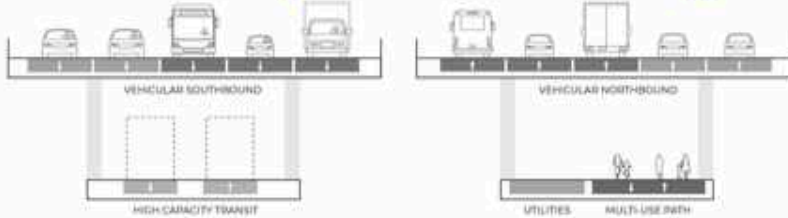
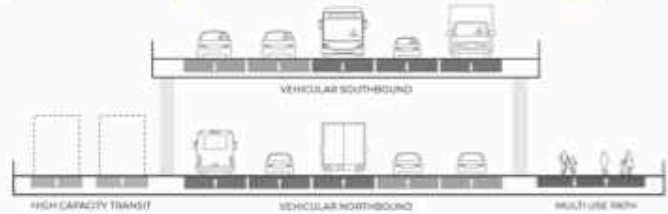


Columbia River
CROSSING

Option 1: Two Bridge



Option 2: One Bridge



Best Option not considered: Immersed Tunnel



A few Immersed Tunnel advantages vs. Bridge

- Half as long and the half total grade
- Natural earthquake resistance, buoyancy during liquefaction
- Simpler and more flexible design, number of lanes
- More local labor, materials, and technology, similar to floating bridge construction
- Can be built at shipyard (steel shell - Vigor) or graving yard (concrete)
- Better freight mobility, half as much grade
- Safer, less grade and weather protected
- Better access for walkers and cyclists
- Less noise, air pollution, and visual impacts
- Allows waterfronts for parks
- Less energy consumption and green house gases
- Better light rail station locations, near Vancouver & Hayden Island riverfronts
- Less cost, see Vancouver and Denmark immersed tunnel vs. bridge studies
- Better connections to current interchanges at grade level, SR-14 & Hayden island
- No need for massive elevated interchanges on Vancouver & Hayden Island, \$1 billion savings
- No need for expensive drilled shafts, bridge piers, and 500-ton trusses
- No air space conflict with FAA
- No navigation conflict with USCG
- Allows barge channel in center of river, required by USACE