

To: Transportation Commission
From: Ken Dueker
Re: Concurrency
Revised January 2018

Kirkland is adding population faster than anticipated and transportation capacity slower than planned. In addition, reduction in auto use is not occurring as we have hoped. Consequently, the growth in dwelling units is not being offset by reduced auto travel. Our growth in population is increasing auto travel faster than roadway capacity has been expanded resulting in increased congestion. This means that we may not be meeting our concurrency mandate. The purpose of this memo is to assess whether our development growth is leading to changes in travel behavior that soften the perceived increase in congestion and improves overall mobility.

Recently, the typical development pattern in Kirkland is where one modest house on a large lot is demolished and replaced by two to ten high-end single-family dwellings. This kind of increase in density is not conducive to reduction of auto use and increased use of other modes. This happens as a result of upzoning that occurred in conjunction with implementation of the Growth Management Act that mandates growth targets and assumes that increasing density leads to less travel by auto.

An unintended consequence is that upzoning increases the value of the land, which increases the rate that our older, most affordable housing stock is torn down and replaced with luxury housing. And the replacement affordable units we are promised from affordable housing set asides will likely be too few and too late.

Analysis of building permit activity, data on where Kirkland residents live and work, and journey-to-work data, are examined to see whether a shift to non-auto modes of travel has occurred.

During the period of 2010-2016 there were 3330 single -family (SF) permits issued, 1746 multi-family (MF) permits issued, and 564 demolition permits issued. Most of the housing units demolished were replaced by single-family dwellings. During the last five years over 100 dwellings were demolished per year. Similarly, most of the SF and MF permits were issued in the last five years. So the net increase is on the order of over 800 housing units per year. The pace of development has quickened in the most recent years.

Although the job-housing balance in Kirkland has improved as shown in Table 1 the proportion of workers who both live and work in Kirkland has not improved from 2013 to 2015. The proportion of workers who both live and work in Kirkland continues to be less than 12 per cent of total workers residing in Kirkland. This results in a large flow of workers to and from Kirkland.

Considering travel mode, the shift to non-auto modes has not quickened. Journey-to-work data from the American Community Survey does not show a reduction in auto use for commuting nor an increased proportional use of alternative modes. The use of alternative modes from 2014 to 2016 is constant, 11.5 per cent. In 2014 there were approximately 47,000 daily work trips by Kirkland residents, with a growth rate of roughly one per cent per year. This growth of work trips translates to 500 daily work trips per year and vehicle trips are increasing by 400 daily work trips per year, and work trips by alternative modes are increasing by 50 work trips per year. (Alternative modes included carpools, transit, bicycle, walk, and work from home. Margin of error is too high for individual alternative modes to compare one year to another.)

Admittedly, this analysis is incomplete. I have not analyzed changes in trip generation and trip scheduling that may have occurred in response to congestion. Persons may have reduced travel and/or shift their travel to non-peak periods.

I conclude that travel in Kirkland continues to be unabatedly auto oriented . Based on the above described evidence the mode use dials are not being moved. Travel by auto has not been reduced and development patterns have not improved our ability to maintain affordable housing options for service workers.

On the transportation capacity side, the plan to improve 100th Ave. NE, north of NE 132st St, and the 6th St./108th corridor study illustrates the infeasibility of adding capacity to our arterial system. Our arterial system is largely inherited from a King County rural road system, making it very difficult to widen arterials and densify the arterial network.

On the plus side, the investment in intelligent transportation systems technology is supposed to replace the need to build additional roadway capacity. We need to evaluate the extent to which ITS is accomplishing its purpose of managing congestion and adding effective roadway capacity.

According to the Transportation Master Plan our current concurrency policy is based on the following description:

Many communities have focused almost exclusively on road capacity standards to address traffic congestion. However, public transportation, bicycle and pedestrian paths, may meet a significant portion of a community's transportation needs. Programs to reduce demand or shift traffic away from rush hours, may reduce the need for new facilities. As a result, lower LOS may be justified for street capacity in dense urban areas even if streets are congested, if overall mobility is adequate.

The task before us is to assess whether the level of congestion is tolerable and the overall mobility is adequate.

This memo provides some data by which to assess the concurrency mandate. The analysis is partial. More is needed. Specifically, we need better measures of congestion, and we need to examine more ways to reduce auto travel. Congestion pricing or carbon taxes may be on the horizon and may be more effective in managing congestion than building more roads. Similarly, changes in land development policies may be needed to foster more MF housing and fewer large SF houses on small lots. Also, improved transit is needed to achieve reduced auto travel.

Table 1
Where Kirkland Residents Live and Work

	2013	2015
Employed in Kirkland, Live outside	31960	35391
Live in Kirkland, Employed outside	35104	36260
Employed and Live in Kirkland	4677	4925
Employees living in Kirkland	39781	41185
Percentage of Employees living Kirkland that are employed in Kirkland	11.76%	11.95%
Employees in Kirkland	36637	40316
Job- Housing Balance	-3144	869

Source: U.S. Census Bureau, Longitudinal Employer-Household Dynamics (LEHD), LEHD Origin-Destination Employment Statistics (LODES) data, On-the-Map Application