



Innovative pontoon construction tests begin in 2009

We are taking the first steps toward replacing the SR 520 floating bridge by conducting innovative pontoon construction tests.

These tests help move pontoon construction forward by field-testing various pontoon construction methods and techniques. The work includes constructing mock-up pontoon sections and testing different concrete mixes and forming methods. We are conducting this effort now in order to provide more detailed design information to the pontoon construction contractor.

A new approach to bridge pontoon building

The pontoons for the SR 520 floating bridge are the largest we've designed and will need to be built on a fast schedule in order to replace the vulnerable SR 520 floating bridge by the end of 2014. Our design work is informed by previous pontoon construction projects, like the Hood Canal Bridge. However, each bridge design is different and presents a different set of challenges.

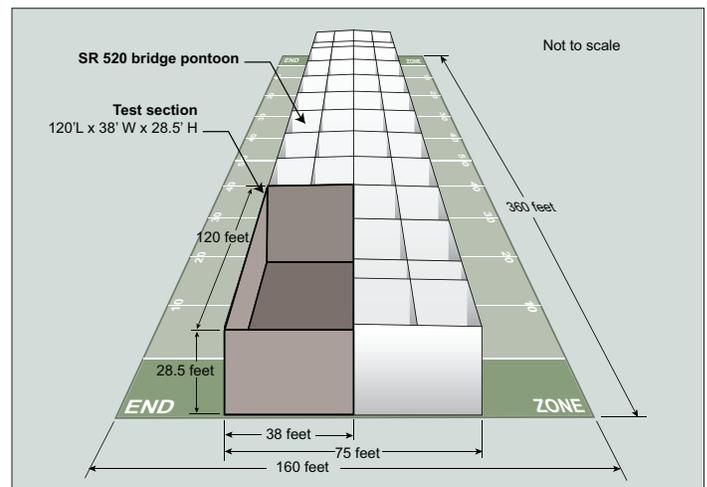
This work will help us address possible challenges and avoid delays by:

- **Testing mix designs for strength and durability.** We are testing several different concrete mixes and types of aggregates to be sure the materials are watertight, resistant to cracking, and the new SR 520 bridge pontoons will be durable.
- **Testing forming methods for efficiency.** We are testing several different forming and pouring methods to help us identify a preferred system that is efficient and constructible.
- **Expediting pontoon construction.** We will identify pre-approved mix designs and forming methods so that the pontoon contractor is able to begin pontoon production as quickly as possible.



Crews construct a wall for the innovative pontoon testing effort.

Pontoon design concept



This is a preliminary graphic of a future SR 520 bridge pontoon, compared to a football field.

- The shaded area represents the mock-up section we will build as part of our testing work.
- The white area represents the cells and walls of a finished SR 520 bridge pontoon.



Pontoon construction testing in Grays Harbor



We are conducting the testing effort at the Satsop Business Park.

Pontoon Construction Project

This testing work is a component of the Pontoon Construction Project. We are advancing pontoon construction to restore the SR 520 floating bridge in the event of a catastrophic failure, and to store those pontoons until needed.

Testing pontoon construction methods will help the contractor begin constructing pontoons soon after the contract is awarded.



Waves batter the SR 520 bridge during a windstorm.

If the SR 520 bridge were to fail, it would take as many as four years to build new pontoons to replace the bridge. Improving and replacing the SR 520 bridge is critical to maintaining the safety of our state's transportation infrastructure.

We will begin building the new construction site in Grays Harbor later this year. We will begin pontoon construction at the new facility in 2011.

As a result, the pontoons will be complete as soon as 2014 and we can open a new floating bridge later that year.

Key dates

April/May 2009:	Identify the testing location.
August 2009:	Advertise the testing effort to contractors.
August 2009:	WSDOT selects a contractor.
September 2009 to spring 2010:	Project under way.
Spring 2010:	Testing efforts are complete.
Ongoing:	Public involvement.

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**Washington State
Department of Transportation**

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