

SDOT says a shallow tunnel could be an option to replace the cracked West Seattle Bridge

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The West Seattle Bridge, left, closed in March after shear cracks in the concrete girders began growing rapidly, making travel across the... (Mike Siegel / The Seattle Times) **More** ✓



By **Mike Lindblom** 

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City executives have broadened their West Seattle Bridge replacement process to consider a shallow tunnel in addition to more traditional bridge options expected from big engineering companies.

The Seattle Department of Transportation (SDOT) may also shift \$2 million in federal money toward initial planning for a new corridor, instead of using that cash for downtown programs, such as commute-reduction incentives.

These moves come as the city juggles studies, task forces and bid requests that officials will rely on to decide whether and how to repair or replace the cracked bridge. The city announced last week it's soliciting engineering companies to compete for a \$50 million to \$150 million contract to design and supervise construction of a bridge replacement, if one is needed.

The city is racing to reinforce the 36-year-old bridge, which was closed March 23 due to rapidly expanding shear cracks in the massive concrete girders. The structure, the busiest city-owned span, might [collapse unless braced soon](#).

The shallow tunnel idea is championed by Bob Ortblad, a historian of Seattle and world infrastructure who previously suggested installing immersed tunnels to carry traffic under the Columbia River between Portland and Vancouver, and between Bainbridge Island and Seattle's Magnolia neighborhood.

Such tunnels are assembled from pre-cast concrete sections that are lowered into a trench across the waterway bottom. The method bears little resemblance to construction of the drilled tunnel that carries Highway 99 below downtown Seattle.

"I think it's just common sense that you wouldn't want to repeat the mistakes they made 36 years ago," Ortblad said Monday. "They rushed a bridge and just built it over an earthquake zone and fairly questionable soil."

While the 2001 Nisqually quake did cause a 3-inch wobble, other factors [such as concrete shrinkage](#) and a stuck bridge bearing are suspected of playing a greater role in causing the cracks.

The weekly Westside Seattle newspaper has [published Ortblad's concept](#), and Shiv Batra, a member of the Washington State Transportation Commission, has praised the idea of immersed tunnels because they can be built faster than a bridge.

Some residents voiced their support for a tunnel in comments sent to City Councilmember Lisa Herbold of West Seattle. SDOT [amended the contract solicitation last week](#) to include a tunnel as an option.

An immersed tunnel would present potential challenges, including the difficulty of digging trenches on Harbor Island for cars to enter the tunnel, followed by tight geometry west of the Duwamish Waterway, where traffic would climb to the surface then disperse to Delridge, Avalon, Admiral and Fauntleroy Ways Southwest.

Ortblad's concept also would run Sound Transit light rail through the tunnel.

“You have very significant elevation changes that alone would be challenging,” said Port of Seattle Commissioner Peter Steinbrueck, who sits on a 31-member community task force that will evaluate early bridge replacement and traffic control options.

As for study money, the Puget Sound Regional Council (PSRC), which allocates certain U.S. Department of Transportation funds, on May 28 [approved a transfer of \\$2 million](#) from Seattle’s One Center City budget into bridge-replacement planning.

One Center City is a \$30 million program launched in 2018 to find ways to keep people moving through the downtown core at a time of massive roadway and tower construction.

The \$2 million for bridge studies was carved out of a \$3.5 million grant that PSRC [originally earmarked for downtown “travel demand management”](#) projects, such as making low-income ORCA passes easier to obtain; delivery of goods by electric bicycle in crowded locations; improved transit apps; and marketing campaigns for businesses to reduce solo-drive commuting. Seattle will still receive \$1.5 million federal funds in 2020 for travel-management downtown, said Kelly McGourty, PSRC director of transportation planning.

[Mayor Jenny Durkan argued](#) that because One Center City was meant to tackle commute gridlock, solving West Seattle’s crisis fits the mission.

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