

## Santic, Heather (Consultant)

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**From:** Paananen, Ron  
**Sent:** Sunday, October 25, 2009 10:01 PM  
**Subject:** FW: Alaskan Way Viaduct - video information  
**Attachments:** AWW\_Simulation\_FAQs\_TPs.pdf

### Program Staff:

I want you to have information that was just sent to elected officials and stakeholders. We released a video simulation this evening that shows what would happen to the viaduct in the event there was an earthquake that was more intense than the 2001 Nisqually earthquake. While we have refrained from releasing the video in the past, we received a public disclosure request for it, which we are complying with.

When I watch this video, it makes me realize how important the work that everyone on the team does every day. Thank you for keeping the critical project moving forward.

As always, if you receive any media inquiries please forward them to Kristy Van Ness at 206-382-6361. And please stop by my office if you have any questions.

Thank you,  
Ron

Here is a link for you to watch the video from your WSDOT computer:

[http://media.wsdot.wa.gov/asxgen/video/viaduct/earthquake\\_simulation.wmv](http://media.wsdot.wa.gov/asxgen/video/viaduct/earthquake_simulation.wmv)

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**From:** Paananen, Ron  
**Subject:** Alaskan Way Viaduct - video information

Dear Alaskan Way Viaduct Interested Party:

Today WSDOT is releasing a [video simulation](http://www.youtube.com/watch?v=hos_uIKwC-c) ([www.youtube.com/watch?v=hos\\_uIKwC-c](http://www.youtube.com/watch?v=hos_uIKwC-c)) of what would happen to the Alaskan Way Viaduct and Seawall if there was an earthquake that lasted longer, was closer, or was stronger than the 2001 Nisqually earthquake. This type of earthquake has a one in ten chance of occurring in the next 10 years, which is information we released to the public in early 2008.

We have not released this video earlier because we believe it sensationalizes a serious safety issue, however, we are releasing it now in response to a public disclosure request. [More information](#) about the video can be found here: <http://wsdotblog.blogspot.com/>

### Why was this video produced?

In 2007 WSDOT prepared a [report about the seismic vulnerabilities](#) of the viaduct based on new geotechnical data and a better understanding of local and regional seismic behavior. The information showed there was a higher chance of an earthquake occurring that could cause portions of the Alaskan Way Viaduct to collapse. The full report can be found here:

[www.wsdot.wa.gov/NR/rdonlyres/4452FD83-963F-4CD1-B7AE-1277499AC7C0/0/Seismic\\_Vulnerability\\_Analysis\\_Report.pdf](http://www.wsdot.wa.gov/NR/rdonlyres/4452FD83-963F-4CD1-B7AE-1277499AC7C0/0/Seismic_Vulnerability_Analysis_Report.pdf)

The higher chance translated to a one in ten chance that an earthquake that could cause the viaduct to collapse could occur in the next 10 years. This was approximately double the previously known risk. Scientists estimate this magnitude earthquake occurs once every 108 years. The risks are the same for the adjacent seawall.

When we understood this higher risk, there was little agreement about how the Alaskan Way Viaduct was to be replaced. To ensure that we fully understood the risks of not reaching a decision, we created a visual simulation of how the viaduct would respond in the event of an earthquake more intense than the 2001 Nisqually earthquake.

Progress was being made in late 2007. Agreement had been reached on how the south mile of the viaduct was to be replaced. And there was a collaborative process underway, including a 29-member stakeholder advisory committee, to determine the best solution for the mile of the viaduct along the central waterfront.

While independent experts reviewed the video and found it to be an accurate representation of how the viaduct would respond to an earthquake, we felt it was too sensational to release. We felt that it may unnecessarily frighten the public as well as distract from the progress underway.

### **Why release this video now?**

Last month we received a public disclosure request. Many documents were requested, including the earthquake simulation video.

### **Is the viaduct safe for drivers?**

The Alaskan Way Viaduct remains safe for drivers, but the video shows why we cannot afford to delay replacement of it. WSDOT has increased inspections since the 2001 Nisqually earthquake and work to take down the south mile of the viaduct will begin next spring. Steps taken or underway to ensure the viaduct is safe include:

- Four sections of the viaduct that were damaged in the 2001 Nisqually earthquake were repaired soon after the earthquake.
- We inspect the structure four times a year. The section of the viaduct between Columbia and Yesler continued to settle an additional five and a half inches after the 2001 Nisqually earthquake. WSDOT completed repairs to the column footings in April 2008.
- Vehicles with a gross weight or more than 105,500 pounds are prohibited, and trucks and buses must travel in the right-hand lane only. If further settlement is found, additional weight restrictions may be required.
- Next spring an automated closure system will be installed to allow the state and city to act quickly if an earthquake, fire or other event compromises the structure. This system will use the latest in monitoring technology, including GPS antennas and wireless equipment, to detect structure and ground movement. New signs and gates at the viaduct's ramps and entrances will detour traffic away from the structure and advance warning signs will notify drivers of any closures. The automated closure system will cost approximately \$5 million and is federally funded.
- The City of Seattle is advancing the environmental review and design of a new seawall. Construction will take place in parallel with construction of the bored tunnel. The city has made approximately \$500,000 in repairs and monitors the seawall.

## **Will the proposed bored tunnel be safe for drivers?**

Geotechnical and structural engineers agree that tunnels can be designed as one of the safest places to be during an earthquake. This is because ground movements below the surface are much smaller than the amplified movements above the surface. The BART tunnels in San Francisco were re-opened hours after the earthquake when no damage was found. The proposed SR 99 bored tunnel would be designed and built to current seismic standards, which mean it will not collapse in the event of a 1,000 year earthquake.

If you have any questions about this video or our work to replace the Alaskan Way Viaduct, please call me at 206-276-0499 or send an email to [paananr@wsdot.wa.gov](mailto:paananr@wsdot.wa.gov).

Ron Paananen  
Washington State Department of Transportation  
Alaskan Way Viaduct and Seawall Replacement Program Administrator