Dear President and Commissioners of the Port of Seattle:

Port Commission Special
Meeting of March 10, 2009

Concerns for Seattle's 45 Billion dollar Deep Bored Tunnel:

- 1. 70% of Seattle voters opposed a "Surface/Tunnel Hybrid" replacement in the 2007 election. The Voters of Seattle have said no to a tunnel replacement for the Viaduct. All state taxpayers will be forced to pay the Tunnel cost overruns.
- 2. The lack of access from the tunnel exit to the Magnolia and the Ballard Industrial area and the loss of 2 lanes on Nickerson Street for bike **traffic** will have a devastating effect on the annual 2 billion dollar maritime, fishing industries and **working** family jobs located here.
- 3. The bored tunnel will only have two-thirds the vehicle capacity as the existing Viaduct. The 6% tunnel grades will slow traffic in the uphill grade, increasing congestion, accidents and green house gases.
- 4. With the added 35,000 vehicles and freight the Viaduct now carries from Ballard to **SODO/West** Seattle in this north-south corridor through the Western and Elliott connections, the additional stoplights on waterfront Alaskan Way will increase congestion and gridlock
- 5. The Port of Seattle Cruise Ship Terminal is north of downtown Seattle at T-91 and over 800,000 passengers will load and unload annually. Up to 5,000 daily vehicle trips will travel from Sea-Tac Airport to T-91 on I-5 to a 1 lane Mercer Place Street and will increase I-5 and 15th Ave. congestion.

6. The risk to the citizens in the tunnel over the Seattle Fault is being ignored by WSDOT.

A Bored Tunnel will increase the **safety/cost** risk due to the multiple geologic Hazards encountered.

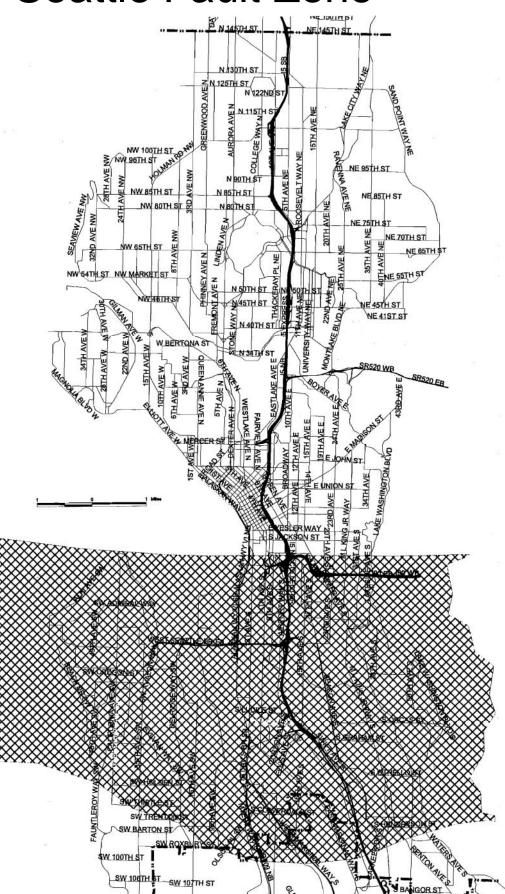
- (a) The bored tunnel will be built directly over the Seattle Fault Rupture Zone "northern portion of the zone appears to be the most recently active and capable of rupturing the ground surface, resulting in several feet of vertical offset. (AWV DEIS 2004)
- (b) Southern entrance of the bored tunnel will be in a Mapped Tsunami Inundation and lahars area and in the event of an Earthquake on the Seattle Fault the tunnel could be flooded.
- (c) Because the bored tunnel will be built over active Seattle fault with known 4-6 Meters Uplift, it will have a higher Risk to rupture, injury to the public and could double the cost. (2007 Seattle Fault Zone Map-attached)
- (d) The Claremont Tunnel, located in the Hayward California fault zone, required 20 engineered breaking points and specially reinforcement, to withstand the 8.5 ft offset during an earthquake. (Berkeley Seismological Laboratory-attached)
- 7. The majority of Seattle citizens support a solution that promotes safety, mobility while relieving congestion, air pollution and unnecessary expense. The Tunnel could cost Seattle and King County taxpayers an additional 2 Billion dollars and will greatly increase congestion through out the region.
- 8. Because these cost and Safety issues the Elevated highway should be moved forward in the EIS as the AWV stakeholder team recommended.

Request Port of Seattle Commissioners not financially fund any part of this tunnel project until these above issues have been resolved.

Sincerely,

The Hogline 1 3503 30th Ave W. Scattle, WA 98199

Seattle Fault Zone



SW 116TH ST

Arterial
State Highway
Interstate
City Limits
Seattle Fault Zone
Waterbodies



No warranties of any sort, including accuracy, fitness, or merchantability accompany this product.

Copyright 2007, All Rights Reserved, City of Seattle Prepared by DPD January 19,2007



Seismo Blog: December 2008

<u>December 19, 2008 | December 15, 2008 | December 9,2008 | December 5,2008 | December 1, 2008 | Current Month | January 2009 | November 2008 | October 2008 | September 2008 | December 2008 |</u>

December 19, 2008

Of Tunnels and Earthquakes, Part II

The Claremont Tunnel through the Berkeley Hills is a major artery of the East Bay Municipal Utility District's water supply system (EBMUD). It delivers drinking water to more than 800,000 people living in East Bay communities from Oakland to Richmond. Damage to the tunnel by a major earthquake on the northern section of the Hayward Fault would cause more than "just" economic losses of \$1.9 billion (see blog December 15,2008). A study commissioned by EBMUD more than 10 years ago concluded that a quake would disrupt water delivery for weeks, reduce fire fighting capabilities, and lead to severe water rationing for up to six months during tunnel repairs. To avoid service disruptions, EBMUD, the tunnel's owner, decided to make the tunnel safe and keep water flowing even if an earthquake of magnitude 7 hits the area.

Unbeknownst to most of us, miners and engineers have been digging through the Berkeley Hills near the landmark Claremont Hotel for the past two years. In June 2006, they started the project with a 480 ft long access tunnel into the fault zone. When that was complete, they added a bypass tunnel parallel to the old tunnel. This 1600 ft long bypass is 10 ft across except in the 100 ft long section where it crosses the fault zone. There it is 17 ft in diameter. This section is also specially reinforced. It has a concrete liner more than 2 ft thick, and more than 20 engineered breaking point. along the tunnel which are designed to break and shift during a major earthquake. Here the water is carried through an 85 ft long steel pipe with a diameter of 6 ft and a wall thickness of 3 inches. It rests on pipe guides. (See "before" picture.)

In constructing the bypass tunnel, the engineers assumed the maximum offset during the earthquake would be 85 ft or less. If the tunnel lining and the pipe guides shift that much during the quake, the pipe will stay intact (see "&er" picture). It will continue to deliver up to 130 million gallons of pure drinking water to users. Above ground, meanwhile, the quake might have wreaked havoc. EBMUD finished the project this summer and its customers west of the Berkeley Hills now have a reliable water supply.

Another water agency, San Francisco Public Utility Commission (SFPUC), which supplies drinking water to the city from Hetch Hetchy Reservoir, will also engage in a major upgrade project. Having completed many smaller improvements to their system, they will open bids next spring for a new, 5 mile long water tunnel under the bay near the Dumbarton Bridge. (hra024)

