

Surface-Subsurface Hybrid

A combination of the best elements of the Surface Street Proposals (Scenarios A, B or C) and one of two subsurface options: 4-Lane Lidded Trench (H) or Bored Tunnel (F)

This proposal is meant to be one among many hybrid options suggested by the Viaduct Stakeholder Advisory Committee to the three-agency partnership and government decision-makers. Support for further study of this proposal in no way precludes support for other Viaduct replacement solutions.

What is a Surface-Subsurface Hybrid?

A Surface-Subsurface Hybrid combines many of the best elements of Surface Street proposals with either a Trench or a Bored Tunnel. A Surface-Subsurface Hybrid could be a **'Grand Compromise'** that accomplishes what other hybrid scenarios may not be able to do. It maximizes **new open-space** on the waterfront, preserves **throughput**, **reduces construction and operating impacts** to businesses and residents, **reduces bypass and freight traffic from our city streets**, **creates jobs**, and provides a **relatively affordable solution** given the **long-term return on investment**.



Possible waterfront street level view looking north near Columbia Street (Viaduct Project Team simulation)

Key Features

- ***Reconnects the city with an outstanding waterfront for residents and visitors.***

This is a 100 year decision that will have an enormous influence on the character of the city and the region. After enduring several years of painful construction and spending billions of tax-payer's money, the region deserves a replacement that pays economic, environmental and aesthetic dividends for decades to come. A Surface-Subsurface Hybrid will provide a **world class open-space** that is a **welcoming place for pedestrians, bicycles, transit and vehicles**. It will **reduce surface-water runoff**, provide **higher land values** in the **neighborhoods**, and provide **shoreline restoration** where possible. The pedestrian experience could be further improved by reducing the four surface lanes to two or three, and incorporating the couplet concept.

- ***Includes as much transit as we can accommodate and afford, as soon as possible.***

Transit improvements are necessary to **absorb existing and new trips** that are not handled by the replacement alternative. Transit is an investment in our region's long-term future, and this hybrid seeks to encourage **increased use of transit** and, over time, **reduce vehicle miles traveled**.

- ***Better utilizes excess capacity on the city grid, while preserving a fragile urban landscape.***

A Surface-Subsurface Hybrid makes better use of the **street capacity** we have for vehicle traffic and increases usage where appropriate, while developing a **rich and vibrant pedestrian and bicycle network** in the Center City, First Avenue corridor and Waterfront areas that **encourages commerce** and **supports small businesses**.

- ***Adds affordable capacity on I-5.***

A Surface-Subsurface Hybrid can use new **Advanced Traffic Management technology** to better manage the **throughput traffic** we have on I-5 and provide **additional mobility/capacity** for the entire region at a relatively **low cost** using existing project funds. The hybrid should also include changes to **I-5 lane configurations** and **on and off-ramps**, and consider **adding lanes** within the existing I-5 footprint. All of this identified I-5 work can and should be done early on.

- ***Provides subsurface throughput that keeps the economy moving.***

Both the Bored Tunnel and the Trench provide some of the fastest **throughput** and some of the **fastest freight and general purpose travel times** to and through downtown. The Bored Tunnel provides the most amount of **open-space**, has the **fewest construction impacts** and can be built while the existing Viaduct continues to move traffic, thereby **avoiding the enormous costs of construction and mitigation** to surrounding residents and businesses. The Trench is **less expensive** at \$1.9B, has the **least overall impact on parking** downtown, has the **least impact on peak-period traffic on I-5**, and provides a **Ballard-Magnolia connection**.



Possible aerial view
(Viaduct Project Team Simulation)

Proposed Workplan for Further Analysis of the Surface-Subsurface Hybrid

Further Analysis of the Surface Street Scenarios

- Consider the short and long term potential of using the Western Avenue portion of a couplet for surface street access.
- Consider other lane configurations on the surface street on Alaskan Way, including two to three more pedestrian-oriented lanes.
- Consider separating the seawall replacement from the project and commit to staging it in phases when cruise ships and tourists are not on the waterfront.
- Consider further analysis of how traffic related to the stadiums and stadium events can influence the upstream functionality of any of this hybrid.
- Consider regional tolling to: 1) reduce SOV city traffic and its associated greenhouse gas emissions; 2) generate significant user-based funds for SR99, SR520 and other priority regional roadways; and 3) provide incentives overtime for increased use of transit. A commitment to regional tolling overtime can build on the first step of tolling SR520 in the near future.
- Consider elaborating on the timing of a transition from a Surface-Transit-I-5 construction mitigation to the construction of a subsurface throughput replacement.



Possible Western Avenue view
(Viaduct Project Team Simulation)

Further Analysis of the Trench

- Consider extending the length of the Trench to increase its performance. Identify cost-saving measures and ways to minimize Trench construction time and its impact on the waterfront and downtown.
- Consider building the Trench 'open' for now with periodic crossings to keep the street grid connected, and lid it later on (possibly in stages).
- Consider agreeing to a construction mitigation plan for affected businesses and residents, especially those on the waterfront and at Pike Place Market.

Further Analysis of the Bored Tunnel

- Consider regional tolling and design modifications for the Bored Tunnel to bring costs and construction time down and bring its costs in line with other tunnels already built. Consider further refinement of the Bored Tunnel cost estimate and design using independent consultants.
- Consider alternative tunnel designs such as three levels or three bores, one dedicated to freight and transit.
- Consider a 'Y-shaped' or 'spur' configuration to provide Ballard/Fremont access.
- Consider examining a transportation management program for the future use of any sub-surface roadway, converting it over time from current uses to an increased transit and freight emphasis that would result in reduced greenhouse gases.



Possible Bored Tunnel
(Viaduct Project Team Simulation)

The Surface-Subsurface Hybrid is a truly fresh idea to emerge from the Stakeholder Advisory Committee proceedings—one of the few new ideas since this process began. It meets the 'Guiding Principles' criteria established earlier this year by the stakeholders, agencies and government decision-makers, and it deserves a chance to be vetted further prior to a final recommendation to the state legislature.