

## Moving the goalposts: Redefining traffic congestion

By Joe Cortright : 4-5 minutes : 10/21/2024

*IBR re-wrote the definition of congestion to make I-5 traffic look worse*

*For decades, Oregon DOT has defined traffic congestion as freeway speeds below 35 MPH.*

*Now, for the Interstate Bridge project, IBR has moved the goalposts: now any speed under 45 MPH is counted as “congested.”*

*The definition of “congested” matters because its central to claims that in the future there will be more “hours of congestion” than there are today. But by changing the yardstick to count traffic traveling at up to 45 miles per hour as “congested,” IBR has artificially inflated the problem.*

*The determination is based on an unpublished, incomplete ODOT study that was supposed to be finished a year ago. The new 45 MPH threshold contradicts WSDOT research showing freeways like I-5 maximize vehicle flow at 38.5 to 47 MPH.*



### **IBR moved the goal posts on what is counted as “congestion”**

One of the major problems the Interstate Bridge is supposed to fix is to reduce the number of hours of traffic congestion on I-5 between Portland and Vancouver. But the project’s just released Draft Supplemental Environmental Impact Statement (DSEIS) shows that the two state highway departments have inflated their estimates of current and future traffic congestion by re-defining the threshold for what constitutes congestion. In years past, Oregon has treated speeds of less than 35 miles per hour as “congested.” But now, the DSEIS raises that threshold to 45 miles per hour—automatically inflating present and predicted future congestion.

**The new definition is based on an incomplete, unpublished “White Paper.”**

The decision to move to a 45 mile per hour threshold is contained in obscure section of the the project’s DSEIS, and has a very questionable basis. The DSEIS says that the OregonDOT is “finalizing a white paper” to redefine congestion as speeds less than 45 MPH. Oddly, the DSEIS says the white paper was to be finished in fall winter 2023—a year before the issuance of the DSEIS itself. Plus, the DSEIS concedes that even that 45 MPH standard may be revised before the “white paper” is finalized. Nonetheless, even though the report isn’t final, and might be revised, and should have been done by now, the DSEIS proclaims “The IBR program has defined congestion as speeds below 45 mph.

The [Transportation Technical Report](#) for the SDEIS offers this explanation of how they’ve changed the definition of what constitutes congestion. You have to dig deep, it’s on page 498 of the 1,121 page technical report.

#### VISSIM Model Confidence and Calibration Report



The Interstate Bridge is a bottleneck on the I-5 corridor causing congestion that lasts for multiple hours during the weekday commute periods. ODOT and WSDOT define congestion as speeds below a certain threshold. ODOT has historically defined congestion as when travel speeds drop below 75% of the posted speed limits due to constrained conditions (for example, speeds slower than 45 mph in an area with a posted speed of 60 mph). In the CRC EIS analysis, congestion was defined as occurring when travel speeds were below 35 mph. ODOT is finalizing a white paper in the fall/winter of 2023 to document the definition of congestion and severe congestion. Based on early findings, which are subject to revision before the white paper is finalized, ODOT defines congestion as highway speeds below 45 mph and severe congestion defined as speeds below 35 mph. ODOT is coordinating this updated congestion definition with WSDOT. Therefore, the IBR Program has defined congestion as speeds below 45 mph.

Congestion was speeds less than 35 MPH, now we’ve decided its lets than 45 MPH

### **Washington State says speeds under 40 miles per hour are optimal for maximizing traffic flow.**

The new definition flatly contradicts the research and policy of the Washington State Department of Transportation. WSDOT points out that based on published transportation research, freeways carry the maximum amount of traffic when average speeds are between 70 percent and 85 percent of the posted speed limit. When cars travel faster, following distances increase, and the the road can actually carry fewer cars per hour than when speeds are slightly slower. According to WSDOT, these slightly slower speeds make better use of the public investment in expensive road capacity —enabling as many people and vehicles as possible to travel in a corridor.

WSDOT research and policy say that freeway throughput is maximized when speeds are 70 to 85 percent of the posted speed limit. Most segments of I-5 in North Portland have a posted speed limit of 55 miles per hour. This means the optimal speed for the standpoint of maximizing traffic throughput on I-5 would be in the range of 38.5 to 47 miles per hour.

## ***Background information on throughput***

WSDOT aims to provide and maintain a system that yields the most productivity and efficiency, rather than a system that is free flowing but where fewer vehicles can pass through a segment during peak travel periods. For this reason, WSDOT uses maximum throughput speed rather than the posted speed limit to establish a baseline definition of an efficiently operating highway segment.

On freeways, maximum throughput is achieved when vehicles travel at speeds between 70% and 85% of the posted speed limit (42-51 mph in a 60 mph zone). At maximum throughput speeds, highways are operating at peak efficiency because more vehicles are passing through the segment than at posted speeds. This

And, unlike the incomplete, unpublished “white paper” referenced by IBR for its new 45 mile per hour standard, the WSDOT analysis is contained in a technical report, now in its second edition, published for the past six years, entitled “[WSDOT's Handbook for Corridor Capacity Evaluation](#).” Using a 45 mile per hour standard for evaluating congestion in the IBR project contradicts and violates the policies laid out in WSDOT's handbook. (Unsurprisingly, there's no mention of WSDOT's Corridor Capacity Handbook in the DSEIS transportation technical report).