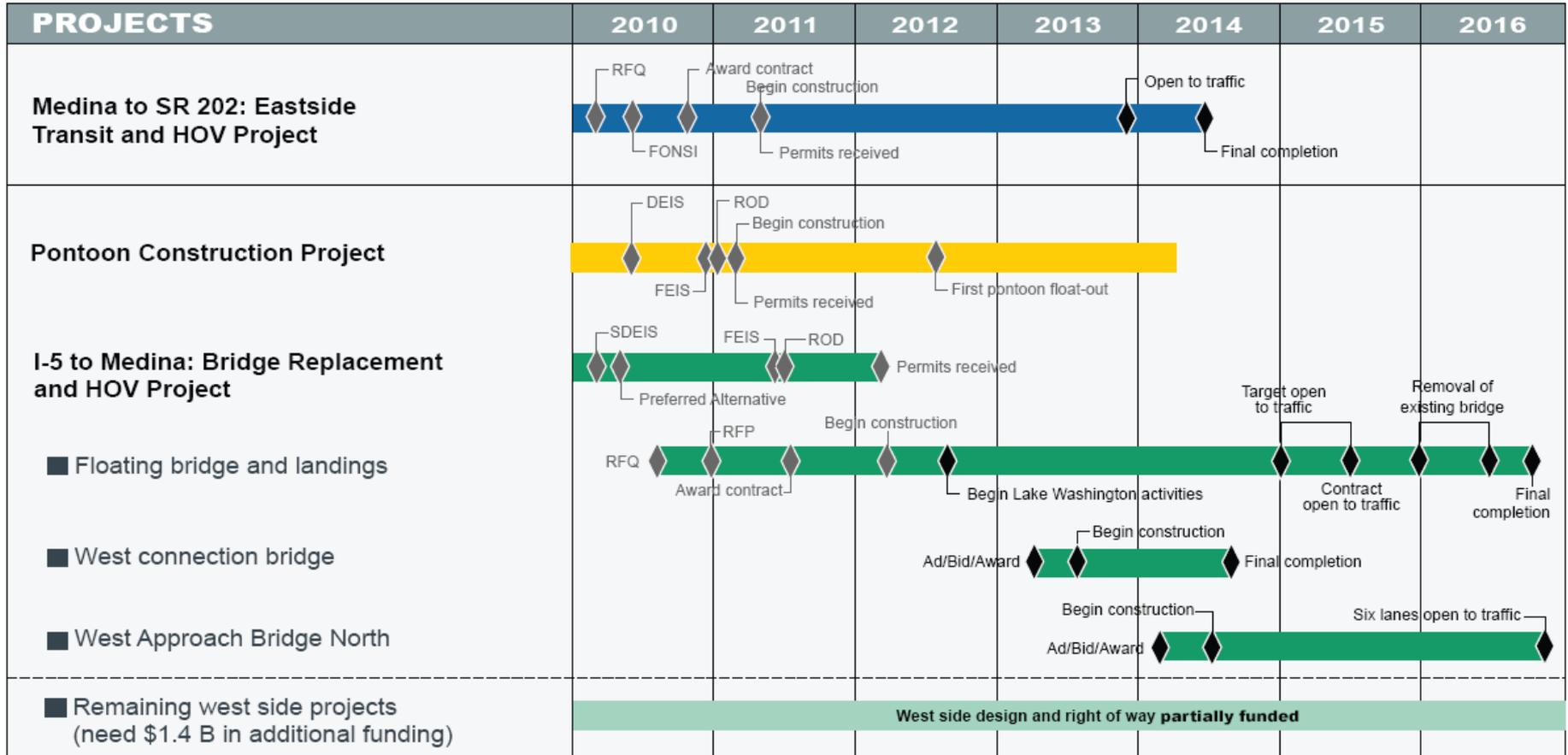
The SR 520 Bridge Replacement and HOV Program will replace the Portage Bay and Evergreen Point bridges and improve the existing roadway between I-5 in Seattle and SR 202 on the Eastside.

- I-5 to Medina: Bridge Replacement and HOV Project** – Replaces the SR 520 floating bridge and landings, and interchanges and roadway between I-5 and the eastern shore of Lake Washington.
- Medina to SR 202: Eastside Transit and HOV Project** – Completes and improves the transit and HOV system from Evergreen Point Road in Medina to the SR 202 interchange in Redmond.
- Lake Washington Congestion Management Project** – Implements tolls on the existing SR 520 floating bridge, and activates Smarter Highways features from I-5 to I-405.
- Pontoon Construction Project** – Advances pontoon construction to restore the floating section of the SR 520 bridge in the event of a catastrophic failure and to store those pontoons until needed.



SR 520 Bridge Replacement and HOV Program

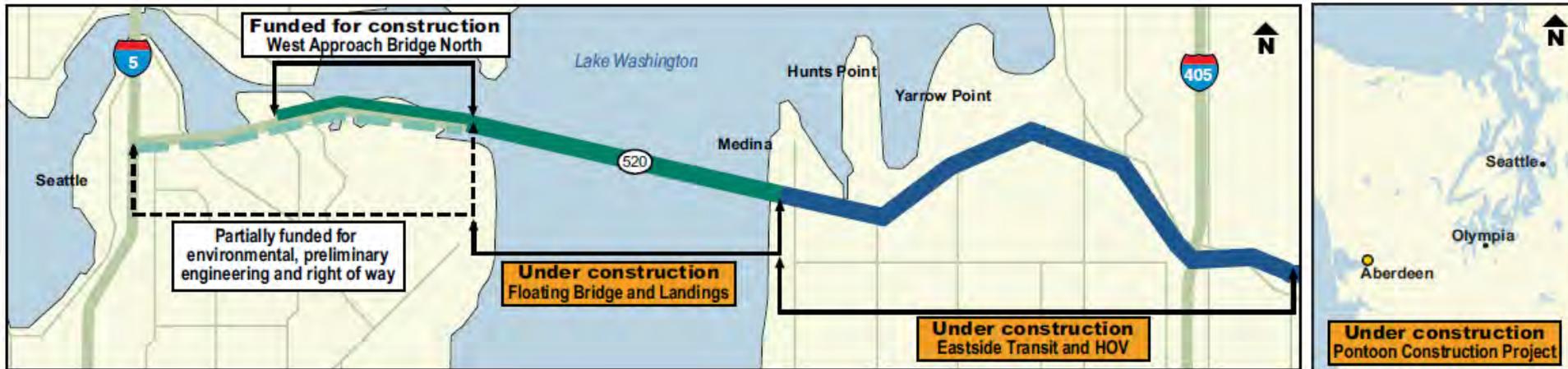
SR 520 Program construction schedule



DRAFT: Jan. 2013

SR 520 Bridge Replacement and HOV Program

What is funded for \$2.72 billion?



Program cost estimate (Oct. 2012): \$4.13 billion

Current SR 520 construction:

- Eastside transit and HOV improvements.
- The floating bridge and landings.
- Pontoon construction in Grays Harbor.

In planning and design:

- I-5 to the west end of the floating bridge

SR 520 Bridge Replacement and HOV Program

Costs and funding

SR 520 program cost estimate <i>2009 legislative budget cap: \$4.65 billion</i>	\$4.128 B
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Funding received to date	\$2.724 B
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State and local funding (Nickel and TPA)	\$0.55 B
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Federal funding	\$0.12 B
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SR 520 Account (tolling and future federal funds)	\$1.91 B
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Toll proceeds

- TIFIA \$300M
- Triple pledge bonds \$550M
- First tier toll \$159M
- PAYGO \$74M

Federal proceeds

- GARVEE \$825M

Deferred sales tax	\$0.14 B
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Unfunded need	\$1.404 B
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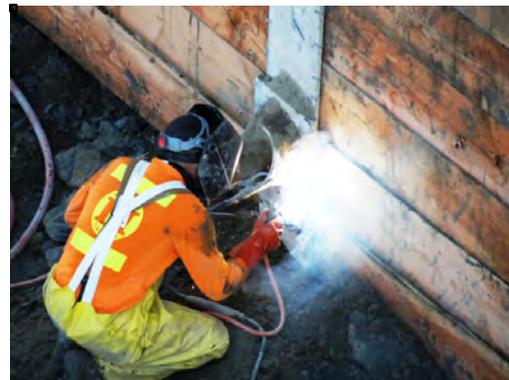
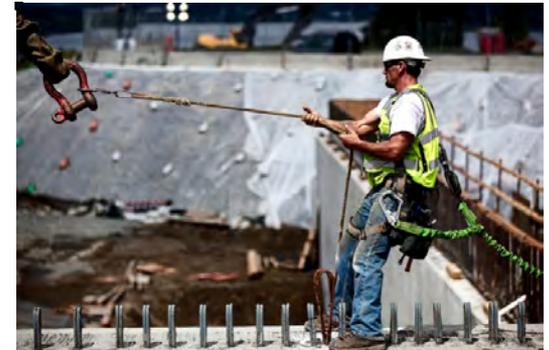
Program cost estimate based on 2012 CEVP - updated 10/25/12

Updated 10/25/12

SR 520 Bridge Replacement and HOV Program Construction update – Job creation

- SR 520 projects have created hundreds of jobs around the state.
 - Eastside Transit and HOV Project: 207 jobs
 - Floating Bridge and Landings Project: 452 jobs
 - Pontoon Construction Project: 349 jobs
 - Total jobs as of Winter 2013: 1,008 jobs

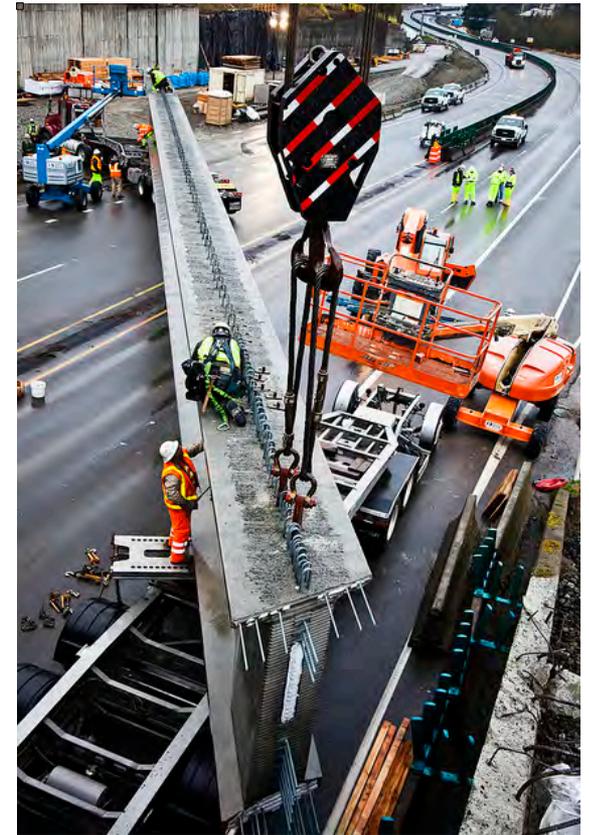
- Skilled construction trades include:
 - Carpenters
 - Concrete workers
 - Crane operators
 - Electricians
 - Iron workers
 - Laborers
 - Machine operators
 - Painters
 - Truck drivers
 - Welders



SR 520 Bridge Replacement and HOV Program

Construction update – Eastside Transit and HOV Project

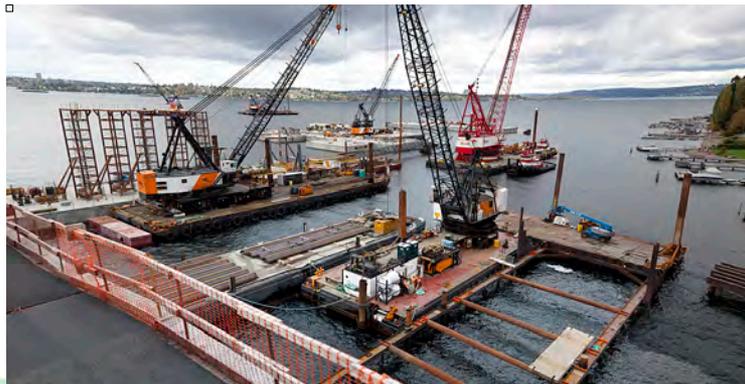
- Construction on the \$306 million project began in April 2011. Corridor improvements are scheduled to open to travelers in late 2013.
- The project will improve regional mobility by:
 - Adding new transit/HOV lanes through the Eastside SR 520 corridor.
 - Adding median transit stops.
 - Creating wider, safer shoulders.
 - Building direct-access ramps.
 - Completing a regional bicycle and pedestrian path.
- Recent work accomplished includes:
 - Constructing several fish-friendly culverts under the highway to improve fish migration.
 - Making progress on three lidded overpasses.
 - Installing corridor walls and stormwater ponds.



SR 520 Bridge Replacement and HOV Program

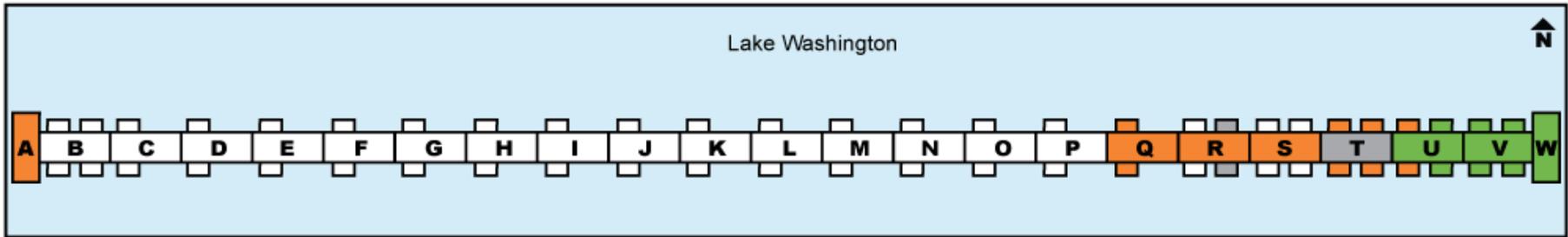
Construction update – Floating Bridge and Landings Project

- Construction of the \$586 million project started in April 2012. The floating bridge contract allows through July 2015 to open the new bridge to traffic.
- Work is taking place around the region:
 - **Kenmore:** Construction of anchors and precast roadway elements.
 - **Tacoma:** Construction of 44 supplemental pontoons; Cycle 2 will float out in late January.
 - **Lake Washington:** Assembly of new floating bridge and east highrise.



SR 520 Bridge Replacement and HOV Program

Floating Bridge Assembly



Note: not to scale

LEGEND:

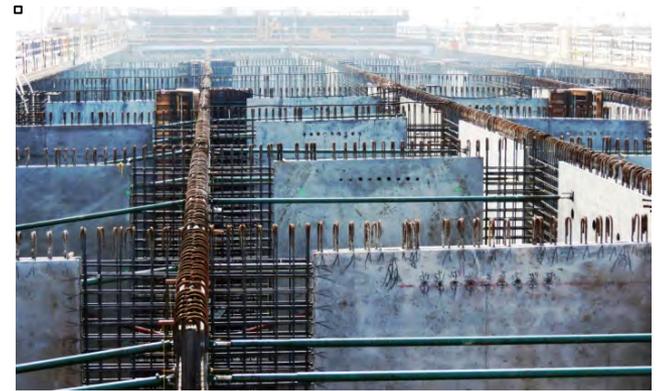
 On Lake Washington	 Temporarily moored	 Awaiting construction
 Under construction	 In transit	

77 total pontoons will be used in the new SR 520 floating bridge:

- 21 longitudinal pontoons
- 2 cross pontoons
- 54 supplemental stability pontoons

SR 520 Bridge Replacement and HOV Program Construction update – Pontoon Construction Project

- The casting basin facility is located in Aberdeen, WA.
- We began pontoon construction first to address the vulnerable floating bridge.
- Construction of the \$367 million project started in February 2011, and 33 pontoons are being constructed in six cycles through 2014.
- The first six pontoons in Cycle 1 were floated out of the basin in July 2012.
- The next six Cycle 2 pontoons are currently under construction.



SR 520 Bridge Replacement and HOV Program

Pontoon recap

- In May 2012, WSDOT discovered spalling and more-than-expected cracking in Cycle 1 pontoons.
- Since then, WSDOT has worked proactively with its contractor and an expert review panel to examine the issues and improve future cycles.
- WSDOT values transparency, and has worked closely with the public, elected officials and the media since May to explain ongoing inspections, repairs, design modifications and plans moving forward.
- WSDOT will not accept the pontoons or the floating bridge until all contract requirements are met.
- The new bridge will meet WSDOT's rigorous standards and serve the public for more than 75 years.

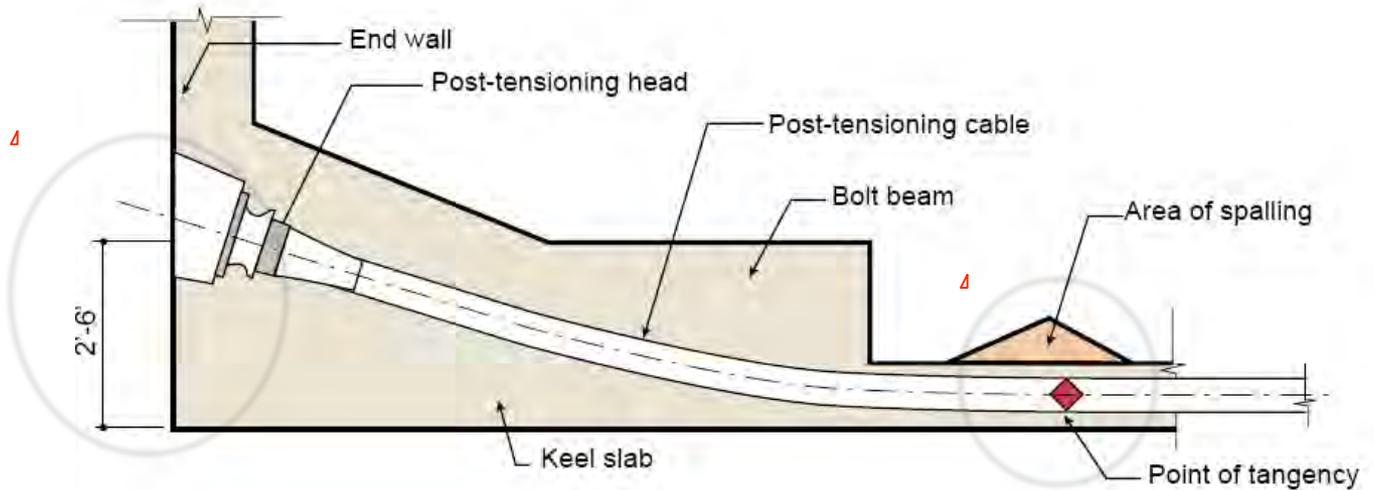


SR 520 Bridge Replacement and HOV Program

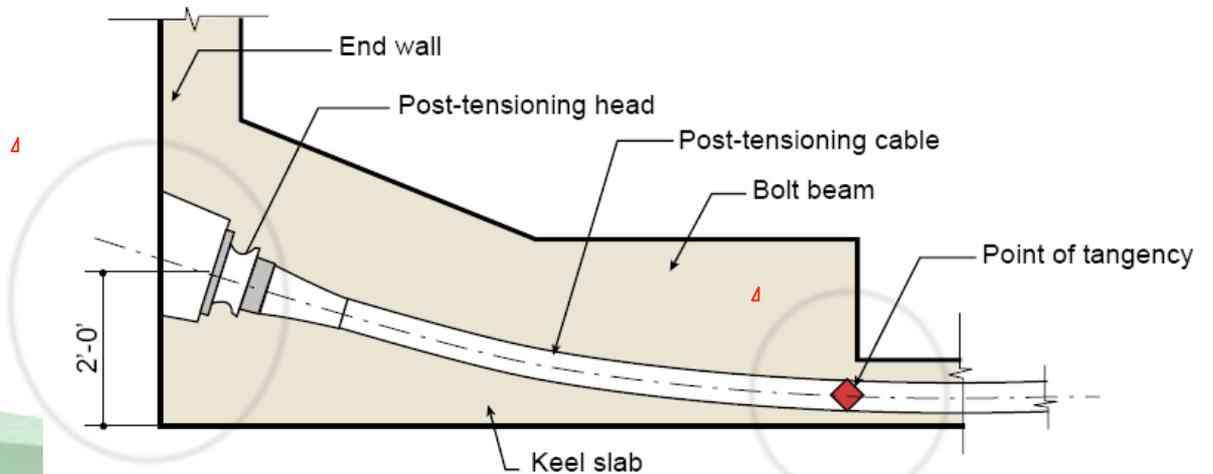
Addressing concrete spalling

We're modifying the post-tensioning duct design to avoid spalling

Cycle 1 as built



Cycle 2 plan



SR 520 Bridge Replacement and HOV Program

Cycle 1 issues: End-wall cracking



SR 520 Bridge Replacement and HOV Program

Expert review panel

Panel members:

- Neil M. Hawkins, Ph.D., Dist. M. ASCE, Professor Emeritus, University of Illinois, former chair of the civil engineering department, University of Washington
- Tom Sherman, specialist in floating bridge design and construction, TES Enterprises;
- John H. Clark, P.E., Ph. D., a consultant in long-span bridges and heavy structures.
- Steve Tatro, Army Corps of Engineers
- Mark Leonard, Federal Highway Administration, formerly Colorado DOT

- The panel is chaired by John Reilly, P.E., C.P. Eng., with experience in management, risk assessment and pre-stressed concrete.

SR 520 Bridge Replacement and HOV Program

Pontoon next steps

- Underwater inspections continue on Lake Washington.
- Finalizing repair methods for Cycle 1.
- Cycle 2 under construction in Aberdeen, incorporating expert review panel recommendations. Anticipate float-out in Spring 2013.
- Focused now on design and construction modifications for Cycles 3 – 6.
- Next status update mid-February with latest expert review panel findings.
- Costs and schedule: In negotiations on cost and schedule with our contractor.
- More information online: www.wsdot.wa.gov/Projects/SR520Bridge/PontoonProgress

SR 520 Bridge Replacement and HOV Program

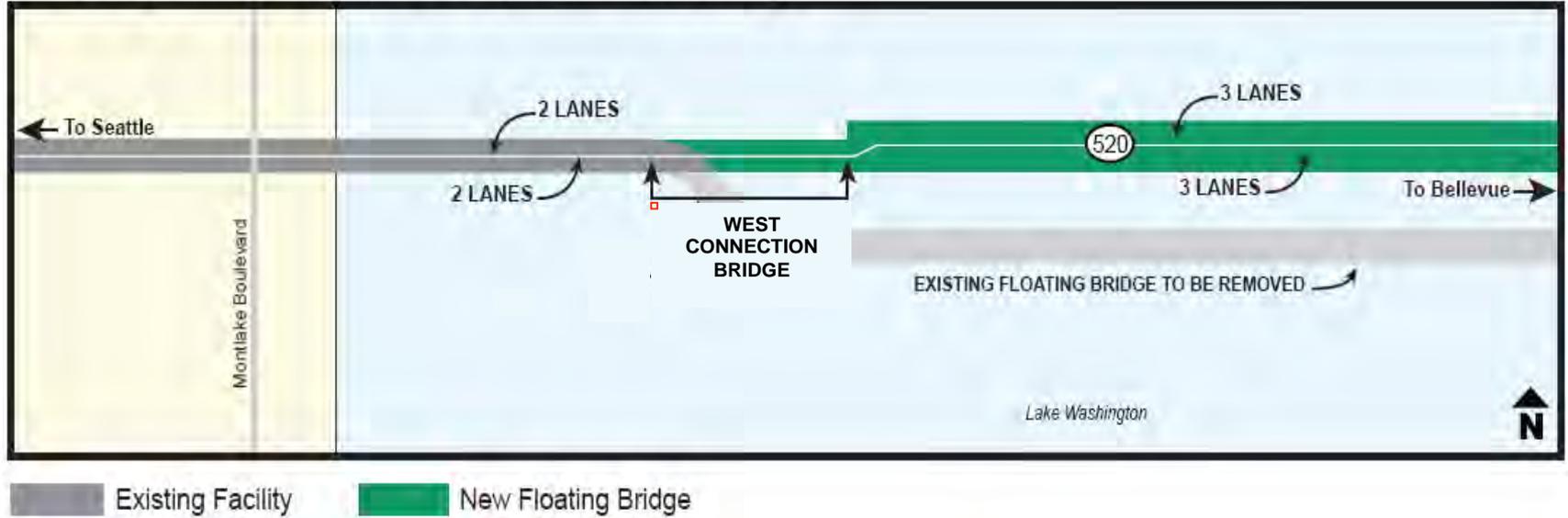
Upcoming SR 520 construction work



SR 520 Bridge Replacement and HOV Program

2013 Construction: West Connection Bridge

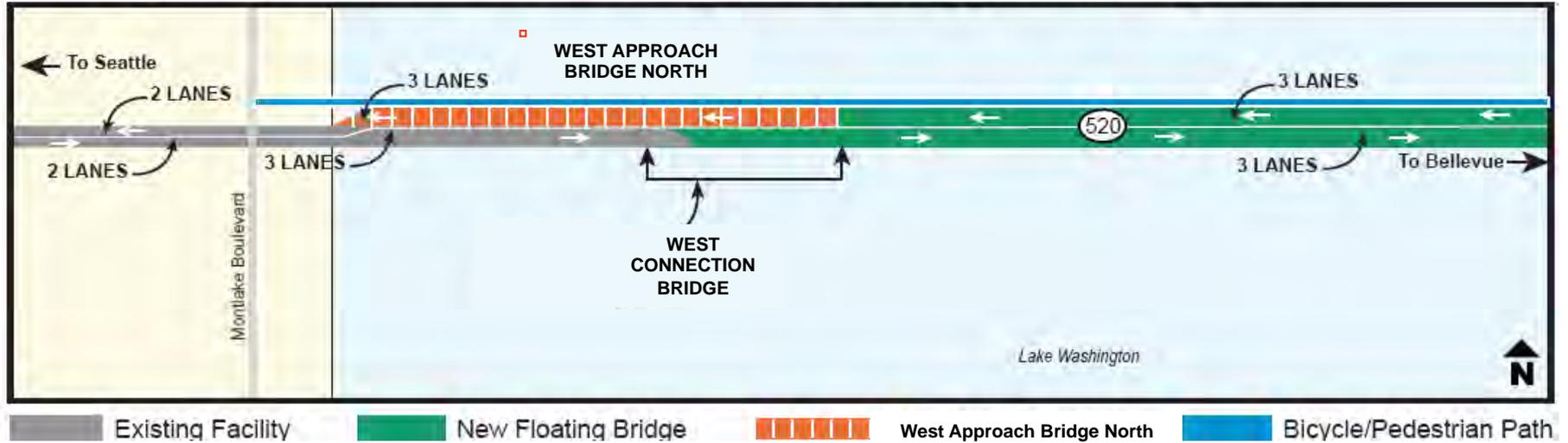
Floating bridge and west connection bridge



SR 520 Bridge Replacement and HOV Program

2014 Construction: West Approach Bridge North

Floating bridge, west connection bridge and west approach bridge north

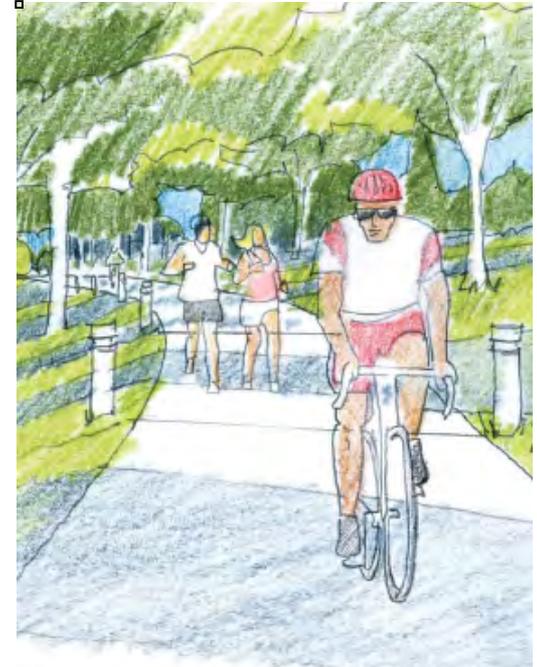


SR 520 Bridge Replacement and HOV Program I-5 to Medina next steps

- 2010 Legislation ESSB 6392: Arboretum mitigation
- Ongoing coordination with City of Seattle and city council
- Seattle Community Design Process
- January 22 Seattle City Council Resolution introduced
- SR 520 Program open houses February 5 (Bellevue) and 6 (Seattle), 4:30 to 7:30 p.m.
- Funding remaining - \$1.4 billion to complete corridor.



Attendees discuss design refinements at a July 2012 public meeting.



The project will improve bicycle and pedestrians connections.

SR 520 Bridge Replacement and HOV Program Questions?

For more information, contact:

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meredjl@wsdot.wa.gov

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