

October 25, 2007

**TO:** Steve Saxton, FHWA  
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**FROM:** Kris Strickler, Deputy Project Director

**SUBJECT:** Modeling and Year of Analysis for Project Alternatives – Proposal to Conduct 2035 Analysis During FEIS

### Summary

In January 2007 the Columbia River Crossing (CRC) project submitted a memorandum summarizing an analytical approach to ensure that the selected project will provide a 20-year design life in accordance with FHWA policies, while utilizing the currently approved 2030 regional land use and travel demand models employed by Metro and RTC. This memorandum updates our proposed approach.

### Proposed Approach

As noted in our memorandum dated January 4, 2007, our analysis of DEIS alternatives builds on 2030 land use and travel demand forecasting models adopted by the region's Bi-State Coordinating Committee. Transit and highway elements will be analyzed consistently using the 2030 forecast data, in accordance with current FTA policies.

FHWA policies, on the other hand, require that the project demonstrate a 20-year design life after opening day, which is currently estimated to occur near 2015. Therefore, 2035 travel demand forecasts should be used to identify freeway design elements needed to meet operational and safety design requirements.

Our January 4, 2007 memorandum proposed that the DEIS phase incorporate a sensitivity analysis to evaluate how the project alternatives would perform under year 2035 traffic conditions. Given several additional months of analysis, we are now proposing that the sensitivity analysis be conducted as part of the FEIS, following selection of the Locally Preferred Alternative. Our rationale is as follows:

- 1) It is clear that peak period traffic will exceed planned and reasonable capacity levels under all of the alternatives under consideration. Moreover, saturated conditions on the highways and arterials linking to the CRC project area will limit the amount of traffic that can enter and exit the project area. As a result, travel demand forecasts for 2030 are expected to be only marginally different than forecasts for the year 2035. This leads to two preliminary conclusions:
  - a. We can reliably compare the DEIS alternatives using the 2030 travel demand forecasts. Marginal differences in 2035 travel demand are not expected to affect the comparison and ultimate selection of a recommended project. In other words, the best-performing project in 2030 can be safely assumed to be the best-performing in 2035.
  - b. The design of project elements to meet 2035 traffic conditions will not differ significantly from that required for 2030. In both forecast years, freeway design elements will be governed by safety and operational needs for traffic throughout the day, as well as the goal of reducing the duration of congestion during the day, rather than solely basing design needs on peak period travel demand. Any design changes resulting from shifting from a 2030 to 2035 design year are expected to be minor and can be readily addressed in the FEIS.

- 2) Conducting a sensitivity analysis for one alternative in the FEIS will be more efficient and less time consuming than conducting a similar analysis for each of the DEIS alternatives, while accomplishing the same goal of ensuring a 20-year project life.
- 3) Metro and RTC are currently developing a 2035 land use and travel demand model. Conducting the 2035 analysis as part of the FEIS will delay the analysis by roughly one year (compared to the DEIS), thus increasing the likelihood that the regional 2035 model will be available for the CRC project. If so, it gives us the opportunity to consider whether it may be a better tool to use for the analysis, as opposed to a process of extrapolation from the 2030 model.
- 4) Forecasts of opening year for the project are highly dependent on the selected alternative and, of course, on the availability of funding. Delaying the analysis until the FEIS will improve our ability to estimate when the project will be completed, and thus provide a firmer foundation for building a travel demand forecast for the year-of-opening plus 20 years.