



IMPLEMENTING COMPLETE STREETS

## Complete Streets Ease Traffic Woes



*Oran Viriyincy, Flickr user Viriyincy*

### Incomplete streets breed congestion

Designing streets only for automobiles reduces opportunities for safe travel choices that can ease traffic congestion: walking, bicycling, and taking public transportation. Americans drove almost three trillion miles in 2008,<sup>1</sup> and many of those trips were very short. Half of all trips in metropolitan areas are three miles or less and 28 percent are one mile or less.<sup>2</sup> In rural areas, 30 percent of all trips are two miles or less, and yet a vast majority of these trips are by automobile.<sup>3</sup> Congestion is not solely an urban issue. Regions of all sizes have experienced increased congestion, costing the economy \$87.2 billion in hours lost to traffic jams and wasted fuel in 2007 alone.<sup>4</sup> An evaluation of auto-dependent transportation systems found that their per-capita congestion costs are significantly higher than systems that provide alternatives to driving.<sup>5</sup>

Continuing to invest in incomplete streets will prevent people from using options such as walking, bicycling, or hopping on a bus or train. Networks of Complete Streets, with pedestrian and bicycle infrastructure and improved access to and efficiency of public transportation, are needed in our communities to reduce the burden of congestion on our roadways and improve travel times for all users, regardless of whether they walk, bike, drive, or take public transportation.

## Complete Streets ease congestion

Decades of investment in expanding automobile capacity have not succeeded in keeping congestion in check in the United States.<sup>6</sup> Sixty to seventy percent of increased road capacity (additional lane-miles) on state highways in California counties was filled with new automobile traffic within just five years; at the municipal level, 90 percent was filled over the same period.<sup>7</sup> Communities are now looking for new ways to meet their residents' travel needs, and help residents avoid getting stuck in congested traffic conditions. A comprehensive, Complete Streets approach to transportation planning and design will increase transportation choices and encourage efficient use of current roadways by offering alternatives to the automobile, especially during peak travel times.

Providing travel choices – walking, bicycling, and public transportation – can reduce the demand for peak-hour travel in cars, the principal cause of daily congestion. About 44 percent of all vehicle trips in both congested areas and other areas made during the morning peak are not to work or related to a work trip. Instead, they are for shopping, going to school or the gym, or running errands. Many such trips are short and could be made by walking, bicycling, or taking transit – if the streets are complete. Parents cite traffic as a primary reason for driving children to school, yet in doing so, they account for 7 to 11 percent of non-commuting vehicle traffic during morning rush hour.<sup>8</sup>

Currently, short bicycling and walking trips account for 23 billion miles traveled annually. Shifting even a small portion of travelers out of single occupancy vehicles can have a big effect on congestion. In 2008, when national vehicle miles traveled (VMT) dropped by 3.6 percent,<sup>9</sup> congestion plunged 30 percent in the nation's 100 most congested areas.<sup>10</sup> Combined with the benefits of public transportation access and mixed-use development, modest increases in walking and bicycling could avoid 69 billion miles driven; more substantial increases in travel by walking and bicycling could avoid nearly 200 billion miles driven.<sup>11</sup> Avoiding these miles driven is a much more cost-effective option than continued expansion of highway infrastructure capacity.



Left: 200 people in 177 cars. Right: 200 people in 3 buses. *Produced by I-Sustain, Experts on Global Best Practices in Urban Sustainability* [www.i-sustain.com](http://www.i-sustain.com). Photos by On-Request Images.

## Increase road capacity

Planning and designing roads to make them safer for all users and more inviting to pedestrians, bicyclists, and transit users can increase overall capacity and efficiency without a negative impact on automobile travel. For example, improving intersections for pedestrian safety can reduce the time needed for a pedestrian crossing signal phase, keeping vehicular traffic flowing.



Left: 200 people in 1 light rail car. Right: 200 people on 200 bicycles. *Produced by I-Sustain, Experts on Global Best Practices in Urban Sustainability [www.i-sustain.com](http://www.i-sustain.com). Photos by On-Request Images.*

Paying attention to all modes in street planning can also create a more efficient system that responds better to travel demand. As the accompanying photographs show, Complete Streets can move more people while using less space. Public transportation is key to mitigating congestion because it carries more people in the same road space. Getting more productivity out of the existing road and public transportation systems is vital to reducing congestion.<sup>12</sup> Complete Streets improve access to public transportation and assist transit vehicles in moving efficiently along the road, making it an attractive and viable option to more people. Increasingly popular are the use of bus rapid transit and bus priority signal systems, which allow buses to extend green lights and shorten red lights.

**Learn more at [www.smartgrowthamerica.org/completestreets](http://www.smartgrowthamerica.org/completestreets).**

- 1 Federal Highway Administration. (2008). "Traffic Volume Trends" <http://www.fhwa.dot.gov/ohim/tvtw/08dectvt/index.cfm>.
- 2 Federal Highway Administration. (2002). "National Household Travel Survey: Daily Travel Quick Facts."
- 3 Federal Highway Administration. (2001). "National Household Travel Survey, 2001."
- 4 Schrank, D. and Lomax, T. (2009). *Urban Mobility Report*. Texas Transportation Institute.
- 5 Litman, T. (2009). *Smart Congestion Reductions: Evaluating Highway Expansion Benefits*. Victoria Transport Policy Institute.
- 6 Schrank, D. and Lomax, T. (2009). *Urban Mobility Report*. Texas Transportation Institute.
- 7 Hansen, M. and Huang, Y. (1997). "Road Supply and Traffic in California Urban Areas." *Transportation Research A*, Vol. 31, No. 3, 1997, pp. 205-218.
- 8 U.S. Department of Transportation. (2007). *Congestion: Who is Traveling in the Peak?* [http://nhts.ornl.gov/briefs/Congestion\\_percent20- percent20Peak\\_percent20Travelers.pdf](http://nhts.ornl.gov/briefs/Congestion_percent20- percent20Peak_percent20Travelers.pdf).
- 9 Federal Highway Administration. (2008). "Traffic Volume Trends" <http://www.fhwa.dot.gov/ohim/tvtw/08dectvt/index.cfm>.
- 10 Bak, J. (2008). "INRIX National Traffic Scorecard Reveals Startling 30 Percent Decrease in Traffic Congestion in 2008" <http://www.inrix.com/pressrelease.asp?ID=65>. INRIX.
- 11 Gotschi, T. and Mills, K. (2008). "Active Transportation for America." Rails-to-Trails Conservancy.
- 12 Schrank, D. and Lomax, T. (2009). *Urban Mobility Report*. Texas Transportation Institute.