## To Whom It May Concern:

Nearly every serious scholar who addresses the issue of "congestion relief" finds that expanding travel lanes provides only ephemeral relief. Because gas is cheap and a car is a large sunk cost, the largest marginal expense for using our roads is the driver's time spent in congestion. People's decisions about whether and when to take discretionary trips by car are largely made based on the expected congestion at the time of the trip. Each driver has a personal threshold for how much delay they are willing to tolerate in a given situation, when that threshold is exceeded they avoid or delay discretionary trips. In aggregate, these drivers' pain thresholds specify a demand curve.

When roads are widened, to the extent that traffic moves more smoothly at first, this decreased congestion induces more people to take discretionary trips due to the perceived cost. This continues until congestion returns to the drivers' pain thresholds (i.e. the new equilibrium point on the demand curve based on the increased supply).

Perversely, with the former "bottleneck" eliminated, the new congestion patterns are likely to extend far beyond the original locations, and will include even more slow-moving drivers in the newly-added lanes.

It is very important that our officials begin using scientific language to discuss auto issues. Just as the oil and auto interests have poisoned the discussion around climate change with antiscientific denialism, they have also spent the better part of a century propping up the pseudoscience of highway engineering. People think that widening roads relieves congestion because it's an intuitive idea and because their governments keep telling them so.

Widening i5 will hurt Portland, and is a waste of public funds and counterproductive. Please reallocate this budget to congestion pricing, tolling, active transportation infrastructure, and other projects that would advance our climate goals and improve our mobility.

Best Regards, Alan Kessler

