

## Complete Streets: Fact-Based Resources

Updated June 28, 2016

### **Basic Definitions & Background**

#### **Complete Streets: Definition**

Michigan Public Act 135 defines complete streets as "...roadways planned, designed, and constructed to provide appropriate access to all legal users in a manner that promotes safe and efficient movement of people and goods whether by car, truck, transit, assistive device, foot, or bicycle."

[https://www.michigan.gov/documents/mdot/MDOT\\_CS\\_Policy\\_390790\\_7.pdf](https://www.michigan.gov/documents/mdot/MDOT_CS_Policy_390790_7.pdf)

#### **Complete Streets is "Context Sensitive"**

Context Sensitive Solutions (CSS) is a collaborative interdisciplinary approach to developing transportation projects. Context Sensitivity takes into account community interests and gathers input from stakeholders. The aim is projects that fit their surroundings while effectively serving transportation needs. In practice, wider shoulders, sidewalks, bike lanes, traffic signals, etc., are considered where they make sense to "complete the street," not "everywhere."

[http://www.michigan.gov/mdot/0,4616,7-151-9621\\_41446---,00.html](http://www.michigan.gov/mdot/0,4616,7-151-9621_41446---,00.html)

#### **KATS' Complete Streets Policy does not apply to all projects in Kalamazoo County**

At the date it was adopted, the CSP only applied to improvement (e.g., new roadways, reconstructed bridges and Federal Transit Administration facility improvements, etc.--not maintenance), projects within the KATS MPO's central "urbanized boundaries." By definition, most rural areas are outside this boundary and do not need to comply with the CSP.

<https://katsmpo.files.wordpress.com/2014/09/kats-csp-fact-sheet-final-140915.pdf>

#### **Engineers recommend a multi-modal approach -- AASHTO**

"All roads, streets, and highways, except those where bicyclists are legally prohibited, should be designed and constructed under the assumption that they will be used by bicyclists. Therefore, bicyclists' needs should be addressed in all phases of transportation planning, design, construction, maintenance and operations. All modes of transportation, including bicycles, should be jointly integrated into plans and projects at an early stage so that they function together effectively."

<https://katsmpo.files.wordpress.com/2014/09/kats-csp-fact-sheet-final-140915.pdf>

### **Safety Related**

#### **Bicyclist and pedestrian fatality proportions – The Greenway Collaborative, Inc.**

"...38,000 people each year ... die on our nation's roads, 15% of which are pedestrians and bicyclists. In Michigan, 17% of the fatal and incapacitating injuries are people who were walking or riding a bike. In some Michigan cities, people on foot and bike account for 30 to 40% of the total number of traffic fatalities."

<http://greenwaycollab.com/discussion/>

#### **Estimating the Costs of Unintentional (Motor Vehicle) Injuries – National Safety Council**

From the section entitled Costs of Motor Vehicle Injuries: Average Economic Cost per Death, Injury, or Crash, 2012 -- Death \$1,410,000; Nonfatal Disabling Injury \$78,900; Property Damage Crash (including nondisabling injuries) \$8,900

[http://www.nsc.org/news\\_resources/injury\\_and\\_death\\_statistics/Pages/EstimatingtheCostsofUnintentionalInjuries.aspx](http://www.nsc.org/news_resources/injury_and_death_statistics/Pages/EstimatingtheCostsofUnintentionalInjuries.aspx)

**Evaluation of the Safety Benefits of Paved Shoulders** – Center for Transportation Research and Education

Extensive study of crash data found “effect due to treatment is 8.9% immediately after implementation of shoulders; then crashes decrease at a higher rate than segments with no paved shoulders; at 10 years, decrease is 15.9%.”

[http://www.intrans.iastate.edu/reports/updated\\_paved\\_shoulders\\_w\\_cvr1.pdf](http://www.intrans.iastate.edu/reports/updated_paved_shoulders_w_cvr1.pdf)

**Michigan bicyclist deaths hit new high even before Kalamazoo tragedy** – Mlive

“An MLive analysis of Michigan State Police accident data shows fatalities involving bicyclists surged 57 percent in 2015, and the 33 deaths caused by the accidents mark the heaviest death toll in at least 18 years.”

<http://www.mlive.com/news/index.ssf/2016/06/bicyclists.html>

**Reasons for Highway Shoulders** – Oregon Department of Transportation

Paved shoulders benefit many types of highway users (drawn from AASHTO).

<http://www.walkable.org/library/Documents/twentytwobenefitsofbikelanes.pdf>

**Safety Benefits of Paved Shoulders** – Midwest Transportation Consortium

“Single vehicle run-off-road (SVROR) crashes are the largest type of fatal passenger vehicle crash in the US (NCHRP 500 2003). In Iowa, ROR crashes accounted for 36% of rural crashes and 9% of total crashes in 2006. Run-off-road crashes accounted for more than 61.8% of rural fatal crashes and 32.6% of total fatal crashes in Iowa in 2006. ... At 10 years, sites with paved shoulders have 13.5% fewer ROR crashes than control sites. ... At 10 years, SVROR crashes are 16.4% lower for sections with paved shoulders than for sites with no treatment.”

[http://www.intrans.iastate.edu/reports/updated\\_paved\\_shoulders\\_w\\_cvr1.pdf](http://www.intrans.iastate.edu/reports/updated_paved_shoulders_w_cvr1.pdf)

**Safety Benefits of Walkways, Sidewalks, and Paved Shoulders** – FHWA Safety Program

Extensive statistics; references for data cited. Sample:

“Paved shoulders provide numerous safety benefits for motorists and pedestrians. Installing or widening paved shoulders has the following benefits:

- Reduces numerous crash types including the following:
  - Head on crashes (15%–75% reported reduction)
  - Sideswipe crashes (15%–41%)
  - Fixed object crashes (29%–49%)
  - Pedestrian (walking along roadway) crashes (71%)”

[http://safety.fhwa.dot.gov/ped\\_bike/tools\\_solve/walkways\\_trifold/](http://safety.fhwa.dot.gov/ped_bike/tools_solve/walkways_trifold/)

**Time of Return Calculation Spreadsheet** – Michigan Department of Transportation

States a crash reduction factor of “5% per foot widened each side” for widened shoulders; 85% pedestrian crash reduction factor for “Sidewalk for Pedestrians;” 50% bicycle crash reduction factor for “Bicycle Lanes.”

[http://www.michigan.gov/mdot/0,4616,7-151-9625\\_25885\\_40552---,00.html](http://www.michigan.gov/mdot/0,4616,7-151-9625_25885_40552---,00.html)

**Traveler Response to Transportation System Changes, Pedestrian and Bicycle Facilities** –

Transportation Research Board

“The U.S. Department of Transportation has declared that walking and bicycling should be considered ‘as equals with other transportation modes’ and adopted ‘complete streets’ principles” (p. 16-1). “[T]he goals and objectives for pedestrian and bicycle facilities are very diverse. The corresponding diversity of associated benefits leads to a situation where benefit analysis based on one objective alone, such as energy conservation, will lead to a severe understatement of advantage to the public welfare” (p.16-4).

[http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp\\_rpt\\_95c16.pdf](http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rpt_95c16.pdf)

## **Place Making Implications**

### **2012-2017 Michigan Tourism Strategic Plan (page 3) – Michigan State University**

States bike tourism has been identified as one of most prevalent current/emerging niches in Michigan.  
[http://tourismpplan.anr.msu.edu/docs/Progress\\_2013-14.pdf](http://tourismpplan.anr.msu.edu/docs/Progress_2013-14.pdf)

### **America needs Complete Streets – ITE Journal**

“An aging population; rising fuel costs; congestion, health, and environmental concerns; and changing consumer preferences are all increasing demand for walking, cycling, and public transit.. These trends indicate that an integrated multimodal transportation system is required if we are to meet future travel demands.” [footnote numbering omitted in quoted material]

<http://www.aarp.org/content/dam/aarp/livable-communities/act/transportation/america-needs-complete-streets-2011-aarp.pdf>

### **Complete Streets For All Travelers - National Association of Realtors**

“...preliminary results show that each additional point on the Walk Score scale correlates with increased housing values on the order of \$1,000 or more, depending on the regional market.”

<http://www.realtor.org/articles/complete-streets-for-all-travelers>

### **Economic Benefits of Bicycling – MDOT**

“This Community and Economic Benefits of Bicycling in Michigan report ... finds that bicycling provides an estimated \$668 million per year in economic benefit to Michigan's economy, including employment, retail revenue, tourism expenditure, and increased health and productivity.”

[http://www.michigan.gov/mdot/0,4616,7-151-9615\\_11223\\_64797\\_69435---,00.html](http://www.michigan.gov/mdot/0,4616,7-151-9615_11223_64797_69435---,00.html)

### **Like Millennials, More Older Americans Steering Away From Driving - NPR**

“A growing number of Americans are driving less and getting rid of their cars.

“The trend is gaining traction in middle-aged adults, to the point where fewer of them are even bothering to get or renew their driver's licenses, but it's been prominent among younger adults — millennials — for years now.”

<http://www.npr.org/2016/02/11/466178523/like-millennials-more-older-americans-steering-away-from-driving>

### **Surprise! People 60-79 Are Leading the Bike Boom – Streetsblog USA**

“...the rise in biking among people ages 60-79 accounted for 37 percent of the total net nationwide increase in bike trips. ... Seniors that live in walkable, bikeable communities without cars will enjoy a much higher standard of living than those that live in communities where cars are a necessity for basic existence.”

<http://usa.streetsblog.org/2014/06/20/surprise-people-aged-60-79-are-leading-the-biking-boom/>

### **Young talent continues to flee Michigan – Crain's Detroit Business**

“According to the U.S. Census, Michigan had a net domestic migration loss of 38,911 people in the one-year period from July 2014 to July 2015. Translation: That's how many more people left for other states than moved in. That's the sixth highest population loss in the nation.

“And just as notably, Michigan continues to lose a particularly valuable human resource: young people with college degrees.”

<http://www.craindetroit.com/article/20160120/NEWS/160119783/young-talent-continues-to-flee-michigan>

This edition compiled by Paul Selden; links change without notice.