

Approach to Analysis of Transit/TDM/TSM Options

TO: Transit/TDM/TSM Sub-group

FROM: Dan Fricke, ODOT Project Manager
Julie Warncke, City of Salem Project Manager

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After the first meeting of the sub-group in late July, it was clear to project staff that we need to provide more detailed information on how the analysis of transit/TDM/TSM options should be conducted and describe why taking this approach is appropriate. What follows is a description of how we propose to address the non-auto mode share issue in the Salem River Crossing EIS and the impact of this approach on the highway project and EIS process. This approach has two key steps:

- 1) Separate out the TSM/TDM/Transit measures that are not part of the highway project (that is, within the roadway right-of-way and traditional highway funding streams) from the EIS and develop them in a separate plan. This helps assure that these measures are adequately considered and that their implementation is not tied to the fate of the Salem River Crossing EIS.
- 2) In the Salem River Crossing EIS, assume a high degree of success in increasing non-auto mode share. This helps assure that, in the absence of ODOT and FHWA jurisdiction over TSM/TDM/Transit measures, that the highway project does not interfere with and in fact supports their concurrent or future implementation.

Analysis Steps

1. *Non-Auto Mode Share*

The first step in this process will be to determine an appropriate assumption for the non-auto mode share using the bridges in the future analysis year. Travel demand model runs for the alternatives conducted to date have used the non-auto mode share assumptions in the SKATS model. We will now conduct a new analysis of the alternatives by subtracting a calculated percentage of the post-processed trips from the study area roadway network. The purpose of this reduction is to simulate achieving a high degree of success implementing a variety of transit/TDM/TSM measures within the project study area.

Currently, the peak hour alternative mode share (transit, bicycle, and pedestrian) in the study area is less than 3% of total travel demand. We expect that a variety of aggressive assumptions about increased transit availability and use, increased demand management (carpooling and peak shifting), and improved bicycle and pedestrian connections will result in an additional peak hour non-auto mode share reduction. The Project Management Team is currently conducting an analysis to determine an appropriate and defensible level of reduction.

As stated above, the EIS design work will be based on this reduced auto demand scenario. However, the EIS impact analysis will report the difference between the higher SKATS model travel demand scenario and the reduced demand scenario so that a “worse case” analysis of factors that would be affected by the higher demand is fully disclosed. For example, with less success implementing the alternative modes elements, traffic volumes would be marginally higher and air quality would likely be marginally worse, although it would still be better than the no-build alternative. This difference would be reported in the EIS.

Just as we are presenting the alternative highway elements as a range of choices that achieve certain performance levels from almost meeting current mobility standards to only being slightly better than a no-build alternative, we will present the alternative modes elements as choices in which the community may or may not choose to invest. An investment that enables the reduced demand scenario to be fully realized may result in an additional 2-4 years of operation at a particular performance level. However, it is important to note that, because highway capacity is not provided in 5 or 10% increments, the marginal improvement in highway operations that would result from being fully successful in implementing the alternative mode elements will not significantly change the basic amount of highway capacity that will be provided by any of the alternatives.

The reduced auto demand assumption would be common to all alternatives in the EIS. The EIS would note the range of potential transit/TDM/TSM measures assumed to produce the demand reduction factor. However, the impact analysis in the EIS will only address those measures that could be implemented as part of the highway project and would have value regardless of the eventual success of implementing the other measures. These would be the only measures considered as an integral part of the highway project that must be implemented as part of the project. Measures that potentially could be addressed as integral parts of the highway project include park and ride lots and queue jump lanes. Measures identified that could not be implemented with highway funds, like bus purchases and operations, will not be included as elements of the highway project being addressed in the EIS. Note this also applies to toll funds, which DOJ advises will be viewed the same as highway funds under the Oregon Constitution.

In short, taking this approach will enable us to (1) demonstrate fairly and conservatively the independent need for highway improvements even assuming a significant increase in the use of non-auto modes in the peak hours of operation; (2) ensure that the project is not “over-designed” and fully accounts for possible future changes in driving costs and habits; (3) make clear our commitment to support reducing reliance on SOV use through the design and implementation of major projects; and (4) provide the technical basis needed to demonstrate compliance with ODOT’s major improvement policy and justify Oregon Transportation Commission adoption of alternative mobility standards.

It should also be noted that this approach is consistent with the approach used for the Newberg Dundee Bypass EIS which was approved by FHWA in 2006. It is also consistent with guidance being given by ODOT on other large projects where project size, the affordability of highway performance, and alternative mobility standards are in question. These projects include Willamette River crossing projects currently being initiated in Corvallis and Eugene.

2. *Transit/TDM/TSM Study*

In order to address the transit/TDM/TSM issues in the river crossing area, we recommend conducting a parallel study that is independent from the EIS process. The purpose of this process is to develop a specific set of independent recommended actions and assess their operational and implementation viability to help achieve the non-auto mode share increase assumptions used for road design purposes in the EIS.

Completion of this study would take a parallel, but not necessarily concurrent, path with the EIS development. This study will result in a stand-alone document and should include an implementation plan (including cost) that could be further refined and implemented by the various responsible agencies (state, local, transit, etc.).

Ultimately, the study and resulting implementation plan(s) will provide the community with better information about the cost and potential operational benefits of various alternative mode options. This, in turn, will help policymakers determine what level of investment in non-auto modes makes the most sense relative to their potential benefits.

This study also supports previous analysis which demonstrated that a stand-alone TSM/TDM/Transit alternative did not meet the project Purpose and Need but could have transportation benefits in the river crossing corridor (see “TSM/TDM (Transit and Roadway Efficiency Concept) – Analysis and Results” (August 15, 2007)).

Summary/Conclusions

The Project Management Team believes the above described approach gives us the opportunity to assess many possible ways to increase non-auto mode share. For purposes of developing the EIS, this approach assumes implementation of a transit/TDM/TSM program that significantly increases peak hour non-auto mode share. Taking this approach allows us to (1) illustrate the independent need for a certain level of highway improvements; (2) support implementation of alternative mode investments that could extend the effective life of the highway investments; and (3) allow the policy-makers/public to choose to make all or any of these investments in alternative modes without being tied to implementation of the needed highway improvements which are as yet unfunded. The proposal has also been reviewed by FHWA and DOJ staff who have concluded this is an appropriate and defensible way to proceed.

We have the ability, through the ODOT Region 2 flexible services agreement with CH2M-Hill, to quickly get our consultant team on board and working with the affected agencies to conduct the alternative modes study. ODOT expects that this work product would be co-managed by the appropriate responsible agencies – likely Salem-Keizer Transit, City of Salem, and ODOT. Region 2 is also willing to provide funding for this effort.