



Complete Streets

Why America Needs the Safe Streets Act of 2013

By Kevin DeGood December 10, 2013

*If we want safety, comfort, speed and economy in travel we must build it into our roads.
We must build roads that are literally, not figuratively, motor roads.¹*

– Norman Bel Geddes

When Norman Bel Geddes wrote these words in *Magic Motorways*, it was on the heels of the wildly successful General Motors Pavilion at the 1939 New York City World's Fair. There was little chance he could have understood just how far the notion of designing roadways and highways for the speed and comfort of automobiles would extend. Successive generations of engineers took Geddes's concept to heart, delivering designs that improved speed and privileged motor vehicles over all other users.

Beginning with the Eisenhower administration and the passage of the Interstate Highway Act of 1956, the federal government invested heavily in highway construction. Yet the focus on speed extended well beyond the interstate system. State departments of transportation and city planners embraced the philosophy that roadway designs should optimize travel speed regardless of context.

The resulting roadway and highway network helped fuel decades of unparalleled economic growth.² The new system, however, came with significant costs. Metropolitan regions added tens of millions of housing units that lacked access to public transportation, sidewalks, and other pedestrian amenities.³ Even today, almost one-third of Americans live in neighborhoods without sidewalks.⁴ Finding a safe and convenient place to walk, bike, or access public transportation can be a challenge.

The Safe Streets Act of 2013, introduced by Reps. Doris Matsui (D-CA) and David Joyce (R-OH), addresses this unintended consequence of our transportation policy by requiring states and metro regions to design their roadways to safely accommodate all system



No option but to walk in the street.

Source: Photo courtesy of Cheryl Cort, Coalition for Smarter Growth

users, regardless of age or ability level. Americans want transportation alternatives, but inadequate infrastructure and poor design present significant barriers.

Even with significant physical barriers, poor design, and gaps in infrastructure, walking is second only to driving for the share of total trips taken each year. The most recent data from the National Household Travel Survey show that Americans make more than 40 billion trips by walking, accounting for 10.9 percent of all trips.⁵ For trips from one-half to two miles, the share made by walking jumps to more than 20 percent.⁶

Unfortunately, the lack of adequate infrastructure for walking, biking, and using public transportation can lead to tragic outcomes. National Highway Traffic Safety Administration data show that in 2011, 4,432 pedestrians and 677 bicyclists were killed in the United States.⁷ Nationally, more than 40 percent of pedestrian fatalities occur where no crosswalk is available.⁸ For too many Americans, our neighborhoods and roadway networks are too dangerous as a result of their singular focus on automotive travel.

Walking, biking, and using public transportation are not merely a matter of preference for a select few. Complete Streets and high-quality transit are essential elements of an equitable transportation system. Millions of Americans rely on affordable and accessible alternatives to driving. Nationwide, 20 percent of households living in poverty lack access to a car. The percentages of poor African American and Latino households without access to a car are even higher at 33 and 25 percent, respectively.⁹ For these families, walking, biking, and public transportation are the only way to meet their daily needs.

When weighing the benefits and tradeoffs of competing transportation investments, we often forget that people who ride public transportation are pedestrians at the beginning and end of their journeys. Purchasing additional buses or expanding hours of service is of little help if people cannot reach the system safely. In effect, Complete Streets facilitate access to the public transportation system—multiplying the total number of destinations an individual may affordably and safely reach without a car.



Transit stop with no pedestrian access.

Source: Photo courtesy of the National Complete Streets Coalition



Transit stop with pedestrian infrastructure.

Source: Photo courtesy of the National Complete Streets Coalition

Complete Streets are safe and accessible for all users

A well-balanced transportation system is one that provides individuals with multiple options for meeting their daily mobility needs.

Complete Streets are designed to be safe and accommodating for all users, including pedestrians, bicyclists, transit riders, children, the elderly, individuals with disabilities, drivers, and freight carriers.

Complete Streets designs recognize that context matters and that not all roads serve the same purpose. Our highways facilitate interstate commerce and long-distance trips, while our urban arterials and local streets connect people to their destinations—many of them across very short distances. By including pedestrian and bicycle infrastructure and supportive design elements, Complete Streets allow people to match their mode of travel—walking, biking, transit, or driving—with the trip’s purpose and distance.

A trip to the grocery store, for example, will almost always involve driving, while meeting a friend for dinner in the neighborhood could involve walking or public transportation. With Complete Streets, you have a choice. Without adequate pedestrian infrastructure, people are forced to drive for all trips or take unacceptable risks to get where they need to go.

Complete Streets enable seniors and people with disabilities to travel independently

As people age, they increasingly experience physical changes that can reduce or eliminate their ability to drive. In communities with little to no public transportation and without a built environment that includes Complete Streets infrastructure, seniors become increasingly isolated.¹⁰ In the coming years, the U.S. population will age rapidly. In fact, over the next 20 years, the senior population will grow four times faster than the overall U.S. population. By 2030, nearly one in five Americans will be age 65 or older.¹¹ By investing in transportation options now, communities of all sizes will be able to better accommodate the needs of seniors.

With aging also comes increased levels of disability. According to the 2010 Census data, 38.3 million people, or 12.6 percent of the U.S. population, have a disability characterized as severe.¹² The rate of severe disability is almost three times higher among seniors than the population as a whole. Complete Streets can mean the difference between remaining independently mobile and relying entirely on social service transportation.



Disability access on one side but not the other.

Source: Photo courtesy of the National Complete Streets Coalition

In 1990, the Americans with Disabilities Act, or ADA, established mobility as a basic civil right. This major advancement has helped millions of people lead full lives. Under the law, local public transportation operators must provide door-to-door paratransit service to qualifying seniors and individuals with disabilities. Paratransit service, however, is significantly more expensive than standard fixed-route service. The average cost of a paratransit trip is \$29.30 compared to \$8.15 for a fixed-route trip.¹³ Many paratransit-eligible riders could also take standard public transportation for many of their trips with some training and the right supportive infrastructure.

A recent King County Metro study, the public transportation provider for the Seattle region, initiated a program to help train more than 300 paratransit-eligible residents to use the traditional fixed-route system at a cost of \$57,000. King County Metro estimated the program helped them save \$1.3 million in paratransit costs.¹⁴ But no matter how much training someone receives, if the community lacks sidewalks, safe crosswalks, and ADA-compliant curb cuts, people cannot make the switch. In short, Complete Streets remove barriers to independent travel.

Biking and walking improve health and reduce greenhouse gas and other harmful emissions

For most of the 19th and early 20th century, government agencies and public health professionals worked to reduce the spread of communicable diseases. Significant investments in water treatment, combined with zoning ordinances that separated residential communities from heavily polluting industries, substantially improved public health—in addition to advances such as immunization and antibiotics. Today, the most costly and challenging public health problems stem from chronic illnesses such as obesity, diabetes, and heart disease.

Centers for Disease Control and Prevention research shows that half of all Americans fail to engage in enough physical activity each week.¹⁵ More than one-third of American adults are obese, resulting in \$147 billion in direct medical costs in 2008 dollars.¹⁶ A sedentary lifestyle contributes to as many as 250,000 preventable deaths each year.¹⁷

Planners and health professionals are increasingly focusing on the built environment, which combines infrastructure and land use, and its effect on physical activity. Research shows that the built environment can facilitate or constrain activity levels.¹⁸ The connection is important as even modest increases in physical activity can have profound health benefits. In fact, if just 10 percent of adults walked on a regular basis, it would save more than \$5 billion in costs associated with heart disease each year.¹⁹

Walking and biking help reduce harmful greenhouse gas and other transportation-related emissions. A modest increase of only 4 percent in the share of trips made by biking and walking would reduce the annual vehicle miles traveled by 45 billion, eliminating 20 million tons of carbon-dioxide emissions. Taken together, these benefits have a monetary value of more than \$6 billion.²⁰

Complete Streets facilitate public transportation use, which can increase physical activity levels. People who use public transportation walk a total of 19 minutes to and from transit stops.²¹ Approximately 30 percent of transit riders receive more than 30 minutes of physical activity each day.²² Using public transportation provides community-wide emissions benefits as well. Federal government research shows that public transportation produces less than half of the greenhouse gas emissions per passenger mile when compared to cars and light trucks.²³

The federal government is critical to promoting safety, public health, and environmental sustainability.

Complete Streets are a highly cost-effective means of achieving national transportation, public health, and environmental goals. Pedestrian and bicycle supportive infrastructure and design provide affordable and accessible alternatives to driving, allow people to exercise while they reach their destinations safely, and reduce emissions and other transportation-related pollutants.

In June, Reps. Matsui and Joyce introduced H.R. 2468: the Safe Streets Act of 2013. This legislation would require states and metropolitan planning organizations, or MPOs, to enact laws or statements of policy that require that surface transportation projects safely accommodate all users. At a minimum, Complete Streets design principals would apply to projects constructed using federal funds and could apply to all projects.

The bill would not require Complete Streets design elements on interstates and other highways that explicitly prohibit the presence of anyone not in a vehicle. Moreover, the bill provides states and MPOs with the flexibility to set their own design standards, ensuring that the application of Complete Streets principals reflects the unique characteristics and preferences of each state and region.



Pedestrians walking without protection compared to with a dedicated crossing facility.

Source: Photo courtesy of the New York City Department of Transportation



A model of a Complete Street with dedicated accommodations for drivers, transit, pedestrians, and cyclists.

Source: Rendering courtesy of the National Association of City Transportation Officials

In a time of fiscal austerity, the Safe Streets Act is a powerful tool for advancing national goals without needing to raise new revenue. In addition, this bill presents an innovative solution to an imbalance in the federal surface transportation program. Currently, funding for bicycle and pedestrian infrastructure projects represents slightly more than 2 percent of federal-aid highway funds.²⁴ And even within this small pot of money, bike and pedestrian infrastructure must compete against other projects. At the same time, walking represents more than 10 percent of all trips taken in a year.²⁵ The scale of federal investment does not match the demand for pedestrian and bicycle infrastructure. The Safe Streets Act would infuse design standards into projects receiving federal money, effectively multiplying the benefits for all users and addressing the current imbalance.

FIGURE 1
A model of a Complete Street



Extra-wide sidewalks accommodate more pedestrians, reduce road noise, and allow for street trees.

Dedicated bike lane separated from traffic by parked cars improves safety.

Dedicated transit lanes increase system efficiency and reduce travel times.

Pedestrian islands provide safe harbor.

Americans with Disabilities Act-compliant curb designs allow people of all ages and ability levels to easily cross.

Source: Rendering courtesy of the National Association of City Transportation Officials

Charlotte, North Carolina A leader in new street designs

Charlotte, North Carolina, is one of the fastest-growing cities in the United States. From 1980 to 2010, Charlotte more than doubled its population from 315,000 to 730,000 residents.²⁶ Over the next 25 years, the city expects to add another 300,000 residents, which is the equivalent of adding the entire city of St. Louis.²⁷ This rapid population and economic growth increased the need for a better transportation network and transportation investments that would provide more and better mobility options.

In 2006, city leaders reviewed their transportation policies to determine what could be improved and to provide a framework for prioritizing investments moving forward. The effort produced the Transportation Action Plan, or TAP, the city's first-ever comprehensive transportation plan intended to provide a "balanced and multi-modal transportation system that serves the mobility needs of all segments of the population, accommodates all travel modes, and promotes community economic development needs."²⁸

Prior to the development of the TAP, the city recognized that its street and network design standards—including those applied to private subdivisions—limited the travel options of local residents. About half of Charlotte's approximately 600 miles of thoroughfares and 3,000 miles of local streets reflect more than 50 years of building auto-only oriented streets.²⁹ Similar to other cities that grew rapidly after the 1940s, much of the roadway network lacked even the most basic accommodations for pedestrians and cyclists. Even in 2012, for example, 40 percent of thoroughfares and 70 percent of local streets still lacked sidewalks.³⁰ Moreover, half of all signalized intersections had poor pedestrian level of service,³¹ and 95 percent had poor bicycle level of service.³²

A Federal Highway Administration report based on journey-to-work data from the 2000 Census



A Complete Street in Charlotte, North Carolina.

Source: Photo courtesy of the National Complete Streets Coalition

showed that the Charlotte area had very low levels of walking and public transportation use compared to other major metro regions.³³

In October 2007, the city adopted a set of policies called the Urban Street Design Guidelines, or USDG, which established how Charlotte's streets would be designed as Complete Streets and, importantly, that the street network would become more dense. These guidelines included a new classification system to better account for the range and context of city streets from local and residential to major and commercial.³⁴

According to Danny Pleasant, director of the Charlotte Department of Transportation, the Complete Streets policies help Charlotte create infrastructure with "long-lasting value" through design standards that improve "capacity, mobility, safety, and convenience."³⁵ Since adopting the guidelines, the city and the county have added 160 miles of bike lanes and bikeways.³⁶ In addition, the city has completed 11 thoroughfare projects, rebuilt 12 intersections, and is undertaking more than 100 sidewalk projects.³⁷

In 2010, the city also incorporated key aspects of the USDG policies into ordinance, thereby ensuring that privately built streets are built as part of a Complete Streets network.

Charlotte has implemented a street design philosophy that will continuously improve multimodal travel choices. This philosophy is in step with residents' expectations: A 2012 survey of county residents found that 80 percent approve of designing and building roadways to accommodate all users.³⁸ Furthermore, a review of construction costs for a variety of street designs shows that the cost of including Complete Streets elements such as sidewalks and bike lanes is only 2 percent to 8 percent more than what it would cost to build a roadway without these elements.³⁹ By adopting policies, updating ordinances, and changing the way street projects are designed, Charlotte is committed to creating a better street network for all users and one that provides long-term value to the community—and in so doing, creating an example for what American streets can be.

Conclusion

Complete Streets are an essential element of a balanced transportation system, providing individuals with options for meeting their daily mobility needs through designs that are safe and accommodating for all users regardless of age, income, or ability level.

In effect, Complete Streets represent a new social compact in transportation policy based on universal access through design. Transportation infrastructure should, to the greatest extent possible, facilitate access and improve mobility for all system users. Focusing solely on vehicle speeds creates unnecessary structural barriers that Complete Streets can help solve.

The Safe Streets Act represents a powerful and cost-effective step toward a more accessible future.

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