

Thoughts on Level of Service
Kirkland Transportation Commission
September 17, 2010

The following are some comments and ideas (in no particular order) to stimulate thinking for the commission discussion on LOS.

The Growth Management Act requires a vehicular level of service (LOS) in the Transportation Element of each city's Comprehensive Plan.

Kirkland has viewed LOS as an output not an input. The equation below is Figure 7 from *Transportation Conversations*. In the past we have taken the items on the left of the = sign as givens. We then calculate what the LOS is and that's our standard. That's different than setting the LOS at some level and coming up with facilities and programs to meet it (for a given land use).



Our current level of service uses a measure of auto volume divided by auto capacity known as V/C at signalized intersections. We have two tests to see if LOS is acceptable. 1) we average V/C across the intersections and 2) no V/C can exceed 1.4. The city is divided into 4 subareas and there's an average test for each subarea. The purpose of averaging is to estimate how the "system" is operating.

A few years ago a major complaint about our LOS system was understandability. What does V/C of 1.4 feel like?

LOS is important because it is directly linked to concurrency and impact fees. What's really important is not how you measure LOS but the level at which action is needed. That is, what has to happen before LOS begins to effect concurrency and Impact Fees.

A recommendation from *Transportation Conversations*:

- **Develop new level of service standards that align with the transportation principles.** This will mean incorporating transit, bicycling and walking into the standards. A new, less auto-centric level of service standard could reduce the requirement for construction of expensive projects to meet that standard. Because impact fees are proportional to the cost of projects needed to meet the level of service, reducing the cost of projects could reduce impact fee rates. The design of concurrency systems are heavily reliant on appropriate selection of level of service.

Redmond and Bellingham are examples of cities with newly revised concurrency systems incorporating revised multimodal levels of service. They both incorporate the idea of trip capacity across modes and trip demand across modes.

How LOS might be viewed in the context of the Commission's principles:

Transportation Principle →	Move People	Be sustainable		Create Partnerships	Link to Land Use
		fiscal	environment		
Level of Service (LOS)	<p>Level of service should be multimodal.</p> <p>Could explicitly consider person throughput or person trips served</p>	<p>The method by which LOS is calculated should be as cost effective as possible, for all those involved.</p> <p>A level of service standard has to be in keeping with the amount and type of facilities and programs we can afford.</p>	<p>The level of service standard could consider environmental impacts.</p>	<p>Many stakeholders are interested in LOS. Traditionally the development community and those interested in development are primary stakeholders.</p> <p>Public process should be used to determine an LOS method.</p> <p>If transit is a component of LOS, transit agencies may be a partner.</p>	<p>Take land use into account, perhaps by using different measures or standards in different areas of the city</p> <p>LOS should support the land use and transportation plans, not define them.</p>