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Title

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Permalink

<https://escholarship.org/uc/item/1kx197r0>

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Publication Date

2026-06-01

DOI

10.17610/T6589S

June 2026

Minimum Parking Requirements Fuel Driving



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High levels of driving can impose significant social costs, including traffic injuries and deaths, congestion, air and noise pollution, and health risks linked to sedentary lifestyles. Minimum parking requirements amplify these impacts by encouraging car ownership and driving — and discouraging other ways of moving around. These mandates typically result in so much parking that, despite the high cost to provide,¹ it becomes effectively free to drivers — a hidden subsidy that reinforces a car-oriented transportation system and undermines walking, biking, and public transit. This issue brief synthesizes current research and highlights key studies that demonstrate parking’s impacts on car ownership, driving, and transit use.

Key Research Findings

1. Residential parking strongly influences car ownership.

The more parking there is, the more cars people own. Some of the causality here is intuitive — people who want to drive want places with lots of parking — but research has shown that parking can also cause people to drive more. For example, a study of affordable housing lottery winners in San Francisco (who were likely to accept any unit regardless of parking) found that only 38% of households in buildings without on-site parking owned a car, compared with 81% of households in buildings with at least one space per unit (Figure 1). Differences persisted even after accounting for income and access to transit.² In the New York City region, 80% of households with off-street parking owned cars, compared with 49% for households that relied solely on street parking.³ Across the United States, households without bundled parking (a space included in the cost of their housing unit) were more than three times as likely as those with bundled spaces to have no vehicles.⁴

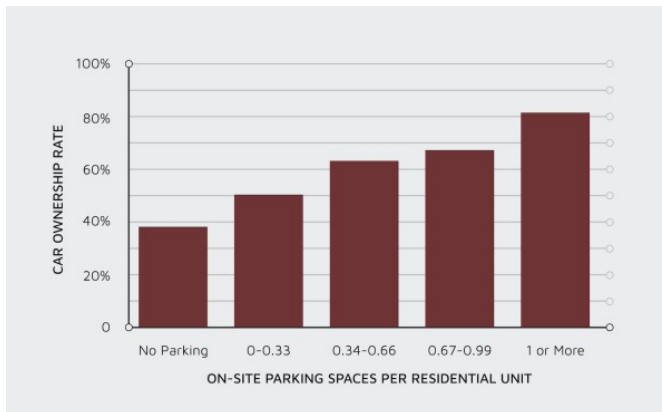


Figure 1. Buildings with more parking led to more car ownership in San Francisco. Image source: Transfers Magazine

Several studies find that parking supply is the strongest predictor of vehicle ownership, exerting a greater effect than household income or transit access. In transit-oriented neighborhoods in New Jersey, households with limited on- and off-street residential parking owned 0.29 fewer vehicles per adult, whereas doubling the number of bus stops within a mile radius corresponded to only 0.08 fewer vehicles per adult.⁵

2. Residential parking affects driving and transit use.

Since an abundance of parking leads people to buy more cars, it also increases driving; households with cars drive roughly 8,500 miles per year more than carless households.⁶ Even among car-owning households, however, parking influences travel behavior. For example, after accounting for car ownership, U.S. households without bundled parking were more than twice as likely to use transit and spent 17% less on gasoline than otherwise similar households.⁴

The amount of residential parking has a large effect on travel behavior. In San Francisco, every 0.43 additional parking spaces per household made residents 7% more likely to drive to work and 7% less likely to take transit to work, and the effect of parking supply on transit commuting was over three times as large as the effect of transit accessibility. More parking also reduced walking frequency.² Similarly, in New Jersey, parking availability influenced driving more than any other factor examined, including transit access: limited off-street parking (less than one space per household) was associated with a 40% reduction in auto commuting, and households with constrained on- and off-street parking took 25% fewer vehicle-based grocery trips.⁵

3. The price and availability of parking impact commuting choices.

Studies of workplace parking focus primarily on the price rather than supply, but because pricing generally occurs where parking is scarce, it also signals limited supply. Employees who do not pay for their own parking are much more likely to drive to work alone. While employees pay for their own cars and fuel, employer-paid parking subsidizes about 62% of the cost of commuting by car, according to one estimate.⁷

Thus, employees who must pay for their own parking at work are much more likely to walk, bike, carpool, or take transit. For example, one collection of case studies compared matched samples of employees with and without free parking or commuting behavior before and after employers stopped offering free parking. On average, when employees paid for their own parking, the share of solo drivers fell by 25 percentage points.⁷ A more recent study in California found that, all else equal, free parking at work was associated with 10.4 more daily vehicle miles per household.⁸

4. Higher citywide parking supplies are linked to more driving.

Instead of focusing on parking at homes or workplaces, some studies examine how travel behavior varies with the overall parking supply across a city. Although citywide studies generally do not fully account for other factors that affect driving, one study found that differences in parking supply explained 70% of the variation in automobile commuting across 12 cities.⁹ Another study examined changes in parking supply over time in six cities. Between 1960 and 2000, the three cities with the highest minimum parking requirements saw parking supply ratios rise by an average of 221%, and the share of commuters driving increased by 31%. In the three cities with lower parking requirements, parking supply ratios fell by an average of 26%, and the share of commuters driving declined by 4%.¹⁰

5. Parking infrastructure undermines walkability and degrades urban design.

Researchers have documented numerous ways that parking infrastructure can discourage people from walking. Abundant parking lots increase distances between destinations, contribute to urban heat, and displace more visually interesting or appealing land uses, such as active storefronts, trees, and landscaping (Figure 2). The curb cuts necessary for parking access also reduce pedestrian safety and comfort by introducing frequent vehicle crossings along sidewalks.

While the mechanisms linking parking to walkability are well documented, quantitative evidence linking parking supply to walking is limited, partly because it is difficult to separate the effects of parking from other factors. Citywide studies — such as a longitudinal comparison of Cambridge, Massachusetts, and Hartford, Connecticut — provide some suggestive evidence that walking falls as parking rises, but even these studies do not fully account for the multitude of other influences on walking.¹¹



Figure 2. Parking areas can displace landscaping and active storefronts.

Source: [Left](#) and [right](#) photo by Mary Brown, from her 2007 MA thesis, *Shifting Landscapes of Mobility: Reconfiguring Space in the Mission District for Automobiles*, San Francisco State University. Licensed under CC BY-NC 4.0

Policy Implications

By making parking effectively free for drivers, abundant parking infrastructure encourages vehicle travel. Repealing minimum parking requirements removes a hidden subsidy for car ownership and driving, while still allowing parking to be provided based on demand. Where needed, cities can price curb parking to manage demand and maintain availability.

Eliminating minimum parking requirements and unbundling parking costs from other expenses can reduce unnecessary car ownership and driving, while creating a more level playing field for walking, biking, and public transit. Cities seeking to go further and actively discourage driving may consider parking maximums, which cap the amount of parking in new developments, or parking impact fees, which allow more flexibility than maximums, but charge developers for each new space created.

Further Reading and Sources

The research literature that informed this issue brief is summarized in greater detail, with citations to the underlying studies, in [The Impacts of Minimum Parking Requirements: A Research Synthesis](#).

Endnotes:

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- 6 Manville, M. (2016). Bundled parking and vehicle ownership: Evidence from the American Housing Survey. *Journal of Transport and Land Use*, 10(1). <https://doi.org/10.5198/jtlu.2016.730>
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- 11 McCahill, C. T., & Garrick, N. W. (2010). Influence of parking policy on built environment and travel behavior in two New England cities, 1960 to 2007. *Transportation Research Record: Journal of the Transportation Research Board*, 2187(1), 123–130. <https://doi.org/10.3141/2187-16>