

FACT SHEET:

LANE REDUCTIONS, ARE THEY SAFER AND GOOD FOR BUSINESS?

Definition

A lane reduction (also known as a “road diet” or “4-lane to 3-lane conversion”) changes the configuration of an existing 4-lane road by reallocating the available street right of way. The final configuration is a through-lane in each direction with a center turn lane. The area the fourth lane occupied becomes a sidewalk, bike lane, on-street parking or provides space for area beautification.

Discussion:

Three-lane roads function similarly to 4-lane roads, carry the same amount of traffic, and are safer. Take a minute and think about your driving experience along a 4-lane road in Anchorage. The inside lanes of 4-lane roads in business districts are frequently blocked with cars or trucks waiting to turn left. Motorists weave from lane to lane to avoid them, creating a dangerous situation that causes people to get sideswiped and rear-ended. Folks entering a 4-lane road from a side street are often t-boned because some nice person leaves them a gap with visibility blocked by the stopped traffic. If you are a pedestrian, you have a similar problem. Motorists often can’t see you because a vehicle in the other lane might block their vision. Crash statistics reveal these to be real problems that have caused property damage and injury on Spenard Road for a long time.

From experience in other cities, the change to a 3-lane road can reduce the speed limit on the road, which in turn may reduce the number and severity of vehicle-to-vehicle crashes. Pedestrians benefit because they have fewer traffic lanes to cross and because vehicle speeds are lower.

Design guidelines issued by the American Association of State Highway and Transportation Officials (AASHTO) in the “Green Book”, *A Policy on Geometric Design of Highways and Streets*, 5th Ed. 2004, no longer recommend urban four-lane roadways without medians and turning pockets.

Seattle has a lot to show us about business impacts---businesses are requesting lane reductions. According to a fall 2006 conversation with Pete Lagerwey in the Seattle Department of Transportation, Seattle has completed 18 lane reduction projects and has three more in the works. Seattle businesses go to the City and say they want a safer, more pedestrian friendly street. Experience has shown them that customers want the slower traffic, easier left and right turning and pedestrian access the lane reductions create. They find that slower, safer traffic means people have time to notice businesses and their window displays.

Anchorage 2020 Comprehensive Plan goals envision a walkable community. To reach the Anchorage 2020 goals, we need more streets that are safe for pedestrians, people with disabilities, bicyclists, and cars to navigate.



Figure 1. 4-Lane Undivided Roadway Conversion to a 3-lane Cross Section

References

General

“Road diet” article in the Wikipedia online encyclopedia. A few short paragraphs that explain the basics and cite the Seattle experience.

<http://en.wikipedia.org/>

“Road Diets: Fixing the Big Roads” by Dan Burden and Peter Lagerwey. The classic article on the benefits of lane reduction, written in layman’s language and illustrated with photos.

<http://www.walkable.org/download/rdiets.pdf>

Safety

"Urban Four-Lane Undivided To Three-Lane Roadway Conversion Guidelines" , a paper delivered at the 2003 Mid-Continent Transportation Research Symposium by Keith K. Knapp, Karen L. Giese, and Woochul Lee. Using 17 case studies, the authors collected safety improvements and operational changes from lane reduction projects across the United States. They recommend factors to be considered when contemplating a 4-to-3 lane reduction.

<http://www.ctre.iastate.edu/pubs/midcon2003/knappconversion.pdf>

A summary of the paper: http://www.ctre.iastate.edu/pubs/en_route/aug01cer/why3lanes.pdf

"The Conversion of Four Lane Undivided Urban Roadways to Three Lane Facilities", a paper by Thomas M. Welch, Iowa Department of Transportation. Comparison of crash data increase/decrease from 2-to-4 lane conversions and 4-to-3 lane conversions. No 4-to-3 Iowa conversions have ever been requested to be reversed.

http://www.ctre.iastate.edu/pubs/en_route/aug01cer/why3lanes.pdf

Good For Business

“Applying the Road Diet for Livable Communities”, by Jennifer A. Rosales. A presentation to an Institute of Traffic Engineers meeting on a study of community response to lane reduction projects in diverse North American and international cities. Presentation slides:

http://www.ite.org/meetcon/2005AM/Rosales_Tues.pdf

Video download of the presentation (scroll down to Fall 2005 Archive):

<http://www.cts.pdx.edu/seminars.htm>

Handbook for Livable Streets—Reversing Trends by Applying the “Road Diet”, a book by Rosales, will be published by the end of 2006 and available on the web:

<http://www.pbworld.com/library/fellowship/default.asp>

“The Whitehorse Driving Diet”, web page describing lane reduction projects as a key element of the City of Whitehorse’s strategy to support walking and bicycling while preserving vehicle mobility in a winter city.

<http://www.tc.gc.ca/programs/environment/UTSP/whitehorse.htm>

“The Economic Merits of Road Diets and Traffic Calming” by Dom Nozzi. A compilation of excerpts from several economists writing on the fallacies of the notion that increased driving and additional road capacity automatically provide economic benefits. <http://www.walkablestreets.com/diet.htm>