City of Seattle
Edward B. Murray, Mayor

Department of Transportation
Scott Kubly, Director

September 2, 2016

Dear Mr. Suni and Mr. Leman,

Thank you for your questions and concerns about the Seattle Department of Transportation's (SDOT) Fairview Avenue North Bridge Replacement Project. We are committed to maintaining safety for all users of Fairview Ave N and we appreciate your concerns.

SDOT's decision to replace both the east and west bridges on Fairview Ave N was based on analysis found in the Type, Size and Location (TS&L) report completed in 2013, the Value Engineering (VE) team review of the project in 2014, and the design team's ongoing consideration of cost, schedule, risk, safety issues, impacts and overall value to the public. The VE study looked at multiple options, including re-examining some previously considered, in an effort to leave no stone unturned.

For example, one consideration was to close the bridge during construction. Initially, the project team planned to keep the bridge partially open to traffic during the day while performing much of the construction at night. However, the VE study found that fully closing the bridge would have many tangible benefits such as shortening the construction duration by 9 months, decreasing the environmental footprint of the bridge, streamlining the bridge design, reducing the noise impact of night work on residences around the lake, and cutting the project cost by $17 million. The project team, SDOT management, and the Mayor's office all agreed that this was a worthwhile proposal to adopt.

The VE team also did not speak to whether the bridge would eventually need to be replaced. While the repairs highlighted by the VE study would fix some, but not all, of the problems with the existing bridge and modestly extend its life, it would not address the seismic issues. The City would need to continue investing capital to maintain and eventually replace the bridge earlier than a new one built today, while retaining an old bridge with seismic risks. The $8 million savings mentioned in your letter only represents the reduction in initial construction cost by deleting the east bridge from the project. It does not capture the additional costs of strengthening and retrofitting the east bridge, including complex mitigation measures for seismic risks at subsoil levels, reconstructing parts of the bridge, modifications to align with the new west bridge, and life cycle operations and maintenance costs.

Rather than contradict previous studies, the VE team's proposal to retain the east bridge acknowledged that it is seismically vulnerable. The underlying site geology of loose lakebed deposits is still the same. The current bridge supports are not deep or strong enough to withstand the lateral sliding and liquefaction of a seismic event. By contrast, the new bridge shaft embedment must be four times as deep to reach solid glacial till. After considering the VE team's proposals and the design team's responses, SDOT management confirmed that the TS&L recommendation to replace both structures would give the public the most value, while minimizing risk and overall impacts and providing for increased safety.

Furthermore, the anticipated replacement of the east bridge at the end of its life span would be much more complex and costly for the following reasons:

- The existing east bridge is a few feet from the historic steam plant (ZymoGenetics) building and directly adjacent to the proposed replacement of the west bridge. The close proximity of live traffic and an occupied landmark building in a constrained site will increase construction costs and risks.
- In order to construct the east bridge and maintain traffic on the west bridge would require a work trestle. SDOT would also need a second mobilization for construction. These two items alone are anticipated to be in excess of $1.5 million.

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- By spanning construction over many years, inconvenience to the public is increased.
- SDOT is currently going through the process of securing environmental permits for both bridges; however, if we only construct one bridge now, SDOT would need to go through the same or more complex process again. In addition, because design codes and standards change, a second full set of design and construction documents will have to be developed in the future when the east bridge is replaced. This will potentially double the cost of these tasks.

The aforementioned costs, risks, and potential safety issues make a compelling case for replacing both bridges now, rather than replacing only the west bridge today and delaying the east bridge until some point in the future. Replacing both bridges now reduces overall project risk, decreases the total cost to replace both bridges, decreases impacts to the public and to the environment, and results in a more efficient structure that meets current seismic design standards.

In response to your questions about SDOT's actions following completion of the VE review:

A. Previous analyses already determined that rehabilitating the east bridge was infeasible and not cost effective, which was further validated by weighing the VE study's estimated savings against the additional expenditures required to make it work. For these reasons, SDOT did not commission any further constructability, seismic or cost analyses regarding rehabilitating the east bridge.

B. Because the rehabilitation of the east bridge was no longer an option, there were no further studies done regarding the timeline for rehabilitating the east bridge.

C. Traffic studies were prepared initially for staged construction and for a full closure of the bridge. However, studies associated with the rehabilitation of the east bridge were not done before or after the VE review due to the lack of feasibility of such an option.

D. SDOT has continued to coordinate with King County Metro about the full bridge closure, following their participation in the VE study. Results of the VE study were also shared with the Washington State Department of Transportation (WSDOT). In addition, SDOT senior management and the Mayor's office were briefed on the design team's recommendation to move forward with a full closure and replacements of both bridges.

SDOT recently ruled out streetcar as the mode for the High Capacity Transit corridor reaching Northgate from this area. While not currently planned, this does not preclude potential shorter extensions of the existing South Lake Union Streetcar across the Fairview Ave N bridge. Since the new bridge will be in place for 75+ years, it needs to be adaptable to future changes in the transportation system for many years to come and is designed to accommodate a future streetcar extension.

We appreciate your questions and would be more than happy to meet with you in person to explain and discuss this complicated project further.

Sincerely,

Scott Kubly
Director, Seattle Department of Transportation

Cc: Council Member Mike O'Brien, District 6, Sustainability & Transportation Committee Chair
Council Member Rob Johnson, District 4, Sustainability & Transportation Committee Vice-Chair
Council Member Kshama Sawant, District 3, Sustainability & Transportation Committee member
Council Member Sally Bagshaw, District 7
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