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From: Liam M Stacey [mailto:liams@u.washington.edu]
Sent: Wednesday, March 31, 2010 12:48 PM
To: SR 520 Bridge SDEIS
Subject: wave attenuation on bridge

Attn: engineers,

I-216-001

Wave attenuation structures could be a simpler and cheaper alternative to bridge height. Many wave attenuation configurations exist. Most are variations of concrete stars or finger-jetties. A simulated sloping beach of concrete is more expensive, but could be more aesthetically pleasing. All of these options permit the bike trail to be placed on the south side of the bridge -- so that cyclists don't have to live in the cloud of mist that wafts northward for much of our rainy season. (Try riding your bike across I-90 for a month and you will see how tiresome it gets)

Waves could also be harnessed to generate power: a wall of many textured boards each hinged with electromagnetic resistance. The rectified current would just be dumped into the electric transit system. University engineers could host a design competition. I know, it makes too much sense.

Please consider my wave attenuation proposal as an alternative to a "height and might" method of resisting wave power.

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Since publication of the SDEIS, WSDOT has identified a Preferred Alternative with a floating bridge deck that addresses community concerns with while providing for bridge maintenance needs. The height of the floating bridge with the Preferred Alternative would be approximately 10 feet higher than the existing bridge, and approximately 5 to 10 feet lower than previous designs considered in the DEIS and the SDEIS. It would be about 10 feet higher than the existing bridge. The height is needed to allow for bridge maintenance.

The bicycle/pedestrian lane would be located on the north side of the bridge in order to maximize connection with the existing regional trail systems, including the Points Loop Trail and connections with the Arboretum and Montlake Park. Further, the largest windstorms historically come from the southwest of the bridge.

Regarding the suggestion of an electric transit system, the project is designed to accommodate light rail or bus rapid transit, should the regional decision to do so be made and funded (the Preferred Alternative allows for two future rail options). Such a decision would need to be planned and programmed by regional land use and transit agencies, funded by a public vote, and evaluated in its own environmental analysis. A light rail or bus rapid transit line on the SR 520 corridor could potentially be powered by electricity; however, that decision would occur as part of planning for the transit line. How transit is powered is a topic best left to the transit agencies (Sound Transit and King County Metro Transit), which are responsible for managing transit facilities and operations. A decision to power existing or future bus service on the corridor with electricity would also be part of the management responsibility of the transit agencies.

The decision to site Sound Transit's initial east-west light rail transit (LRT) corridor on I-90 rather than SR 520 has been made through

extensive regional deliberation. Table 2-2 of the Final EIS illustrates the history of regional decision-making on east-west mass transit routes, which began in 1967 when the Comprehensive Public Transportation Plan for the Seattle Metropolitan Area identified a rail corridor from Seattle to Bellevue and Redmond across I-90. Subsequent studies and agreements over the next 40 years have all continued to identify I-90 as the preferred rail transit corridor, with similar or higher predicted ridership than SR 520 and substantially lower costs and environmental impacts. See Section 2.4 of the Final EIS for more information.