

Project overview



Project purpose

The purpose of the SR 520 Pontoon Construction Project is to accomplish the following:

1. Expedite construction of the pontoons needed to replace the existing traffic capacity of the Evergreen Point Bridge if a catastrophic failure occurs.
2. Store these pontoons in case they are needed for catastrophic failure response or until they are incorporated into the SR 520 Program's I-5 to Medina: Bridge Replacement and HOV Project.



In 2006, a windstorm led to the closure of the Evergreen Point Bridge during the peak afternoon traffic period.



WSDOT has discovered cracks in the Evergreen Point Bridge pontoons.

SR 520 bridge pontoons

Pontoons are the foundation of a floating bridge. They are hollow concrete structures designed to support the weight of the road and the vehicles that use the bridge.

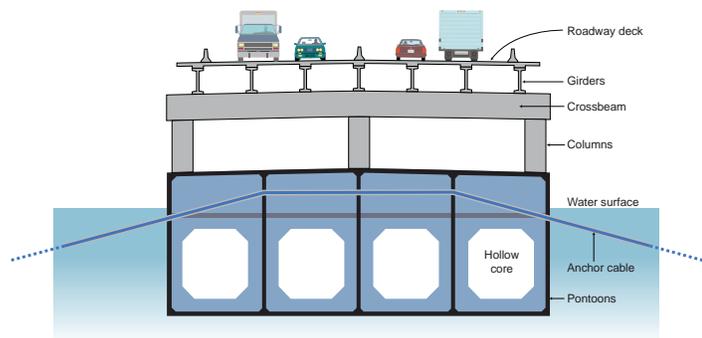
These pontoons must be built at specialized facilities with access to water.

SR 520 pontoons can be up to:

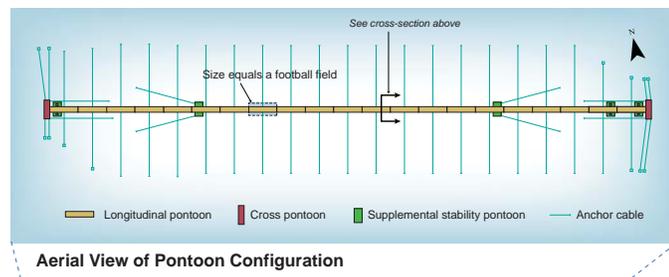
- 75 feet wide
- 360 feet long
- 35 feet high
- 11,000 tons

Three types of pontoons

- 33 pontoons are planned to be built in Grays Harbor.
- Cross pontoons (2) are used to support the western and eastern highrise portion of the Evergreen Point Bridge.
- Longitudinal pontoons (21) make up most of the floating bridge section that crosses Lake Washington.
- Supplemental stability pontoons (10) are the smallest of the three types of pontoons and are strategically placed alongside longitudinal pontoons to provide additional stability.
- Additional supplemental stability pontoons for the proposed SR 520 bridge replacement may be built at another location.



Bridge and Pontoon Cross-Section



Aerial View of Pontoon Configuration



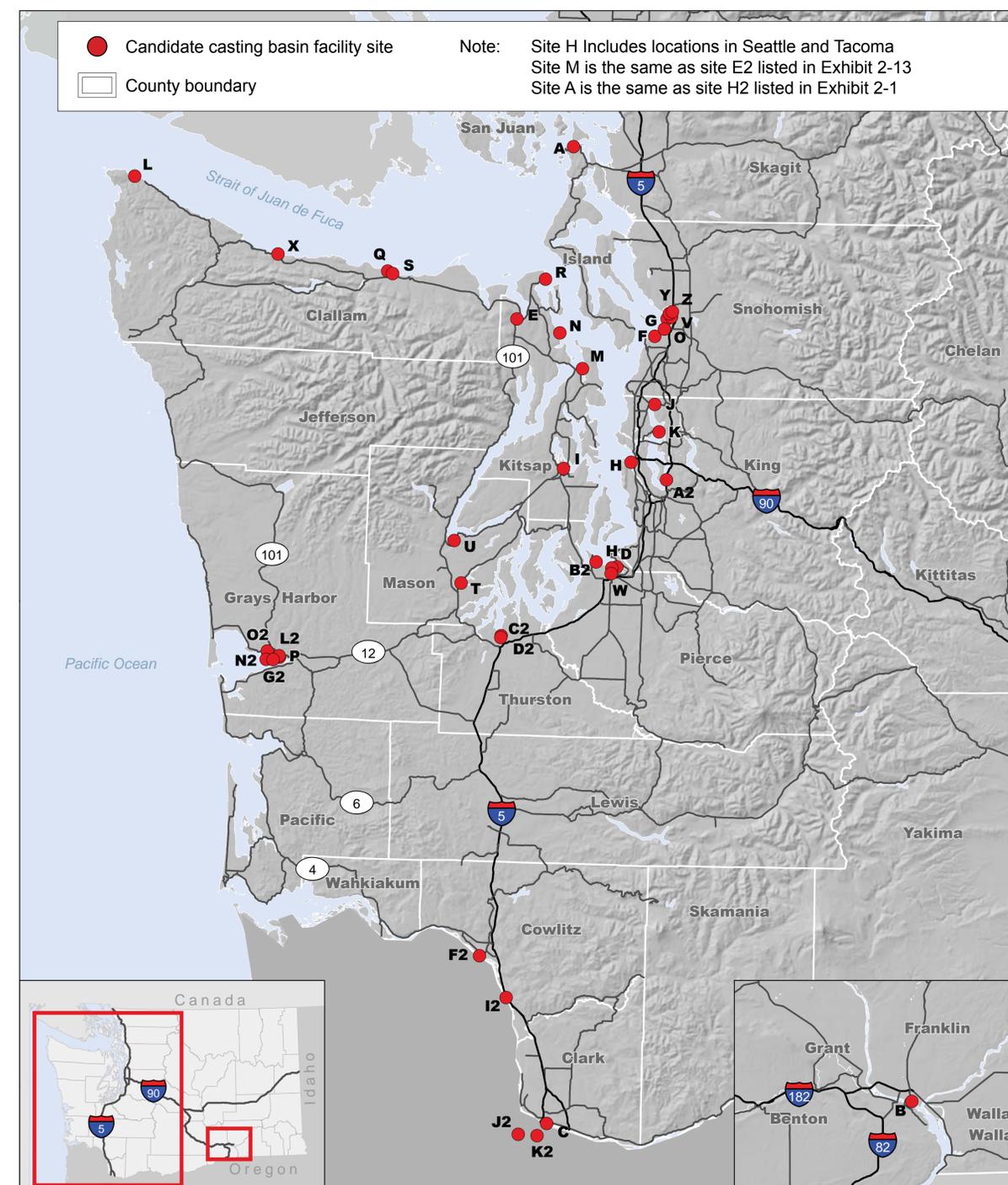
How WSDOT selected two sites

Screening process overview

- **2004:** Solicited for potential locations.
- **2005-2006:** Received private proposals.
- **2006:** Reviewed recommendations from an expert review panel.
- **2008:** Received new sites and conducted an independent real estate search for properties; completed final screening of 39 sites, resulting in three potential sites in Grays Harbor.
- **2009:** Removed the IDD#1 site from list of three sites; identified Aberdeen Log Yard as preferred site alternative; carried Aberdeen Log Yard and Anderson & Middleton sites forward to evaluate in draft EIS.

Sample screening criteria for potential locations

- Physical characteristics of the site, including size and shoreline features.
- Logistics, including towing feasibility.
- Compliance with environmental regulations.
- Availability of property.





Project overview

- In 2009, we identified the Aberdeen Log Yard site as the preferred alternative.
- We have continued to evaluate the Anderson & Middleton site to ensure that either site can be selected if further analysis uncovers new information.
- We also evaluated a No Build Alternative, an important step required by the National Environmental Policy Act that establishes a baseline for comparison with the other alternatives.



The draft EIS analyzes:

- Constructing a new casting basin facility and 33 pontoons at either site in Grays Harbor.
- Potentially using a smaller existing casting basin facility in Tacoma to construct some of the 33 pontoons.
- Transporting pontoons from the casting basin to approved moorage locations.
- Storing and/or mooring the pontoons until they are needed.
- Maintaining the Grays Harbor casting facility while owned and operated by WSDOT.



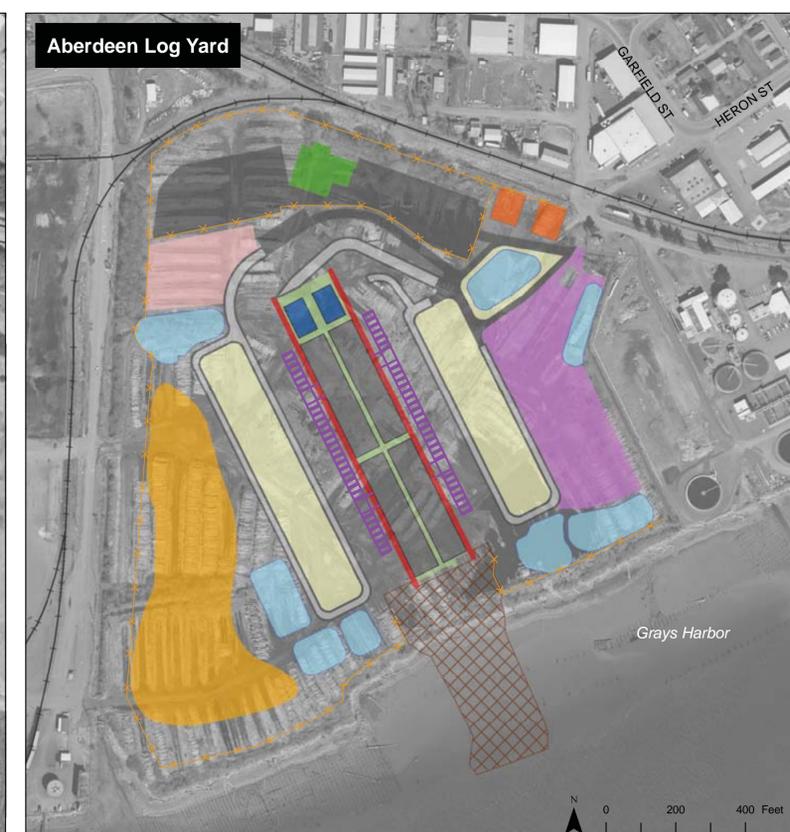
Pontoon Construction Project contractor

Kiewit-General Joint Venture

- WSDOT hired Kiewit-General Joint Venture (K-G) as the best apparent value for the Pontoon Construction Project.
- K-G's bid amount was \$367 million, \$180 million less than the engineer's estimate.
- WSDOT is contracting with K-G to complete preliminary and final design and then build the project. WSDOT chose to award the design-build contract earlier than usual to expedite the project and encourage design innovation as early as possible in the project.

What is K-G's proposed approach to the project alternatives?

- K-G's approach includes:
 - Longer but narrower casting basing.
 - Narrower launch channel.
 - Single chamber basin with a single gate.
- This adaptation fits within impacts already analyzed in the draft EIS and permitting processes.





Innovative pontoon testing effort

In order to build the highest quality bridge pontoons, WSDOT recently completed an innovative pontoon testing effort.

This work involved testing mix designs for strength and durability and testing forming methods for efficiency.

Work was conducted at the Satsop Business Park between summer 2009 and spring 2010.

The pontoon testing contractor found that we can help minimize cracking with the following pontoon construction methods:

- Using thermal controls.
- Using exterior vibration equipment.
- Refining the concrete mix.



Test pontoon at Satsop Business Park. The test pontoon was approximately one-sixth the size of a full-size SR 520 bridge pontoon.