Transportation Benefits of Walking

"Walking is incredibly efficient. Nearly a third of all car trips taken in this country are a mile or less in length—the equivalent of a 20-minute walk. Moving those trips out of cars and onto sidewalks would solve many of our transportation conundrums."

— Samuel I. Schwartz, P.E.
President & CEO, Sam Schwartz Engineering

Problem Overview

- In 2010, road congestion caused 4.8 billion hours of travel delay, wasted 1.9 billion gallons of fuel, and resulted in total congestion costs of $115 billion in 439 U.S. urban areas.[1]
- American Society of Civil Engineers estimates it will cost $5 trillion to repair our nation's crumbling infrastructure—not counting the cost of repairing[2] the minor streets, curbs, walks, and pipes that serve our homes.[3]
- The Congressional Budget Office predicts that the U.S. Highway Trust Fund, which helps fund the federal transportation budget, will reach zero by 2014.[4] In 2011, highway "user fees" (gasoline and other direct auto taxes) paid only about half the cost of building and maintaining the nation's network of highways, roads, and streets.[5]
- The "fundamental law of highway congestion," suggested by Anthony Downs in 1962 and affirmed by further research, concludes that building or widening roads creates a proportional increase in driving.[6,7] Expanding roads potentially increases air pollution, noise pollution, collisions, and adverse health outcomes.

Trip Distance	% of Trips	Walk Time	Walk / Bike %
< 1/2 mi	14%	10 min	46%
< 1 mi	28%	20 min	35%
< 2 mi.	40%	40 min	26%

Table 1: Analysis of Trips Taken in the United States by Distance, Percentage, Time, and Mode. *Source: FHWA 2006-2009 National Household Travel*

Walking as a Solution

- Walking can carry a significant portion of the transportation load: Trips less than 2 miles represent about 40% of all trips.[8]
- Walking is critical to a functioning transportation system and can provide many benefits, including:
  - » Walking infrastructure improvements can help create more compact, mixed, multi-modal, communities where residents drive less and use other travel modes.[9,10]
  - » Walking can help reduce traffic and parking congestion, improve safety, conserve energy conservation, and reduce pollution.[11]
  - » Walking infrastructure improvements can improve vehicular access. Most motorized trips involve walking or cycling links to reach transit or to travel between parked cars and destinations. Parking lots, airports, and commercial centers are all pedestrian environments.[12]
- Americans are moving away from dependency on cars:
  - » The National Household Travel Survey (NHTS) revealed that per-capita U.S. vehicle travel use peaked in 2001, total U.S. vehicle miles traveled (VMT) peaked in 2007, and total fuel consumption peaked in 2006. U.S. vehicle travel has leveled off and decreased despite continued population and economic growth. By 2010, it was about 10% below the long-term trend projections.[13]

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5. Dutzik, Tony; Davis, Benjamin. Do Road Pay for Themselves? US PIRG. 2011. www.uspirg.org/sites/pirg/files/reports/Do-Roads-Pay-for-Themselves.pdf
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7. Kockelman, Kara et al. Research on relationships between transportation infrastructure and increase in vehicle miles traveled: the effects of highway capacity expansion on land and development. Center for Transportation Research, The University of Texas at Austin. 1999. http://www.ce.utexas.edu/prof/kockelman/public_html/EPAFinalReport.pdf
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» Fewer Americans are getting driver's licenses. Only 22% of licensed drivers today are younger than 30, a significant decrease from 33% in 1983. Those under 40 accounted for 50% of drivers in 1983 and now account for less than 40% of drivers. Between 1983 and 2008, the percentage of 18-year-olds with driver's licenses fell from 80% to 65%, the percentage of 17-year-olds with driver's licenses decreased from 69% to 50%, and the percentage of 16-year-olds with driver's licenses decreased from 46% to 31%.[14]

» Nationally 11% of transportation trips are walking trips[15] and 15%–30% of all urban trips involve at least one walking link.[16]

Potential Benefits	Improved Walking Conditions	Increased Walking
	• Improved user convenience • Improved accessibility • Option value • Increased local property values	• User enjoyment • Improved public health • Increased community cohesion
	Reduced Car Use	**More Walkable Communities**
	• Reduced traffic congestion • Reduced road and parking costs • Consumer savings • Fewer traffic crashes • Energy conservation • Reduced air and noise pollution	• Improved accessibility • Lower transportation costs • Reduced sprawl costs • Habitat preservation • More livable communities

Table 2: Nonmotorized Transportation Benefits. *Source: Todd Litman*

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11. Litman, Todd. Evaluating Non-Motorized Transport Benefits and Costs. Victoria Transport Policy Institute. 2011. www.vtpi.org/nmt-tdm.pdf
12. Ibid.
13. Litman, Todd. The Future Isn't What It Used to Be – Changing Trends and Their Implications for Transport Planning. Victoria Transport Policy Institute. May 2012. http://www.vtpi.org/future.pdf
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