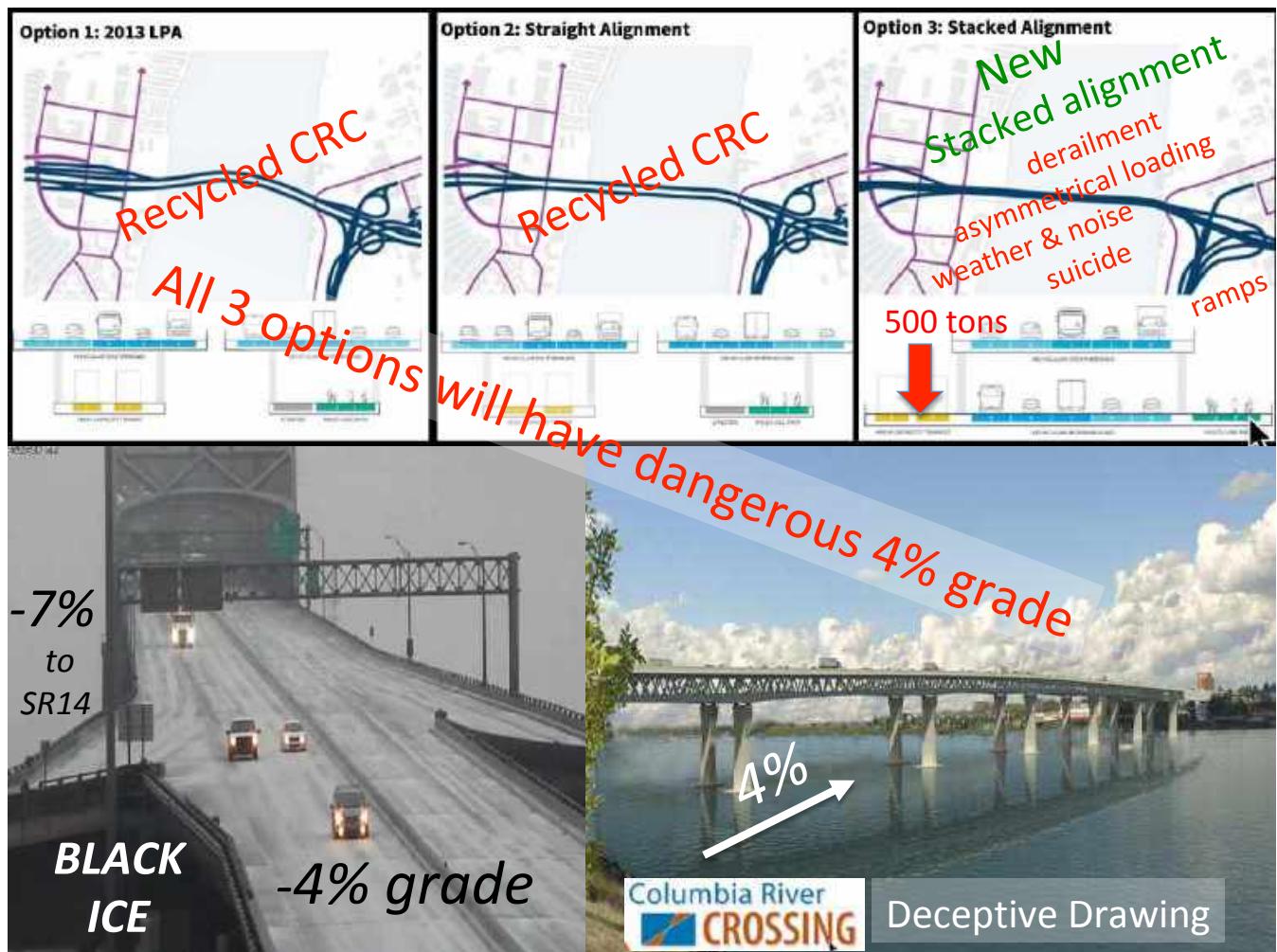


Joint Oregon-Washington Legislative Action Committee

The IBR Program has spent \$26 million and delivered no new feasible options. The IBR is recycling two options from the “Columbia River Crossing”, and has developed one new bizarre option, a “Stacked alignment”.

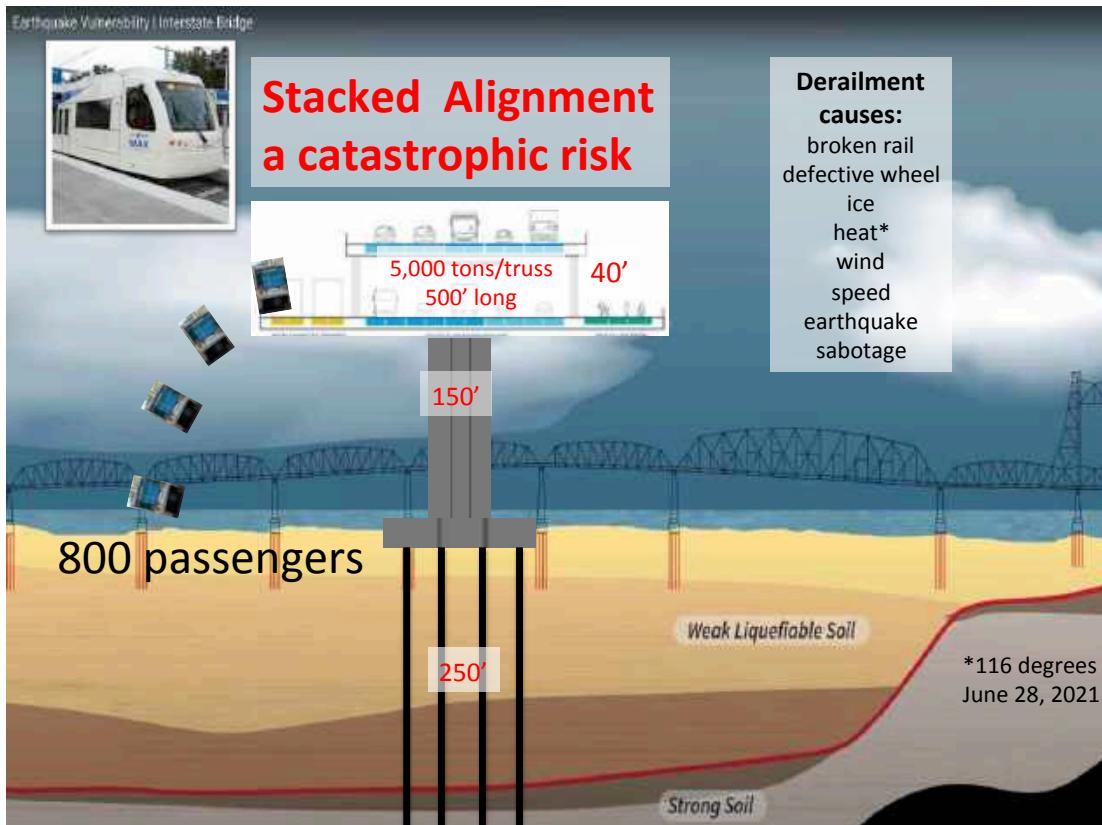
All three options will have a dangerous 4% grade, the steepest interstate bridge grade in the country.

Bob Ortblad MSCE, MBA



The IBR's “Stacked alignment option” has at least five major problems.

1. Derailment



Uses same trains as **DC metro**

Metro 7000-Series Safety Problems Could Have Led To 'Catastrophic Event,' Service Limited This Week

<https://dcist.com/story/21/10/18/wmata-metro-7000-series-safety-derailment-catastrophic-delays/>



Over half of Washington, D.C., Metro rail cars pulled after derailment

<https://www.nbcnews.com/news/us-news/over-half-washington-d-c-metro-rail-cars-pulled-after-n1281814>

7000-Series



One DC Metro Train Derailed Three Times In A Day

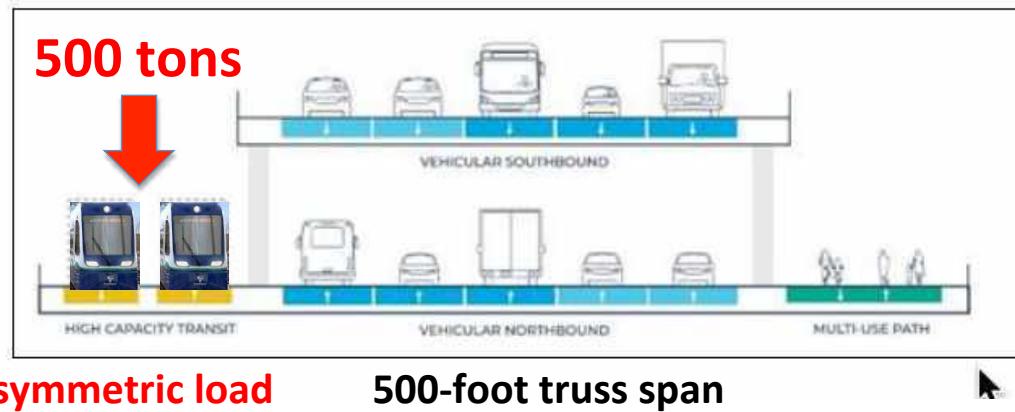
<https://jalopnik.com/one-dc-metro-train-derailed-three-times-in-a-day-1847922741>

2. Asymmetrical loading



250 tons- asymmetrical loading

Figure 4. Stacked alignment option



An asymmetric 250-ton load contributed to the Minneapolis I-35 Bridge collapse.

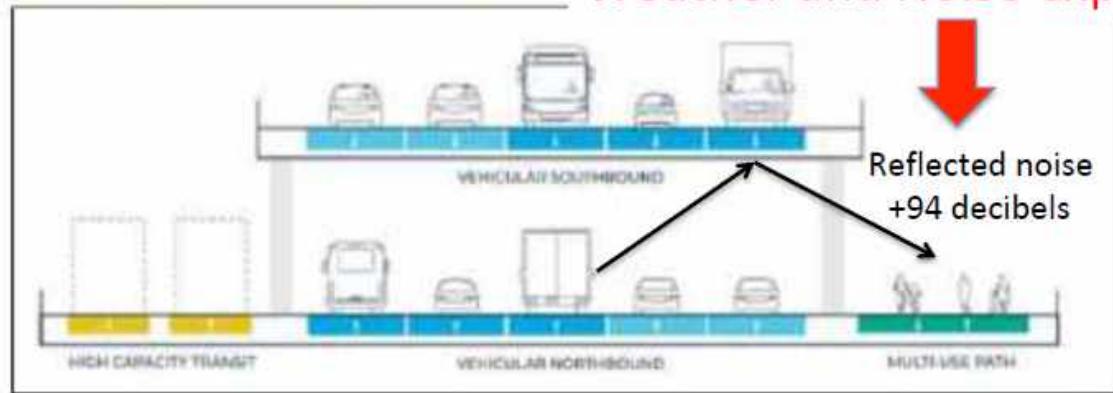
A 500-ton asymmetric load on a cantilever will twist the 500-foot trusses needed for the “Stacked alignment option”.

3. Weather and Noise exposure

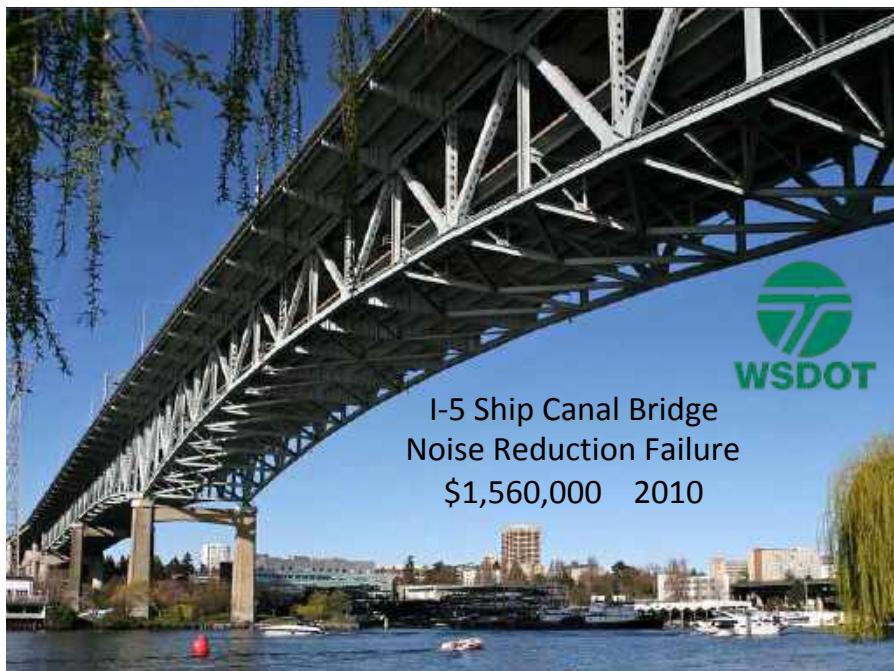


Figure 4. Stacked alignment option

Weather and Noise exposure



If the rain and wind don't blow pedestrians and cyclists off the bridge, then direct and reflected noise will drive them off.



4. Suicide

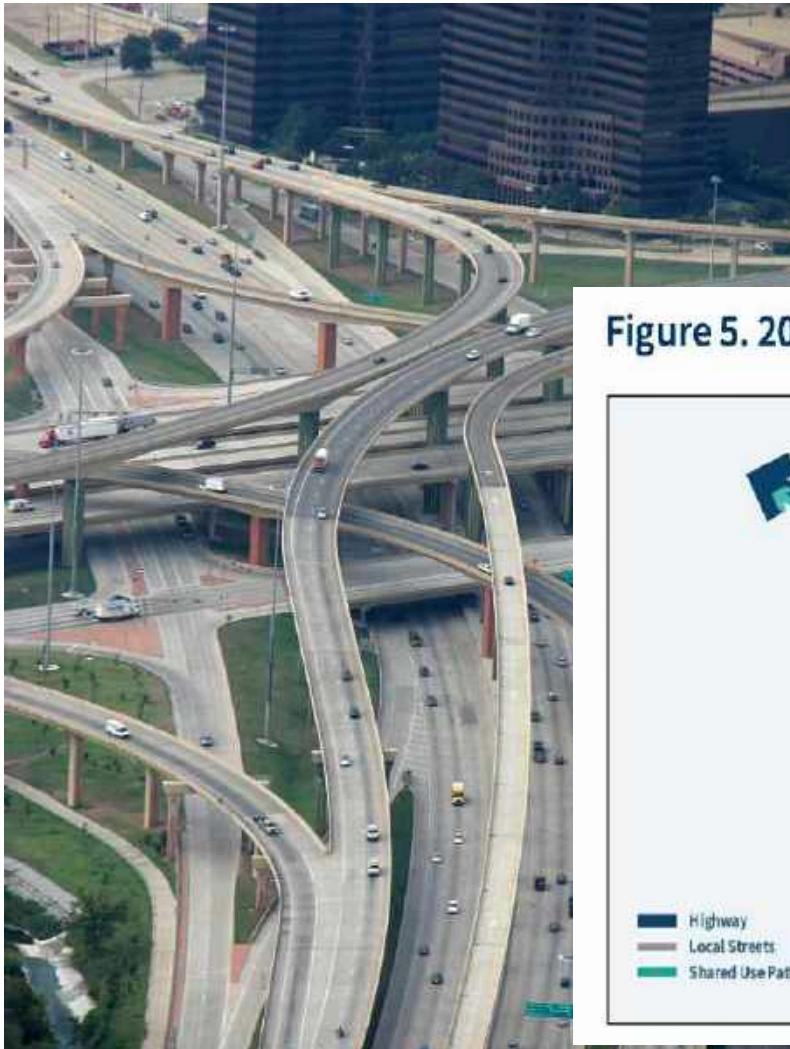
The West Coast has the country's two deadliest bridges for suicide.

Without safety measures a new Columbia River high bridge will be an additional fatal attraction to the sick and desperate.



5. Approaches and Ramps

A snarl of highway approaches and ramps will blanket the Vancouver Riverfront.



Vancouver
Snarl of
approaches and ramps

Figure 5. 2013 LPA option

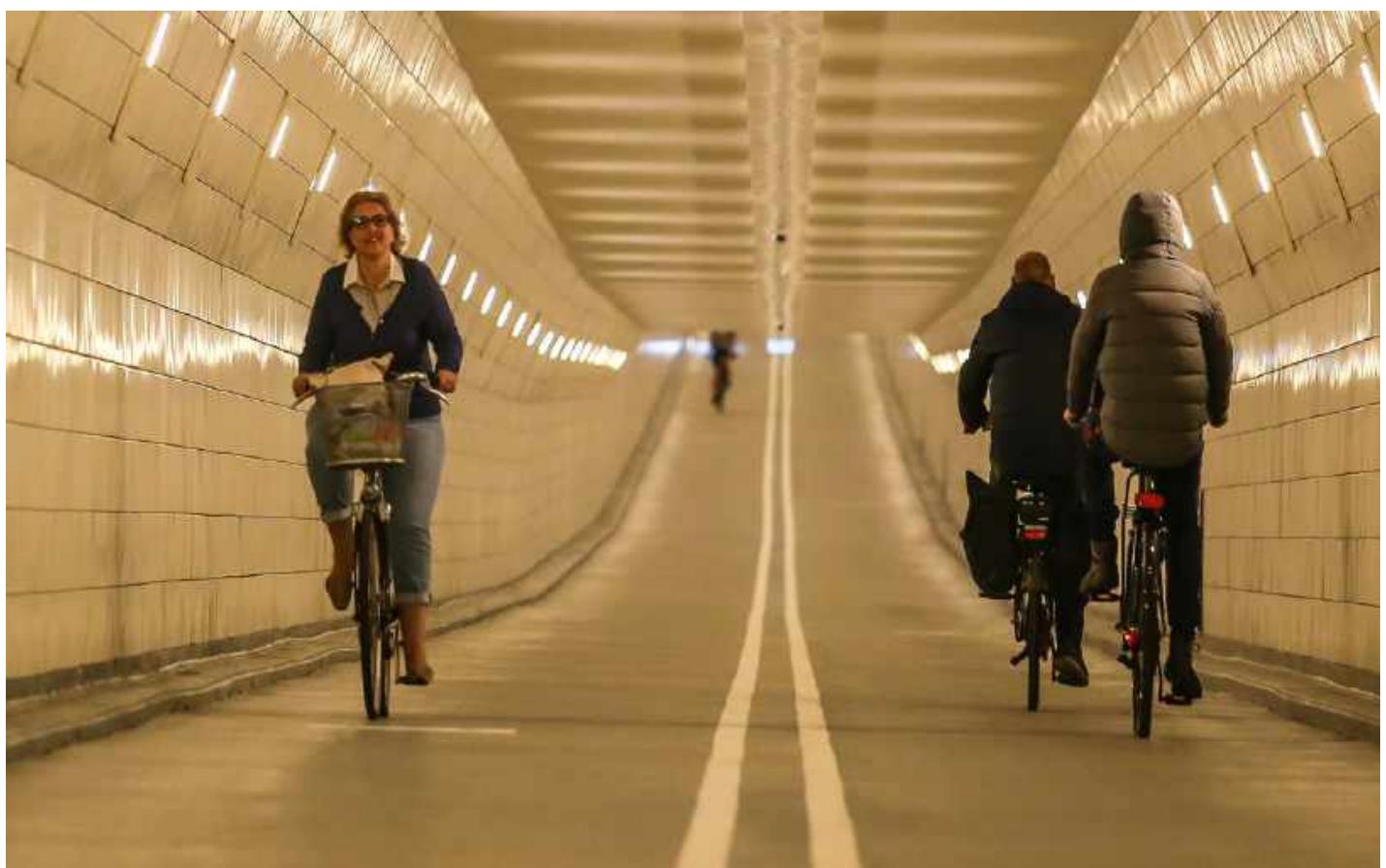


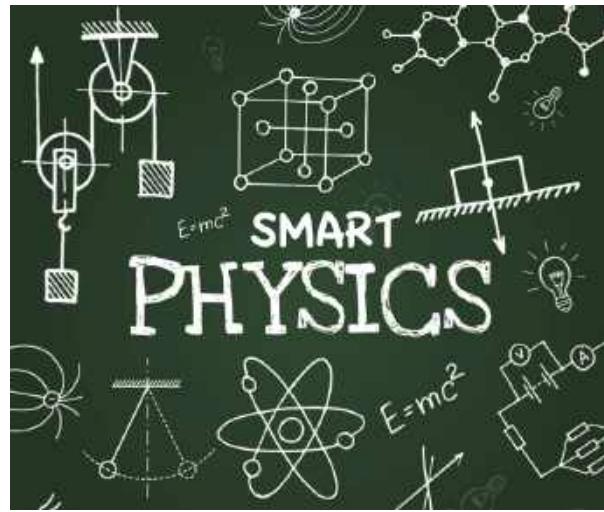
Immersed tube tunnel the best option

An immersed tube tunnel uses buoyance for support, displacing its own weight in a river bottom trench. A bridge needs complex and expensive 250-foot pilings, 100-foot bridge piers, and 500-foot trusses for support. An immersed tube tunnel will half the total grade of a bridge and protect traffic from ice, rain, and wind.



An immersed tube tunnel also protects pedestrians and cyclists from weather, vehicle pollution, and noise.

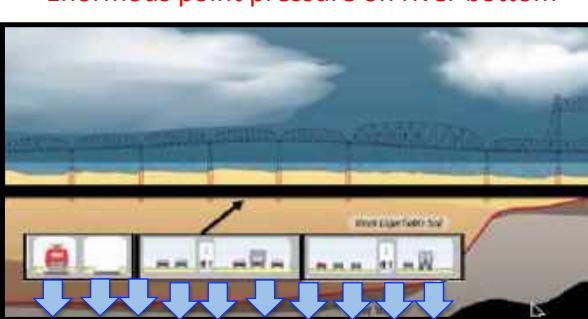
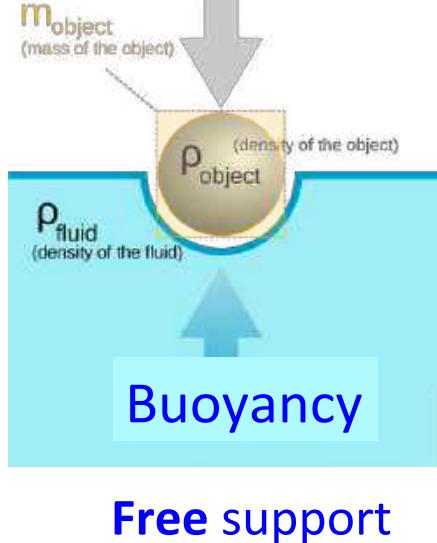




Buoyancy is free, a supporting force for an immersed tunnel that puts almost no weight on the soft river bottom.

Gravity is expensive, massive 5,000-ton bridge trusses will need long, complex, and expensive piles and piers for support. Piles will penetrate 250 feet of soft river bottom and put a 5,000-ton load on small area of solid ground.

**Expensive supporting
Piers & Piles**
5,000 tons on river bottom/pier



Nearly zero pressure on river bottom