

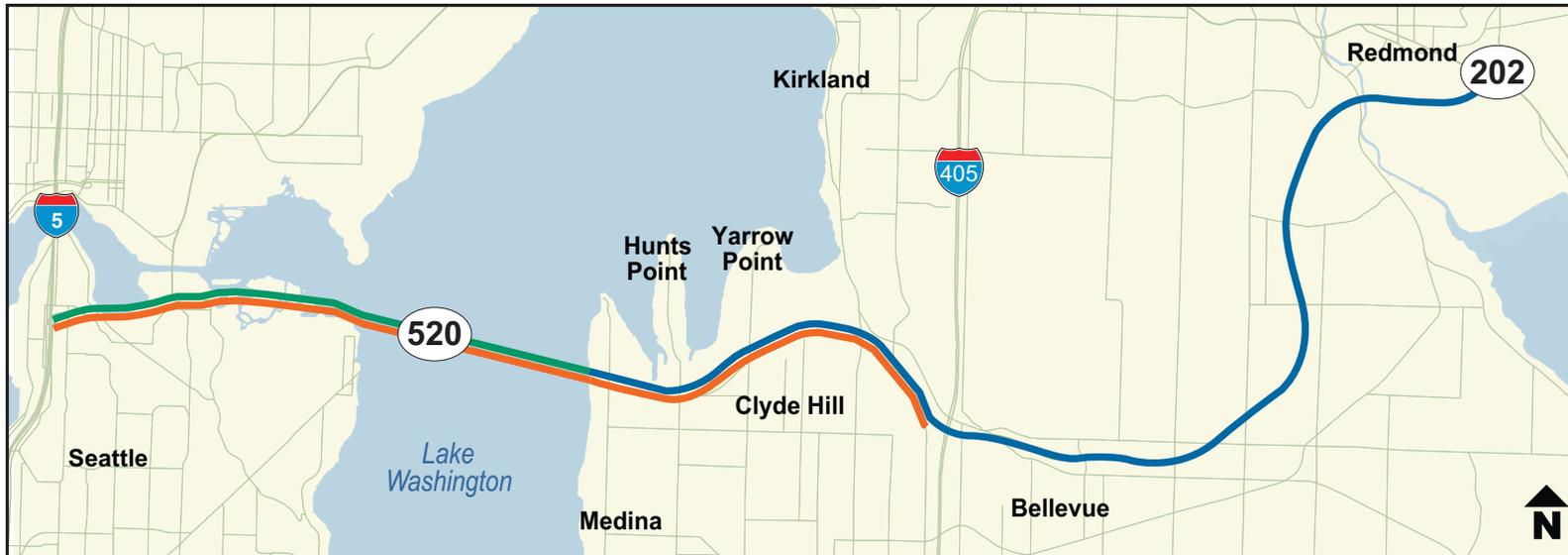
SR 520 Bridge Replacement and HOV Program



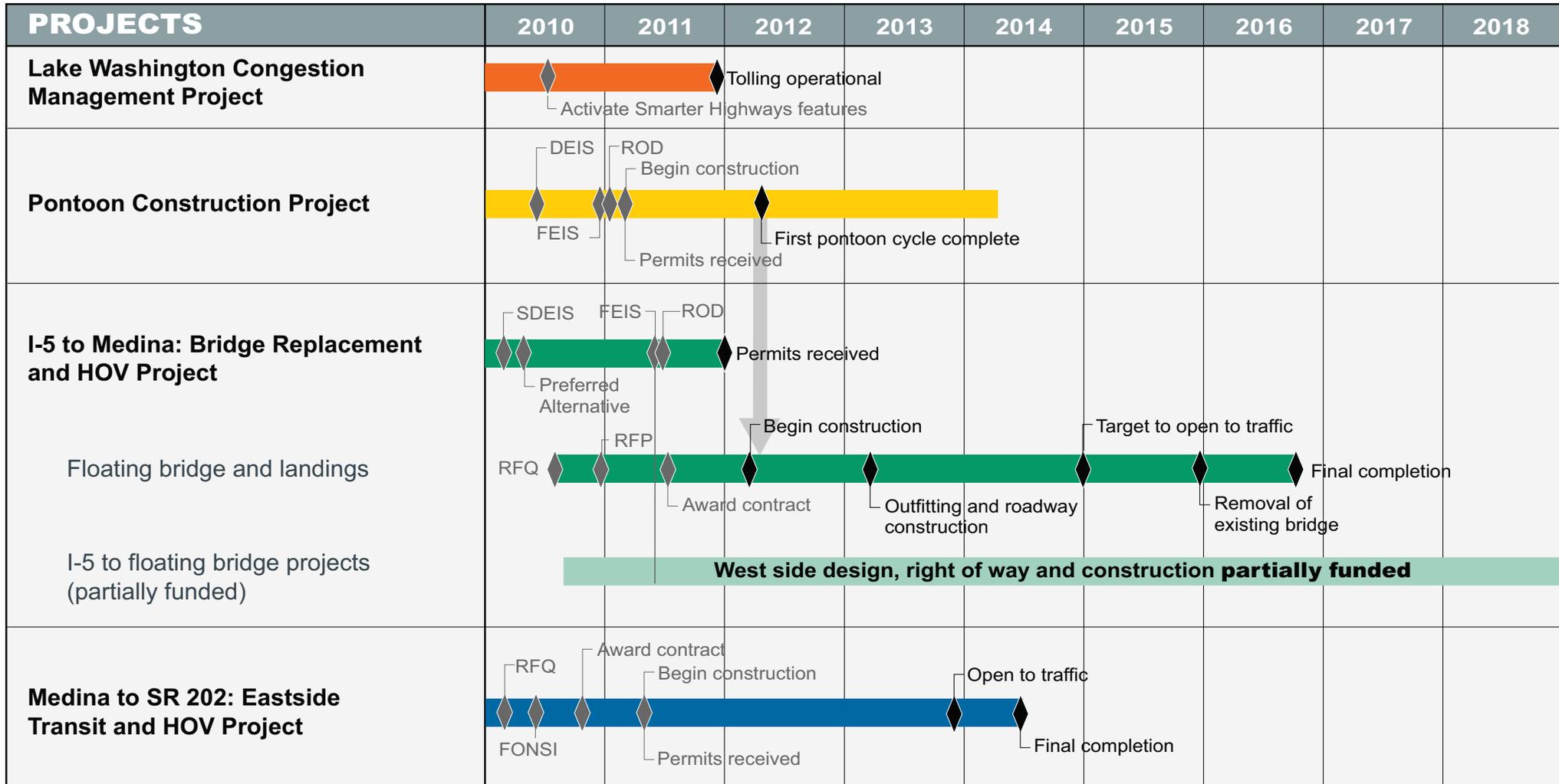
SR 520 Program description

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 Program schedule



SR 520 Program costs and funding

SR 520 PROGRAM BUDGET: \$4.65 BILLION



What's funded: \$2.43 billion

- The new, safer SR 520 floating bridge
- Pontoon construction in Grays Harbor
- Eastside transit and HOV improvements
- Environmental review, design and right of way from I-5 to the floating bridge

SR 520 vulnerability

The SR 520 floating bridge and structures are nearing the end of their design lives and are at risk of catastrophic failure.

A torn cable joint found during a routine inspection in February 2006. The cables connect the floating bridge pontoons to their underwater lakebed anchors.

Exterior walls may crack and leak

Near-shore anchor cables may break during high winds

Cables weak and susceptible to damage. WSDOT must continually repair such things as loose bolts that are damaged by high winds

Maintenance hatches are difficult to access

Repairs and damage to the bridge cause it to float too low. This makes the bridge more vulnerable to damage in strong waves.

The existing Evergreen Point Bridge is vulnerable to high winds.

Hollow columns on Portage Bay and Evergreen Point Bridges are vulnerable to earthquakes.

Column cap to hollow column connection may crumble during earthquake

Hollow columns may implode during earthquake

The inside of a hollow bridge support column that was damaged by a barge in 1999.

SOURCE: Photos from <http://www.wsdot.wa.gov/Projects/SR520Bridge/Photos/Damage.htm>.

Emergency bridge maintenance repairs completed in early March

- On March 8, crews discovered a damaged pin connection on the west end of the floating bridge during a routine bridge inspection.
- Crews worked in 30-foot-deep water to repair the pin connection and in 60-foot-deep water to replace a broken bolt and damaged pin on the southeast anchor cable.
- These emergency repairs were critical to maintain the bridge's ability to withstand windstorms.
- We continue regular inspections to maintain safety of the existing floating bridge.



Damaged floating bridge pin connection and anchor cable section.

SR 520 Program construction update

Eastside construction

- Construction began in April 2011.
- Crews have completed three fish-friendly culverts and begun construction on all four lids and overpass over SR 520.
- Design-build contract amount: \$306 million.
- Workers hired to date: More than 300.



Excavators with jackhammers break up the concrete footings of the old Evergreen Point Road overpass.



Crews prepare and secure two girders for placement.



The new Evergreen Point Road lid under construction, photographed in January 2012.

Pontoon construction

- Construction began in Aberdeen in February 2011.
- The pontoon casting basin is complete and work is under way on the first cycle of pontoons.
- Design-build contract amount: \$367 million.
- Workers hired to date: More than 400.



The casting basin and pontoons under construction. Photo credit: Soundview Aerial Photography



A welder connects rebar on a pontoon in Aberdeen.

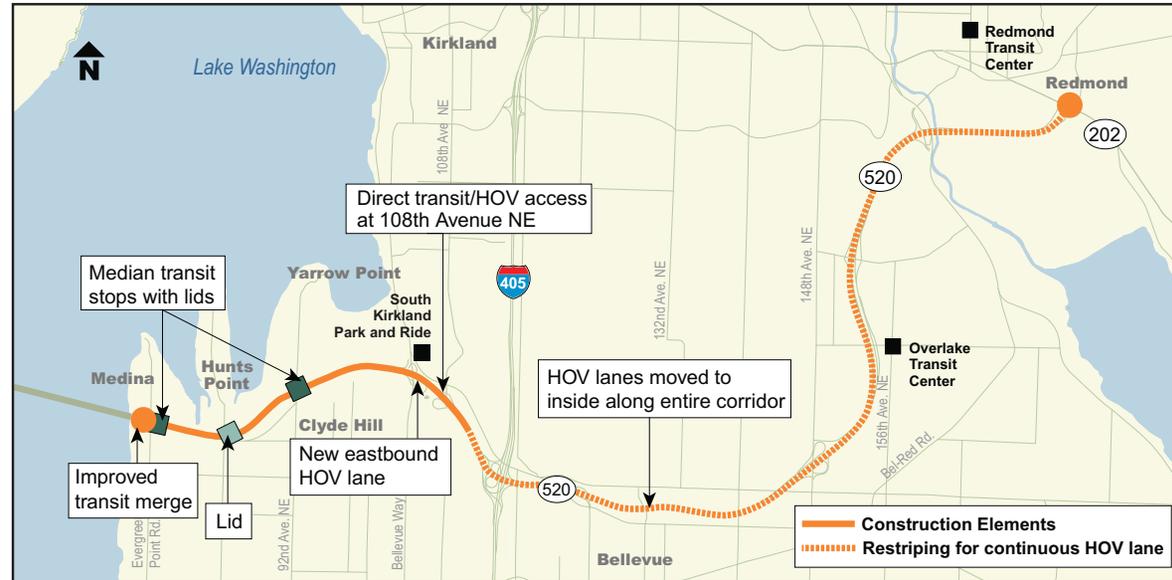


An ironworker descends a pontoon after completing work at the top of an interior wall.

Medina to SR 202: Eastside Transit and HOV Project

We are moving forward with transit and HOV improvements on the Eastside, including:

- Inside transit/HOV lanes in both directions through the entire Eastside corridor.
- Wider, safer shoulders.
- Median transit stops at Evergreen Point Road and 92nd Avenue Northeast.
- Direct-access ramp to and from 108th Avenue Northeast for carpools and transit.
- Regional bicycle and pedestrian path with connections to local trails.



Environmental and community enhancements:

- Wider, fish-friendly culverts.
- Noise reduction techniques.
- Stormwater treatment and detention facilities.
- New lids at Evergreen Point Road, 84th Avenue Northeast and 92nd Avenue Northeast.

Project schedule:

- Construction start: Spring 2011
- Open to traffic: Late 2013



SR 520 Bridge Replacement and HOV Program

Pontoon Construction Project



Pontoon Construction Project

- WSDOT is moving forward with pontoon construction to restore the SR 520 floating bridge in the event of a catastrophic failure, or to store the pontoons until they are needed for the planned bridge replacement.
- The \$367.3 million Pontoon Construction Project broke ground in February 2011 at a 55-acre site in Aberdeen.
- The project contractor, Kiewit-General Joint Venture (K-G) is on schedule to build a new casting basin facility and pontoons that will be used to replace the SR 520 floating bridge.



Project schedule:

- Construction start: Spring 2011
- Project complete: 2014



Engrossed House Bill 2814

Five of WSDOT's city of Seattle Shoreline permits have been appealed. Any appeal, regardless of merit, results in an automatic construction stay. Appeals go to the Shoreline Hearings Board, which can take up to 240 days to complete its review and lift the construction stay.

Combined with in-water and winter work windows, a 240-day construction stay would have the effect of delaying floating bridge construction for an entire year.

In response, the Legislature passed Engrossed House Bill (EHB) 2814, a bill that amends the Shoreline Management Act to remove the construction stay for only the floating bridge portion of the I-5 to Medina project, and only those elements common to both a four-lane and six-lane alternative.

The exemption will not preclude the Hearings Board from reviewing the appeal, nor would it preclude the Hearings Board from concluding that the project or any element of the project is inconsistent with the goals and policies of the Shoreline Management Act or the local shoreline master program.

This legislation allows WSDOT to launch critical work necessary to keep the floating bridge project on schedule and on budget.

EHB 2814 also prevents WSDOT from constructing any element west of the floating bridge until "the Legislature has authorized the imposition of tolls on the I-90 floating bridge and/or other funding sufficient to complete construction of the SR 520 Bridge Replacement and HOV Program." These restrictions expire on June 30, 2014.

Bill history:

- **Feb. 29:** House approved, 94-4
- **March 2:** Senate approved, 33-16
- **March 23:** Bill signed by Governor Gregoire

I-5 to Medina project permitting update



I-5 to Medina Project Permits

City of Seattle Shoreline Permits:

- ① West Approach Bridge*
- ② Union Bay Natural Area Mitigation Site
- ③ WSDOT Peninsula Mitigation Site
- ④ Seward Park Mitigation Site (off map)
- ⑤ Floating Bridge and West Connection Bridge*
- ⑥ Montlake Bascule Bridge*
- ⑦ Portage Bay Bridge*
- ⑧ Taylor Creek Mitigation Site* (off map)
- ⑨ Magnuson Park Mitigation Site

City of Medina Shoreline Permits:

- ⑩ Floating Bridge and East Approach Shoreline Permit (2 permits)
- ⑪ Bridge Maintenance Facility (2 permits)

Permits applicable to full project:

- Army Corps Sections 10 and 404 permits
- US Coast Guard General Bridge Permit
- WDFW Hydraulic Project Approval
- Ecology Clean Water Act Section 401 Water Quality Certification
- Ecology Coastal Zone Management Program Consistency Determination

* Permits that have been appealed

As of March 23, all permits for the I-5 to Medina project have been received.

SR 520 Sustainability

The SR 520 Bridge Replacement and HOV Program is the first program in the U.S. working to implement measurable sustainability criteria across an entire corridor. These criteria seek to improve the environmental, social, and economic welfare of communities affected by construction and operation of public infrastructure.

SR 520 Golden Thread

The SR 520 Program includes a **Golden Thread of Sustainability**, four key sustainability goals that are woven through the design, construction, and operation of the new SR 520 corridor. These goals are:

- ◆ **Reuse, reduce, or recycle** construction materials
- ◆ **Reclaim existing sites and facilities** for new uses
- ◆ **Reduce greenhouse gases** during construction and for the life of the corridor
- ◆ **Improve access** for all users to transportation options and community space

Eastside Transit and HOV Project

- ◇ Enhance public open space.
- ◇ Improve transit access and quality of experience.
- ◇ Recycle construction materials.
- ◇ Improve fish passage.
- ◇ Provide continuous HOV lanes.



Rendering of Evergreen Point Road lid with improved transit operations and new open space.

Floating Bridge and Landings

- ◇ Reduce stormwater pollution discharges to the lake.
- ◇ Minimize in-water impacts.
- ◇ Reduce construction duration.
- ◇ Increase structural durability and life cycle costs.
- ◇ Reuse and recycle materials.
- ◇ Decommission the existing floating bridge.
- ◇ Use existing industrial sites.



New and wider culverts will provide better fish passage on the Eastside.

Westside Design and Construction

- ◇ Assure integration of urban and sustainability design principles.
- ◇ Increase transit and HOV access.
- ◇ Increase access to public open space.
- ◇ Reduce infrastructure impacts on the natural environment.
- ◇ Reduce construction-related noise and pollution.



Pontoon construction under way at an existing site in Tacoma.



Rendering of the new path on the floating bridge that will connect cyclists and pedestrians to regional trails on both sides of Lake Washington.