Columbia River CROSSING

Test Pile Installation and Noise Reduction Project

February 2011

Starting in early February, the Columbia River Crossing project will be conducting an in-water pile installation and noise reduction study. Objectives of the research include evaluating construction noise at nearby residences and businesses, as well as assessing techniques to reduce effects to fish and wildlife.

The work will occur in the Columbia River just west of the Interstate Bridge during daylight hours only. Work is expected to last about three weeks and be complete by Feb. 28, 2011.

Columbia River Crossing

A long-term, comprehensive solution

CRC is a long-term, comprehensive project to improve safety, reduce congestion and enhance mobility on I-5 between SR 500 in Vancouver and Columbia Boulevard in Portland. The project will replace the I-5 bridge, extend light rail to Vancouver, improve closely-spaced interchanges and enhance the pedestrian and bicycle path between the two cities.

Project Benefits

- Improved safety
- No bridge lifts
- Earthquake protection
- Reduced congestion on I-5 and adjacent neighborhoods
- A more reliable trip for freight, autos and transit
- New and sustained jobs with improved access to ports and highways
- Reduced emissions and improved air quality

Why is this research being conducted?

Many people live and work near the I-5 bridge and endangered species use the Columbia River. This research will help CRC planners evaluate:

- Noise effects on land and underwater from pile installation in the Columbia River
- Methods to minimize underwater noise that could affect fish and wildlife during construction
- Pile installation methods to ensure the construction phase of the replacement I-5 bridge stays on schedule and on budget

What is being done?

Six temporary test piles will be installed in the Columbia River bottom near two proposed pier locations for the replacement I-5 bridge. A pile is a circular steel column that is driven into the river bottom to provide support for bridge structures and temporary construction work needs. Installation of piles can create noise associated with metal striking metal.

Two methods will be used for installation – vibratory and impact. Load testing and monitoring will occur for several days following installation. Test piles will be removed after the study is complete.

While installing the piles, underwater noise reducing "bubble curtains" will be tested. Walls of air bubbles will be created to surround the pile and absorb the noise that may be harmful to fish and wildlife species. Two types of bubble curtains will be tested after baseline underwater noise levels are monitored.

Noise and vibration levels on land will be monitored in downtown Vancouver and Hayden Island before the project begins and while it is occurring to assess the effects of the installation in the nearby communities. About 10 noise monitors and five vibration monitors will be used to measure effects of the test project.

What should I expect to see and hear?

The research effort will resemble a construction project. A large crane and other large equipment used for pile driving will be visible in the Columbia River west of the existing I-5 Bridge. Several boats and buoys also will be present in the river both east and west of the existing I-5 Bridge.

There will be a combination of sounds associated with pile installation. The noise heard will depend on the surrounding topography, buildings, wind and other noise. Noise associated with the pile installation might be heard intermittently for up to a few hours a day during the study.

When will the study occur? How long will it last?

The study is expected to begin in February and be complete by Feb. 28, 2011. The project will take up to three weeks with work occurring in daylight hours.

- Approximate Test Pile Location
- Project Footprint
- Project Bridge Piers
- Possible Acoustic Monitoring Location
- Possible Vibration Monitoring Location

Where can I get more information?

Web: www.ColumbiaRiverCrossing.org/TestPile.aspx

E-mail: feedback@columbiarivercrossing.org

CRC fieldwork hotline: 877-567-2033

Mail: 700 Washington Street, Suite 300
Vancouver, WA 98660

How can I get involved?

- Visit the website at www.ColumbiaRiverCrossing.org to sign up for updates and view the project calendar
- Attend an advisory group meeting
- Invite CRC staff to your group to discuss the project
- Contact the project office to talk with a staff member

Columbia River CROSSING

Oregon Department of Transportation

Washington State Department of Transportation

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