

Relieve Chokepoints - Examples

Congestion does not come in one size or shape and neither do solutions. Some congestion problems start as just a few too many cars trying to get through an intersection or onto a freeway. The slowdowns that begin there penalize travelers and shippers in at least two ways. First, the trips take longer because traffic is moving slower. Secondly, a stop-and-go system is inefficient and fewer travelers can get through the constriction. This double penalty was depicted by Washington State DOT as rice flowing (or not) through a funnel—pour slowly and the rice tumbles through; pour quickly and the constriction point is overwhelmed and rice clogs the funnel (37).

Eliminating these problem locations could have huge benefits. A 2004 study of the largest highway bottlenecks by the American Highway Users Alliance (38) estimated that there were more than 210 congested locations in 33 states with more than one million hours of travel delay. The top 24 most congested freeway bottlenecks each accounted for more than 10 million hours of delay; these were located in 13 different metropolitan regions. The study noted that progress had been made in the five years since the previous study with seven of the top 20 locations dropping off the worst bottlenecks list through construction improvements.

Similar studies focusing on freight bottlenecks were conducted for the Ohio DOT and expanded to national examinations of freight travel and congestion problems (39,40,41). Several metropolitan regions have also conducted analyses of public transportation service bottlenecks. All the conclusions have been similar—there are significant returns on investment from addressing the locations of most severe congestion. The solutions range from the simple, quick and cheap to the complex, lengthy and expensive. For example, about 250 miles of freeway shoulder in Minneapolis are used to allow buses to bypass stop-and-go traffic, thereby saving time and providing a much more reliable time schedule for public transportation riders. The routes that use the shoulders had a 9.2 percent ridership increase over a two-year period when the overall system ridership decreased 6.5 percent, illustrating the favorable passenger reaction to improved speed and reliability attributes (42).