Dear Senate and House Transportation Committee Members:

You may have read the story in this morning's *Seattle Times* about a sinkhole that appeared above the Brightwater conveyance tunnel yesterday. There was also an incident last week in Cologne, Germany of a shaft being constructed next to an existing bored tunnel that caused a nearby building to collapse.

We are receiving inquiries from the media and others about whether these incidents affect our plans for the SR 99 bored tunnel. Safety is WSDOT's top priority and we take any news of problems during construction seriously. We will gather information regarding each of these incidents over the coming weeks and will work with the civil engineering community to incorporate lessons learned into our bored tunnel design and construction plans.

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Below are answers to the questions we are sharing with others. We hope you find them helpful and are available to answer any other questions you may have.

Sincerely,

David L. Dye
Deputy Transportation Secretary

Could there be sink holes or building collapses during construction of the SR 99 bored tunnel?

Understanding soil conditions is a high priority for building a bored tunnel under downtown Seattle. We are analyzing soil conditions to help inform design and construction plans. This work, beginning next week, will help us pinpoint potential challenges and design construction approaches that will address them. We will drill test holes up to 300 feet deep, that will tell us what the soils are like where the tunnel will be constructed. We will also conduct extensive monitoring during construction, which will provide real-time information about how the soils are performing that will allow us to make changes to tunnel boring and grouting as conditions evolve.

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What is WSDOT doing to ensure something there aren't problems during construction?

Safety is the top priority for WSDOT during any construction project and the agency has an excellent safety record. WSDOT maintains a strong oversight role before, during, and after construction to review and monitor safety designs and construction methods. For example, we made a design decision earlier this year to proceed with a single bore tunnel rather than a twin bore tunnel, which poses fewer risks during construction. We are also meeting with national and international tunnel experts to evaluate the current plans and seek input on how best to construct the tunnel. These and other experts will be engaged throughout the process to ensure plans are state of the art, and incorporate lessons learned from tunnel projects around the world.

Is building a bored tunnel more risky than building a new viaduct?
Building a bored tunnel is no more risky than a new viaduct and some experts argue that building underground is less risky. The tunneling machine technology is well established, a majority of the tunnel will be constructed deep underneath downtown Seattle in glacial soils, and disruptions at the surface level are concentrated at the south and north portals in relatively open areas. There are several recent examples of successful tunnel construction in the Puget Sound area, including Sound Transit's Beacon Hill light rail tunnel and the I-90 Mount Baker tunnel. In contrast a new viaduct would have significant environmental and business impacts on the waterfront during construction. Also, the foundations of the new viaduct would be in more challenging geotechnical conditions, and construction will take several years longer – leading to more risks related to increased scope and cost escalation.