The Many Costs of Too Much Parking

At Strong Towns, we've created *a lot* of content about parking. If you've read some of our articles on the subject, you've likely caught on to the most prominent recurring message: **parking minimums**—local laws requiring private property owners to provide and maintain a certain number of off-street parking spaces —**do not belong in a strong city or town.**

These minimums result in more parking than we actually need. They rob our cities of financial productivity. They hinder those who contribute value to our cities, from small business owners to developers to renters to homeowners. And they result in dead zones of empty, underutilized space.

The message has encouraged many of you to rethink how parking minimums affect your city. Even better, you've documented the effects of too much parking through our annual #BlackFridayParking event, where readers share pictures of parking lots with ample unused space on the busiest shopping day of the year.

Go here to learn more about how to participate in #BlackFridayParking—all you need is a camera and a social media account!

But then it happens: the guy on Facebook complains about reduced parking; the small business owner rejects the proposed bike lane that would remove parking spots; and the city council considers *another* parking lot downtown.

Articles and pictures of mostly-empty parking lots are great; but to meet people —whether it's your neighbor or your councilperson—where they are and help

them understand why parking minimums hinder the financial productivity cities, you need to dig deeper.

A series of posts this week, in anticipation of #BlackFridayParking, will lay out some of the most important things to understand and examine about how parking affects your city's financial strength and resilience. And we'll help you learn to apply and present that knowledge in a compelling, persuasive way.

Parking is expensive. We can break these costs down into two categories. One is the explicit *fiscal* costs of parking, to the provider and to the public. The other is the implict *opportunity cost* of parking, which occupies land that could have been put to another beneficial use, and/or is often built at the expense of another beneficial activity.

The Fiscal Cost of Parking

▪ **Parking is expensive to build:** a typical surface parking stall costs between $5,000 and $10,000 to construct (including the value of the land it occupies). A parking space in a garage can cost $25,000 to $50,000.

▪ **Studies have measured the cumulative explicit cost of the parking we provide.** A 2018 study by the Mortgage Bankers Association examined the total parking supply in five cities and produced some eye-popping estimates of its cost:

- Parking in Des Moines has a total replacement cost (i.e. what it would cost to rebuild all of it from scratch today) of $77,165 per household, or 60 percent of the cost of the median-priced home in Des Moines.
- Seattle has a population density of 13 people per acre, and a parking

density of 29 parking stalls per acre. That's more than 2 parking spaces per resident (including even young children) citywide.

- Jackson, WY has over 100,000 parking spaces, whose eventual replacement cost is a staggering $192,000 per household.

▪ **Excess parking has implications for housing availability** in cities facing affordability and supply crunches. Developers who build parking pass the cost on to the tenant—whether that parking was required by a local parking-minimum ordinance, or would have been included anyway. Seth Goodman at *Reinventing Parking* did an analysis in 2015 of how much a parking space adds to apartment rent, finding (with much variablility) an estimated average of $225 per month.

Parking minimums can also discourage a developer from building housing at all—more on that in a bit.

▪ **Parking is also an onerous cost for small businesses.** Imagine you open a small, locally-owned business—say, a donut shop. What percentage of your overhead goes to building and maintaining the required parking spaces? Compare that to the situation for a large chain retailer or restaurant. Parking minimums put national corporations at a large competitive advantage over local businesses, because those large companies are more able to swallow the expense of providing mandated parking.

Dunkin can afford the parking lot. Can a mom-and-pop shop? (Image: Wikimedia Commons)

▪**Privately-owned parking induces public sector costs as well**. A common claim in defense of parking minimums is that parking lots may not produce much economic value, but they also come at little to no ongoing service cost because they require few services. This argument misses a key point about infrastructure costs.

Infrastructure—roads, sidewalks, water pipes, sewer pipes, gas and electric and internet lines—exists to service productive land uses: that is, places where people are. Devoting a large amount of land to parking spreads those productive uses farther apart from each other. The commensurate infrastructure cost is real and quantifiable. And it's paid by the public at large, through local government and utilities.

▪ **Parking imposes indirect, but real, costs by reinforcing car dependence.** The "spreading out" effect of devoting much of our land to parking lots means that walking, bicycling, and even public transit become less viable modes of transportation. Parking, especially mandated, ample, free parking, is a powerful inducer of more automobile use. And this means some fraction of the host of real, financial costs associated with driving, from tailpipe emissions to health impacts and 40,000 deaths per year, can be laid at the foot of parking requirements.

The Opportunity Cost of Parking

An opportunity cost is the loss of a potential gain from other alternatives when one alternative is chosen—and your daily life is filled with them.

You choose a salad instead of pizza. You choose to walk to work instead of bike. You choose to move into a two-bedroom apartment instead of a one-bedroom apartment.

The opportunity costs; the cost of *not* choosing the alternative: a better tasting meal, a faster commute, and a more affordable apartment.

The decisions we make, whether for ourselves or for our cities, have an opportunity cost—including decisions related to parking.

In much of North America, free parking is so much a part of the landscape that we take it for granted and rarely think about what else might have been. *Of course* that store has a parking lot; *of course* there's parallel parking on the street. But these things are choices, whether on the part of the property owner, or the local government that sets parking requirements. They consume land that might have gone to another use. What is the opportunity cost of *choosing* parking?

In some cases, it's that a developer can't build much-needed housing; a prospective small business owner can't build a much-needed amenity, such as a grocery store in a food desert; and a local government can't collect much-needed taxes from potential taxable properties.

Present these opportunity costs to your peers or colleagues and you'll likely get this response: *But we need parking, right?*

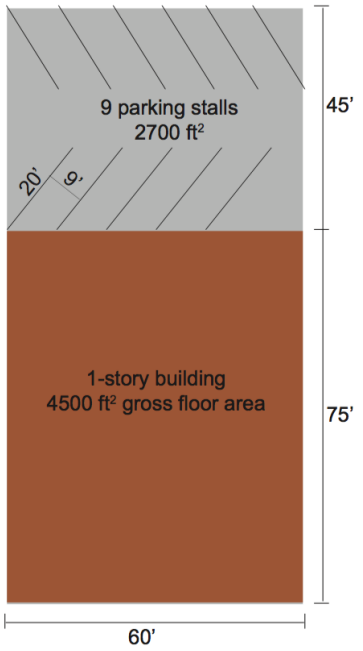
They're right. You likely live in a city where many people need a car to accomplish the day's needs. You're not pitching that your city abolish parking; instead, you're pitching that—because of the opportunity costs—a parking space might not always be the best use of a given piece of land in a given location. It has to be weighed against the best, most valuable of the alternatives that are being foregone: this is the opportunity cost.

Here are a few thought experiments that will help you understand and quantify the opportunity cost of parking, and communicate it to skeptics in your community.

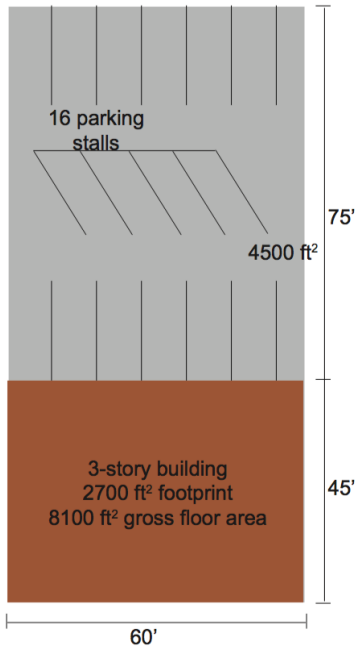
Opportunity Cost for Businesses and Developers

▪ **Parking minimums take large chunks of land out of productive use.** Check out your city's parking requirements. They're most likely in the zoning and/or development code. As an example, here you can find Minneapolis's long list of commercial and residential parking minimums.

Let's examine what that means in practice. The below diagrams show two ways to squeeze a common amount of required parking for commercial businesses in many cities—one space per 500 square feet of gross floor area—onto a typical commercial lot (in both cases fitting the parking spaces into the absolute most cramped alignment possible):



1 Story Building: Parking occupies 37.5% of the lot



3 Story Building: Parking occupies 62.5% of the lot

This illustrates a key insight about the destructive power of parking minimums in cities:

▪ **Parking minimums often make the traditional development pattern impossible.** Even where the zoning code allows a mix of uses (like an apartment above a store), allows buildings to come right up to the sidewalk, and allows a fine-grained mix of smaller structures, parking minimums make an old-fashioned Main Street all but impossible. The parking simply takes up too much land.

▪ **Structured parking isn't an easy answer.** The term *structured parking* refers to enclosed parking in a garage, either underground or above-ground. Structured

parking saves land relative to a surface lot, but it is up to ten times more expensive to build, so it may not be an option except where a development opportunity is valuable enough to justify the expense.

And even in that case, other restrictions on development likely mean that the structured parking comes not just at a monetary cost, but an opportunity cost as well. This analysis from the Sightline Institute examines in detail how parking requirements can cause a developer to provide fewer and more expensive housing units than they would otherwise.

▪ **Parking requirements can price otherwise viable development projects out of existence.** It's not just that rent in a new building must be higher to cover the cost of building parking. Often, that cost drives the necessary rent above what the market will bear.

Imagine you want to build an apartment complex in a neighborhood where you believe you can get $1400 per month in rent for a new two-bedroom apartment. Without parking, maybe a rent of $1350 is sufficient to cover operating expenses and pay back your construction loan. Add a three-story parking garage, and perhaps, in our hypothetical example, the necessary rent to break even on the project jumps to $1600. If you can't find tenants willing to pay $1600, you won't move forward with the project. Most likely, a bank won't even give you a loan.

This is the opportunity cost of parking minimums: productive uses that would have added vitality to neighborhoods and dollars to a city's tax base may never come to pass.

▪ **The above applies doubly to subsidized affordable housing**, where part of the goal is to keep costs, and therefore rents, as low as possible. These projects invariably have very slim margins between viability and non-viability, and a parking minimum can easily push one over the edge into not-going-to-happen land.

Opportunity Cost for Cities and Citizens: Place vs. Non-Place

▪ **Parking lots are non-places**. A powerful way to understand just how much we're giving up when we mandate excess parking is the idea of *places* vs. *non-places*.

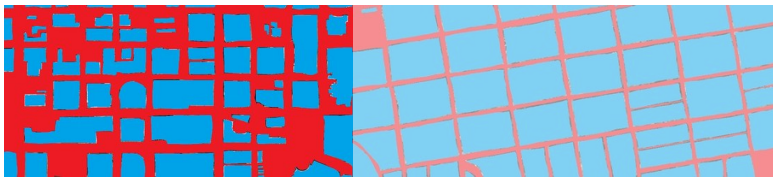
Places are destinations: anywhere a person would go out of their way to purposefully visit or spend time. They include building interiors (residences, workplaces, schools, shopping, entertainment, and so forth), sidewalks, parks, plazas, and other public destinations.

Non-places for transportation, vital infrastructure, and to fill the space between places. They include roads, parking lots, and landscaping "green space" where people are not expected to linger if they set foot at all. Non-places do not directly add value to cities: at best, they *facilitate* valuable land uses.

Here are some sample place vs. non-place maps by Strong Towns contributor Andrew Price:

Downtown Phoenix, AZ

48% Place



▪ **Non-places are self-reinforcing, in a vicious cycle.** Nathan Lewis at New World Economics explains this dynamic as follows:

> *One of the basic problems with Non-Place is that it's contagious. When you start introducing Non-Places into a city design, you tend to add more and more Non-Places to try to fix the problems caused by the original Non-Places. If you have two Places next to each other, like an apartment building and a store, then you can easily walk from the apartment building to the store. If you put a big roadway in between, now you can no longer walk. You need a car. Now the apartment building needs a parking lot. Now the store needs a parking lot. Now the roadway needs to get bigger because of all the people driving from the apartment to the store. Now you need to surround the apartment building with grass (or better yet, a row of trees) to add a little buffer between the apartment building and the noisy roadway, because who wants to live next to a roaring highway? Then, you need to surround all the parking spaces with more grass and shrubbery, so that you aren't left with acres of burning asphalt.*

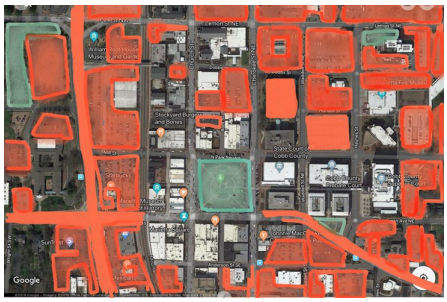
▪ **Parking lots can dramatically impede the walkability of an area**. Look at this aerial photo. The shopping center at the left includes a Target, Petco, and other popular, well-trafficked retailers. The mall at the right includes dozens of shops and restaurants. The distance between them is less than a quarter mile, or about a

five minute walk. But the no-man's land of parking in between makes it so virtually nobody will walk from one to the other.

Click to view larger.

The lack of ability to walk conveniently and safely between destinations is an opportunity cost of parking. And this is true even in less suburban environments. A common situation in American cities is a downtown with a traditional development pattern, but in which many of the historic buildings have been razed and replaced with parking lots.

Strong Towns contributor Antonio Graña made us this place vs. non-place map of downtown Marietta, Georgia, where areas colored orange represent parking:

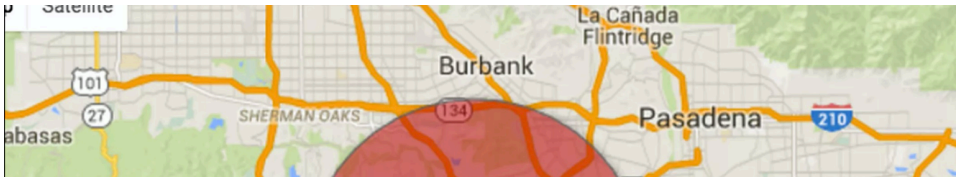


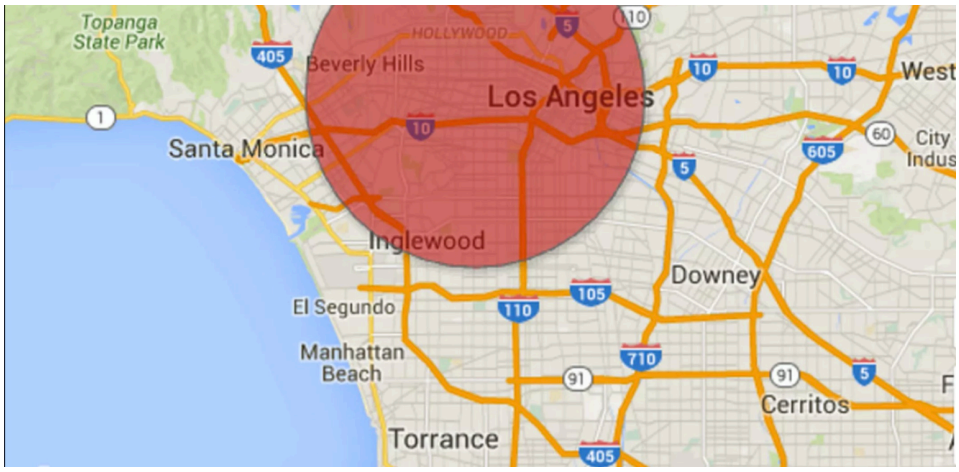
Marietta, GA. Source: Google Maps with modifications by Antonio Graña.

Let's say 40% of potentially developable land within a 15 minute radius is taken up by parking, that is 40% fewer destinations that can be reached within a 10 or 15 minute walk. That is a real cost to the person on foot.

▪ **Parking lots take a large part of a finite supply of land out of productive use.**
In the Strong Towns Mission, we state, "Land is the base resource from which community prosperity is built and sustained." Most cities are unable to expand their boundaries and thus have a finite supply of land. Every bit of it not put to productive use carries an opportunity cost.

How much land does parking take away from other uses in our cities writ large? Here's one famous attempt to visualize it, courtesy of Shane Phillips at Curbed Los Angeles:





If you took every parking space in Los Angeles and combined them into one huge circle, this is how large it would be.

▪ **Even public on-street parking has an opportunity cost: other uses of that space.** Public parking occupies street space that might have gone to another use. This might be recreational space such as a parklet. It might be an expanded sidewalk, which could house cafe seating. It might be a bike lane to enhance safety. The value of these things should be weighed against the potential benefits of devoting the space to parking.

Up Next: Taking These Insights to the Streets

In Part 2 of this series, we look at how to actually go out and collect some hard data to refute the notion that your city needs parking minimums, or doesn't have enough parking.

(Cover photo: Tony Webster via Flickr)