WSDOT

SR 520 Bridge Replacement and HOV Program

SR 520 Portage Bay Bridge and Roanoke Lid Project

August 2022

Construction notice: Test pile and vibration meter installation

Work scheduled near Portage Bay Bridge in late August and early September

Dear neighbors,

We're reaching out to inform you that contractor crews working for the Washington State Department of Transportation (WSDOT) will be working intermittently on the western shore of Portage Bay near Boyer Avenue East beginning August 26 through September 2. The crews will be installing two "test piles" – roughly two-foot diameter by 100- to 150-foot-long steel pipes – and approximately 15 vibration meters in the surrounding area. The test pile installation and vibration monitoring will provide information for the upcoming Portage Bay Bridge and Roanoke Lid Project. During installation, the project team will measure vibration levels to help inform vibration limit requirements on the project.

General project overview

Major construction for the Portage Bay Bridge and Roanoke Lid Project is set to begin in 2024 and will last approximately six years. Project benefits include:

- Safer travel from replacement of the old, structurally vulnerable Portage Bay Bridge with two parallel, seismically stronger bridges.
- Improved regional mobility with completion of the SR 520 Program's transit & HOV enhancements between Redmond and Seattle.
- Greater transportation options through an extension of the regional SR 520 Trail across Portage Bay, a new bicycle and pedestrian crossing over I-5, and connections to the city of Seattle's non-motorized trail networks.
- A community-connecting highway lid between 10th Avenue East and Delmar Drive East, with landscaped open space on top.
- Improved water quality from a new system for treating SR 520 stormwater runoff.
- Wider highway shoulders that allow disabled vehicles to pull over without blocking traffic.

Vibration meter placement

In mid-August – in preparation for the test pile work – crews placed approximately 15 temporary vibration meters on public and private property. These meters will measure vibration levels before and during the test pile installation, allowing the project team to collect approximately two weeks of baseline vibration information prior to the test pile installation and vibration data during the actual test pile installation activities.

Test pile installation

In late-August and early September, crews will install the two temporary test piles — one on land (scheduled Aug. 26-28) and one in the water (scheduled Sept. 1-2). Please see the map on reverse for locations. Pile installation involves driving a long metal tube (pile) into the ground or a lakebed to provide the foundation for a structure. The land pile will be installed from the Portage Bay Bridge above during a scheduled closure of SR 520 related to the Montlake Project. The in-water pile and equipment will be carried into Portage Bay using a derrick barge or crane barge. Each test pile is expected to take one to two days to complete.

Washington State Department of Transportation

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What to expect

- Increased noise and vibration from the vibratory hammer used to drive the piles into the ground. After a pile has been vibrated into a certain depth, the contactor will then use a conventional impact hammer (which makes the loud “bang-bang” noise) to ensure the pile is lodged securely.
- Increased noise and vibration when the test piles are being removed using the same vibratory hammer.
- Temporary lane closures on Boyer Avenue East with cones and flaggers directing traffic while the test pile and equipment are being delivered on-site.
- Vibration will be monitored continuously throughout the pile installation and removal. Staff will also be on-site to take pictures before, during, and after the installation.

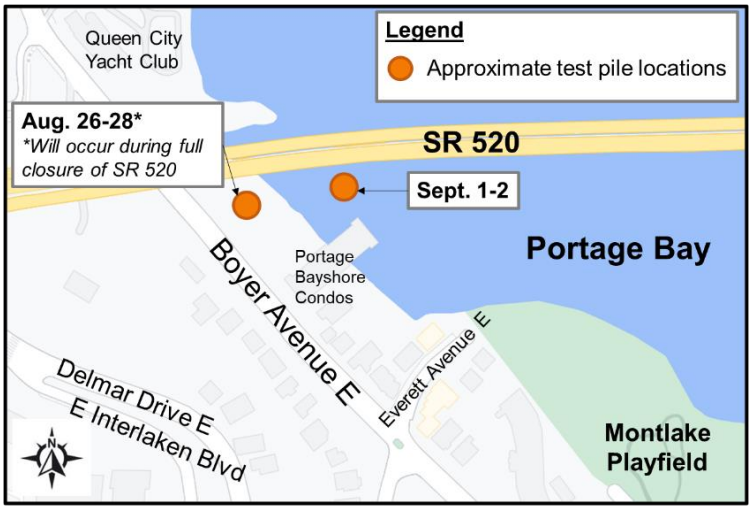
Please note: In some cases, vibratory hammers can produce enough vibration for you to feel or see in your home. For example, the vibration levels can rattle dishes or make guitar strings hum. Out of an abundance of caution, we recommend securing any fragile items in your home prior to this work.

Work hours

Impact pile driving will be limited to daytime work hours (see hours below). This test work will be completed by Graham Contracting, the contractor currently building the Montlake Project. Graham has requested and received a temporary noise variance in this area for Aug. 26-28. This variance will allow the contractor to work at night to assemble the crane on the Portage Bay Bridge while SR 520 is closed for Montlake construction. However, pile driving work is limited to daytime hours.

- General work hours:
  - 7 a.m. to 10 p.m. weekdays, 9 a.m. to 10 p.m. weekends
- Impact pile driving hours:
  - 8 a.m. to 5 p.m. weekdays, 9 a.m. to 5 p.m. weekends

Test pile locations



How to contact the project

Visit WSDOT’s website for additional information and to sign up to receive project email updates: sr520construction.com/FutureConstructionProjects

24-hour hotline: 206-316-2559

Email: sr520bridge@wsdot.wa.gov

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