

# Exploring the Association Between Complete Streets Policies And Taking Public Transit to Work

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**This brief summarizes the results of a study to examine the association between Complete Streets policies at the county and municipal levels in the United States and taking public transit to work. This review found that having a Complete Streets policy was associated with significantly higher rates of taking public transit at both the county and municipal levels.**

Historically, most streets have been designed to emphasize capacity, safety, and efficiency, focused primarily on cars and referred to as “car-centric” design (Figure 1). Complete Streets, on the other hand, are designed for all users and modes.<sup>1</sup> Complete Streets is a transportation and design concept in which streets are “designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists and transit riders of all ages and abilities”<sup>2</sup> (Figure 2). Other terms that are commonly used to describe Complete Streets are “Livable Streets” or “Green Streets.” Depending on the jurisdiction, a Complete Streets policy directs staff in local departments of planning, transportation (including

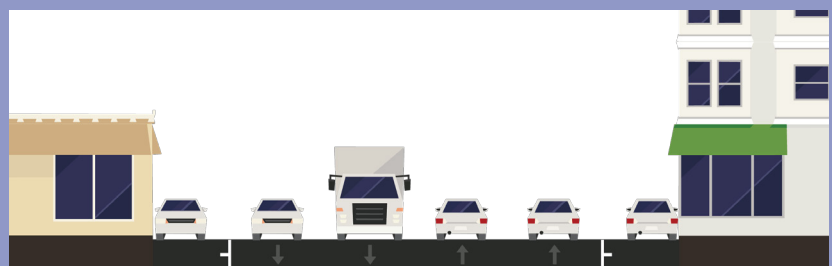
transportation planners and engineers), and/or public works to design, operate, construct, and maintain streets that are safe for every user.

In addition to the roadway itself, Complete Streets designs may include infrastructure such as sidewalks, bicycle lanes or signed routes, bicycle parking, public transit facilities and bus stops, road diets (reducing travel lanes on a road to reclaim space for pedestrians and/or bicyclists), traffic calming measures (curb extensions, roundabouts, medians, traffic islands),

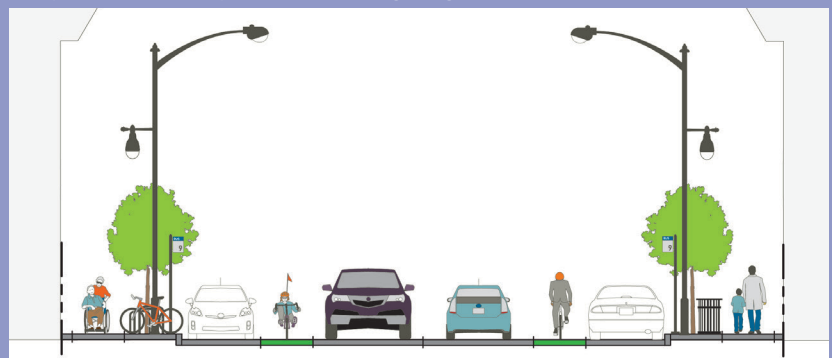
crosswalks, curb ramps, and street furniture (benches).

Besides creating safe access, Complete Streets also support economic growth by increasing accessibility to destinations and improving the environment by increasing air quality. They foster independence by creating opportunities for people to travel who may not be able to drive (elderly, children, disabled, economically disadvantaged), and are considered fiscally responsible by reducing the potential of costly street retrofits in the future.<sup>3</sup>

Car-centric Designed Roadway (Figure 1)



Example of Urban Complete Streets Design (Figure 2)



# Complete Streets and Public Transit Use

From a public health perspective, Complete Streets can play an important role in promoting healthy behaviors by increasing trips made by foot, bicycle, and transit.<sup>4</sup> Complete Streets can reduce injuries and deaths from

motor vehicle crashes, especially those that involve pedestrians and bicyclists.<sup>5</sup> Streets that are convenient and safe for walking and biking make it easier for people to incorporate physical activity in their day.<sup>4</sup> In fact, people who use

public transit are likely to spend a median of 19 minutes a day walking to and from transit thus helping them work towards achieving the recommended 30 minutes of daily physical activity.<sup>6,7</sup>

## Study Methods

This brief summarizes the results of a study to examine the association between Complete Streets policies at the county and municipal levels in the United States and taking public transit to work.



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Complete Streets policies in existence as of May 2015 were compiled through Internet research by researchers at the Institute for Health Research and Policy at the University of Illinois at Chicago. Policies were verified

with each community and through secondary sources including the National Complete Streets Coalition's Policy Atlas.<sup>8</sup> Complete Streets "policy" was defined broadly to include Complete Streets resolutions, ordinances, policies, or executive orders/directives as well as design guidelines, planning documents, or street standards specifically including a section on Complete Streets.

This analysis examined the association between taking public transit to work and Complete Streets policy existence for all 3,041 counties and consolidated cities (collectively referred to as "counties" below) and, separately, for 20,122 out of 20,733 municipalities nationwide. For the purposes of this analysis, 649 municipalities (3.1%), 67 counties (2.2%), and 31 states (62%) nationwide had a Complete Streets policy

as of May 2015. To assess the association between having a Complete Streets policy and rates of public transit to work,\* the policy data were linked with county and municipal level data, respectively, from the American Community Survey (ACS) 2010-2014 5-year estimates.<sup>9</sup> In order to examine population-level associations using the jurisdiction-level data, analyses were weighted by population size. Multivariate regression models were computed to assess the association between rates of public transit use and having a Complete Streets policy, controlling for population size, median household income, median age, and presence of a higher-level (state/county) Complete Streets policy; municipal level models also controlled for region. All models employed robust standard errors and county models were clustered on state and municipal models were clustered on county.

\* Bus or trolley bus, streetcar or trolley car, subway or elevated, railroad, or by ferryboat were counted as public transportation responses from the ACS question about commute mode.

## What Did We Find?

**H**aving a Complete Streets policy was associated with significantly higher rates of public transit to work after adjusting for community characteristics.

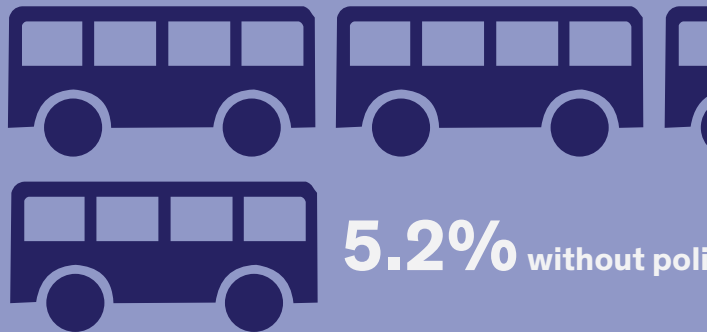
At the municipal level, rates of taking public transit to work were 11.3% in municipalities with Complete Streets policies as compared to only 5.2% in municipalities without Complete Streets policies.

At the county level, rates of taking public transit to work were 6.9% in counties with Complete Streets policies as compared to only 2.5% in counties without Complete Streets policies.

Workers in **municipalities** with Complete Streets policies are over

**2X**

more likely to commute by public transit than workers in **municipalities** without a policy



**11.3%** with policy

**5.2%** without policy

Workers in **counties** with Complete Streets policies are almost

**3X**

more likely to commute by public transit than workers in **counties** without a policy



**6.9%** with policy

**2.5%** without policy



## Conclusions

**Complete Streets policies are associated with higher rates of taking public transit to work. Although this study did not examine whether the policies themselves caused higher rates of taking public transit to work, it suggests that communities with such policies are also likely to see higher public transit usage.**

Future research should explore rates of public transit usage both pre- and post-Complete Streets policy adoption to assess whether the policy itself leads to higher rates of public transit usage or if communities that adopt such policies are also those that are more likely to have higher rates of public transit usage due to additional transportation policies and programs in the community. However, additional qualitative research conducted by the study team revealed that few jurisdictions have the monetary or staff resources or systems in place for measuring the impact of Complete Streets policies on public transit use (or biking or walking), so this is an area in need of future attention. Continued research on Complete Streets is important because Complete Streets can play an important role in promoting healthy behaviors by increasing trips made by foot, bicycle, and transit.<sup>4</sup>

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## Peer Review Provided by:

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