



STUCK IN PARK:

How Mandatory Parking Minimums Hurt American Cities

**STRONG
TOWNS**

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INTRO: WE'VE MADE GREAT PLACES ILLEGAL

By: Daniel Herriges

I know, I know. Start a conversation about parking policy with someone, and watch as their eyes glaze over or they start scanning for the exits. You'd be forgiven for thinking of parking as something dry and mundane. And yet almost nothing has more profoundly shaped the built environment around us.

Parking is the elephant in the room that is the American city. We rarely give much thought to how much space we've set aside for parking, but it is eye-popping when you actually do the math. Parking lots in the U.S. [may occupy](#) a land area greater than Rhode Island and Delaware combined. According to a 2018 [study](#) from the Mortgage Bankers Association, the parking in Seattle, Washington—one of America's most transit-friendly and thus least car-dependent cities—has a replacement cost of \$117,000 for each Seattle household. In Des Moines, Iowa, there are more than 9 times as many parking spaces per acre as there are homes.

All this asphalt doesn't just impose literal costs on us—the cost of paving, the maintenance obligations, the extra distance we must run utilities like sewer lines to traverse our acres of parking lots, and the environmental effects of stormwater runoff. It also represents a colossal opportunity cost. What else could we do with that land that would enrich our communities and our lives far more?

More than anything else, our parking obsession robs us of something profoundly important: the ability to build the kind of places that exist at a human scale, where we are drawn to linger and socialize with each other. The kind of beloved urban spaces we put on postcards—picture the French Quarter of New Orleans with its elegant balconies, the cobblestone streets of Boston's Beacon Hill, or the painted-lady Victorian row houses of San Francisco—would be illegal to build today in nearly all of North America. And the biggest reason comprises one word: parking.



“In far too many cities, we’ve simply made great places illegal, for fear that it might be inconvenient to park our cars in them.”



In far too many cities, we’ve simply made great places illegal, for fear that it might be inconvenient to park our cars in them.

UCLA’s Donald Shoup famously made this case in rock-solid fashion more than a decade ago in *The High Cost of Free Parking*. It’s a great book, but it’s an academic tome beloved mainly by planners and policy geeks. That’s not the battlefield we have to win on if we are to truly change this sad status quo.

The public has to see the stakes. Right now, public outcry is common when drivers fear their access to convenient, free parking will be threatened—for example, by new development in their neighborhoods. But it’s far rarer to see ordinary Americans up in

arms about all the things we’re missing out on because we prioritize parking over building great places.

The first step in changing that is to illustrate the waste that results when we require, by law in almost every city and town, more parking than we will ever use. Strong Towns’ own internationally recognized [#BlackFridayParking](#) campaign was created in this spirit. On the day after Thanksgiving—the busiest shopping day of the year—we ask you, our readers, to take photos of largely-empty retail parking lots, and share them on social media with the hashtag [#BlackFridayParking](#). By doing this, we can all show the world that America has far more parking than it needs.

This e-book is a collection of some of our best essays from the past few years that make clear just what we’re giving up when we prioritize abundant parking over all else. We lose the ability to walk our own neighborhoods in comfort. We demolish historic buildings and drive out small, local businesses. We threaten our children’s safety and independence. We make housing more expensive for those who already struggle to afford it. We degrade our environment. And we devastate the tax base that pays for all the city services we rely on.

THE GOOD NEWS: WE CAN TURN THIS AROUND.

We can start recognizing the trade-offs between parking and truly value-generating uses of our precious land. A good first step would be to completely [eliminate mandatory parking minimums](#). We have a live, crowd-sourced map of cities that have done this—but we're sure it's vastly incomplete, so we're [always taking submissions](#).

Will you join us in our campaign to bring parking sanity back to our cities and towns? Visit strongtowns.org/membership to join the movement, and strongtowns.org/blackfridayparking to learn more about how to participate in our annual #BlackFridayParking social media event.





I. THE THINGS WE GIVE UP FOR PARKING

WE FORBID WHAT WE VALUE MOST

By: Benjamin Ledford

Old Town is probably Pocatello, Idaho's most cherished neighborhood. It has its own challenges and it's not the most affluent area of the city. Still, this older neighborhood of historic houses and storefronts, squeezed between the railroad and the river, is where we come to have our portraits taken. It's where we have our parade of lights at Christmas and hang flower baskets in the spring. We put pictures of it in our promotional materials and our comprehensive plan.

We value Old Town so much that we actually protect it with a historic district designation so that it won't be lost. If we valued the way this part of the city was built so much, you'd think we would want people to build more neighborhoods like it. And maybe we do. But our laws make that impossible.

Like most cities in America, Pocatello's city code sets minimum parking requirements for all types of new development, and the reality is that these parking minimums forbid anyone from ever building a neighborhood that looks remotely like Old Town anywhere in Pocatello.

[Take a look at the numbers.](#) Office and retail uses require one parking space for every 250 square feet (sq. ft.) of floor area. When you include the driving lanes, landscaping, etc., each parking space requires at least 300 sq. ft of parking lot (with a very efficient layout). That means, according to the code, your parking lot is required to be larger than your building. For restaurants, bars, and medical offices, a parking space is required for every 200 sq. ft of floor area, meaning the parking lot must be at least 150% the size of the building. Similarly, apartments require two spaces per unit; considering that a lot of the older apartments are less than 600 sq. ft, they would require more parking lot than building space as well.



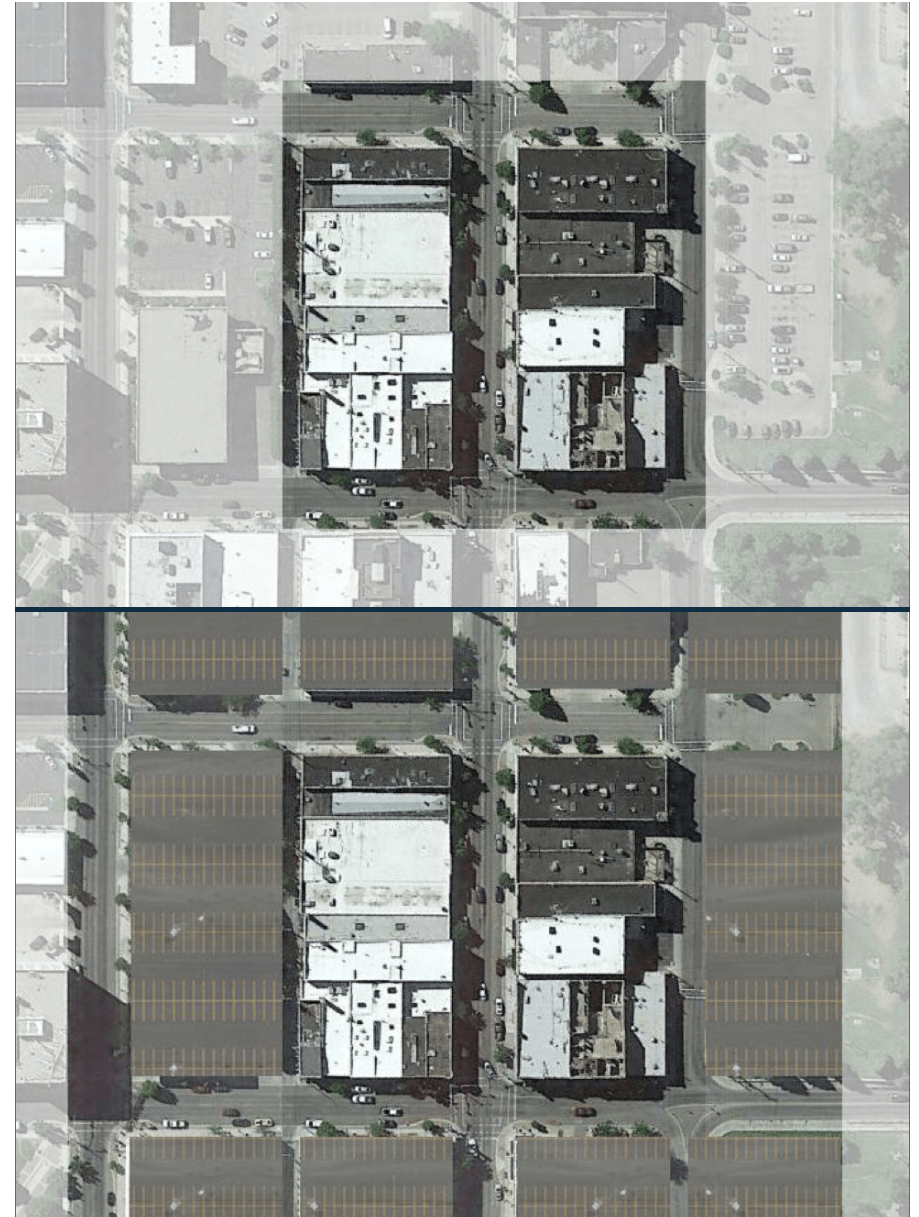
Old Town at night (Source: Craig Worth)

This is all assuming single-story buildings. If you want to build two stories, the parking lot has to double—and so on for each additional story. It should be clear from these ratios that we could never allow a full block of side-by-side single story storefront shops along a sidewalk. The block would have to be at least half parking lots, probably more. A block of two story buildings is even farther from the realm of possibility.

Let's assume some well-intentioned developer wants to create a pleasant, walkable neighborhood of shops and offices for the benefit of Pocatello residents in some other part of the city. Let's say just one street. Here is one block of Main Street.

The blocks are 300 feet long and the buildings average about two stories. Let's say, based on the code, that the ratio of building floor area to parking lot is 1:1.2. In order to build this one section of street, this is the amount of parking that would be required.

You could do it, but it's hardly a neighborhood; it's just a bit of strip development. And it can't be connected to a neighborhood because of its buffer area of required parking. You could build a few clusters of these separated by their parking lots, which is essentially the typical auto-oriented development we have along the highways.



“You would have to tear down an equally sized building on each side to build your parking.”



Or you could combine more of them into a larger conglomeration surrounded by an even larger parking lot, which is essentially a mall. What you can't build is an actual downtown.

In fact, you can't even build Old Town in Old Town! The parking minimums apply there, too. Now, there is an exception for existing buildings in the historic district, but not for new construction. It reads as follows:

Because of the special physical constraints in the central commercial zoning district, off street parking requirements in this district need not be met for any permitted use which occupies or will occupy an existing building. All off street parking requirements shall be met for uses involving new construction or expansion of

existing structures. — Pocatello City Code, section 17.05.520

This means that Old Town can never grow and expand in the same pattern that we love so much, and that we can never infill the empty paved lots where buildings have been lost. In order to build a two-story downtown infill building, you would have to tear down an equally sized building on each side to build your parking.

Here's an example of best practices for a new building in Old Town. In 1993, First Security Bank (now Wells Fargo) built a new building on Main Street at the south end of Old Town. They made every effort to reflect and contribute to the character of the neighborhood. It's two stories, built up to the corner, has an entrance on the sidewalk, and is clad in brick with some historically inspired detailing.

But in order to create the downtown character on one corner, two other corners had to become permanent parking lots. These cover more than twice the area of the building itself. In fact, this largely empty parking lot now essentially marks where the active portion of Main Street stops.

The parking lot necessary
to support the modest Wells
Fargo building...



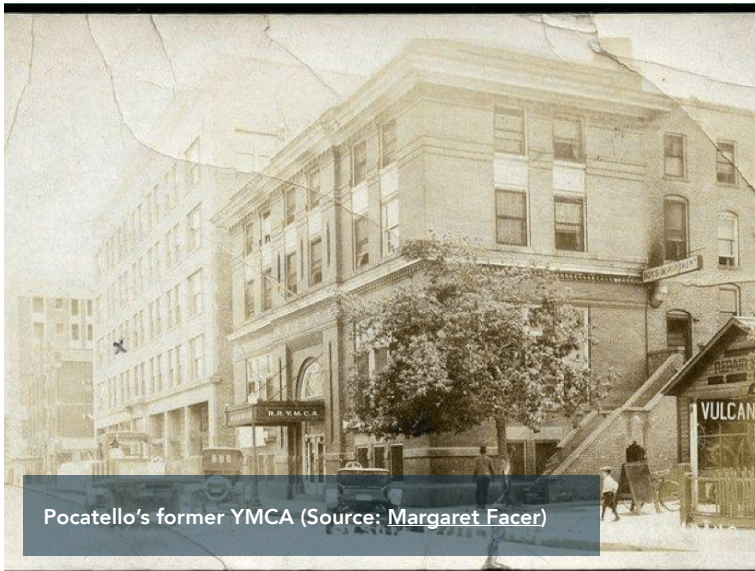
yet more parking...



**AND HERE'S
WHAT THE
WHOLE SITE
LOOKS LIKE.**



“Essentially, we would have to wipe out the remaining half of the block.”



Pocatello's former YMCA (Source: Margaret Facer)

Infill isn't possible, either. In the first place, most of the empty lots have been turned into parking lots for the adjacent buildings. Can they be rebuilt to what they once were?

Land areas actually being used for off street parking in connection with any building or use may not be reduced in capacity to fewer parking spaces than required by this chapter without an exception approved by the city council. — Pocatello City Code, section 17.05.530

In short, no. Once it's become parking, it has to stay parking. The downtown building stock can only be eroded, not replenished. But let's assume we were allowed to build on some of those empty

lots. What would be required? Pocatello used to have a beautiful four-story YMCA building that tragically burned down and is now a half-empty parking lot for the adjacent building.

Here is an aerial of the location where it once stood, along with another showing the amount of parking that would be required if we were to rebuild it today. Essentially, we would have to wipe out the remaining half of the block.



Location of the former YMCA

How much parking we'd need to provide for it

“So are we to believe that we’re better off with the few stalls of parking[...]”

So are we to believe that we’re better off with the few stalls of parking there currently, than we would be to have the old building back?

An even greater tragedy was the [Chief Theater on Main Street](#).

In the 1980’s an iconic theater was painstakingly restored and reopened through great community effort, only to be lost to a fire in 1993.

No one would deny it was a treasure, and its loss was a hard hit to Old Town. So could we rebuild it? To the right is the site of the Chief Theater.



The parking requirement for theaters is one space for every 4 seats. The Chief had 1,200 seats and zero off-street parking spaces. To rebuild it, the code would require 300 parking spaces, or an entire 300’x300’ downtown block. In other words, in order to rebuild it and meet code, you would have to level the rest of the block and then some for parking. It would look something like the image to the left.

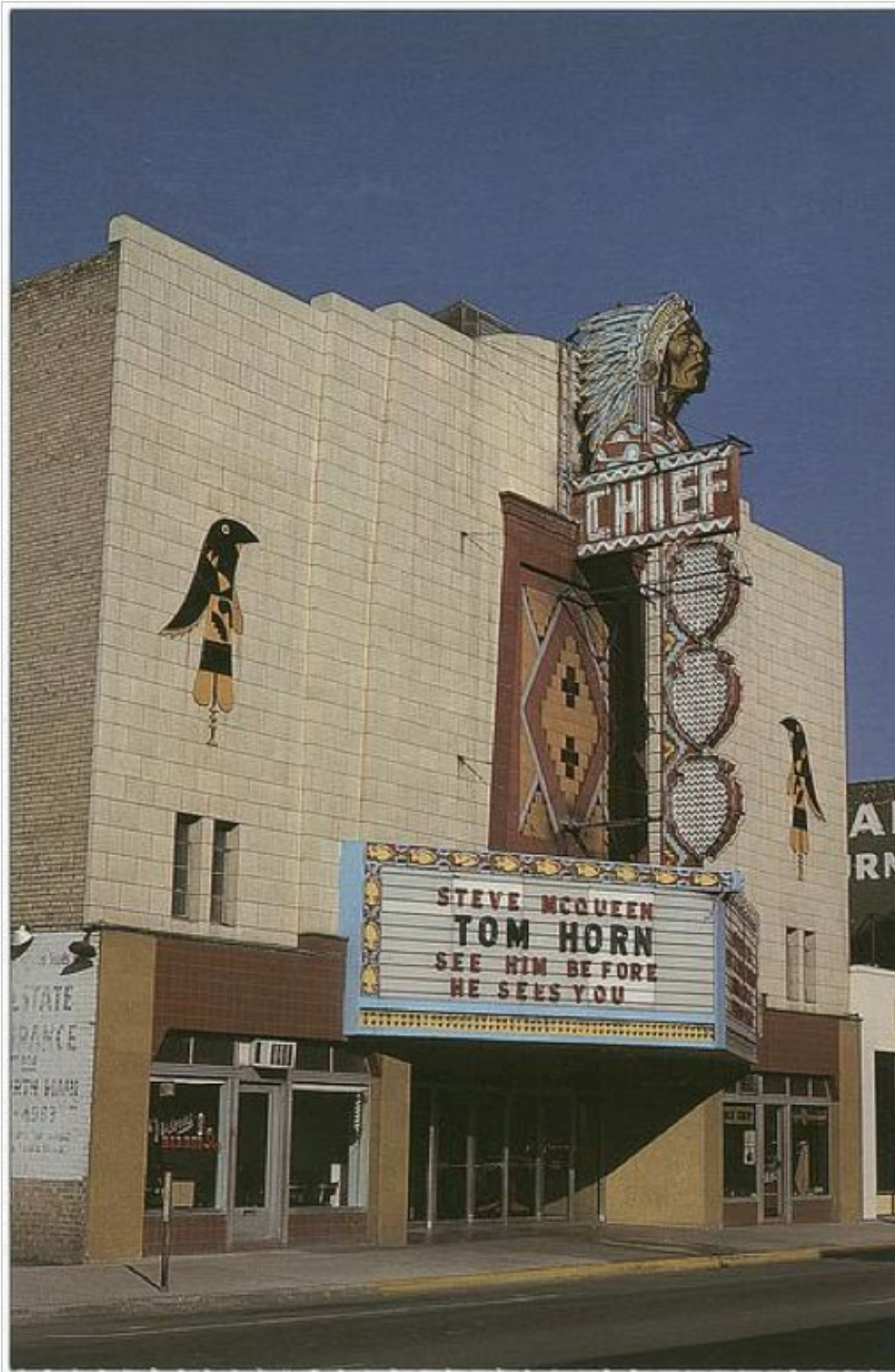
Of course, you couldn’t do that because the other buildings on the block are protected as part of the historic district as well, and rightly so. So you couldn’t legally rebuild it at all. That’s not to say that the city wouldn’t be willing to make an exception in this case. Our city staff are excellent.

They see the value in infill, they want to help, and they want to make these sort of projects work, but they have to fight their own code to do it.

Why do we have a code that requires exceptions in order to build the neighborhoods we like the best? Why does it, by default, forbid the very building types that we are trying to preserve and protect?

The stated purpose of the parking requirements is “to provide adequate parking so as not to negatively impact adjoining properties.” (Pocatello City Code, section 17.05.510, emphasis added). By that reasoning, the Chief Theater, with its zero off-street parking spaces, was negatively impacting adjacent properties. Of course, everyone knows that’s not true—just ask the owners of the restaurants, hair salons, bars and retail stores in the adjacent properties if having a 1,200 seat theater next door would negatively impact them—but that is the reasoning with which the code is written.

These parking requirements make no sense, and they’re preventing the growth of beautiful, walkable and economically productive developments. It’s time to get rid of them so that we can start building strong towns.



PARKING VERSUS SAFETY AT NEIGHBORHOOD SCHOOLS

By: Charles Marohn

In 2018, I was part of an unsuccessful effort to keep my local school district from tearing down an historic structure—a 1930s-era elementary school—as part of an effort to create two square blocks of parking in my city’s core downtown. Our efforts were called “disingenuous” by school officials who wrongly assumed we were anti-school, anti-education, or anti-taxes.

No, we’re just anti-destroying the city.

Geographically, the school district is enormous. Most of the people who voted do not live in one of the city’s core neighborhoods. Advocates for the school district had few misgivings with sacrificing an historic structure for more convenient parking. Most voters experience Brainerd as a place to drive through to get to a destination. For them, there will never be too much parking; trying to save the building was merely misplaced nostalgia.

Even so, there was controversy in the district’s discernment process over proposals to convert playgrounds into parking lots. Early site drawings showed off-street parking in the existing playground areas. In the months before the vote, this parking was removed from the drawings, and a note was added indicating parking would be built, with the location to be determined at a later date. I’m not suggesting anything sinister at this point; district officials said their drawings were creating confusion, that they had not intended to put the parking in the playground, and so they removed the parking from the drawings. It just also happened to be a convenient omission from the public conversation.

Now that the district has voter approval and is moving ahead with its plans, the full extent of the damage to my city’s core neighborhoods is becoming more widely understood. While they have yet to release schematics, the list of properties they are seeking through eminent domain suggests they are going to convert multiple blocks



Image courtesy of U.S. Air Force

of residential dwellings into surface parking. It's a double tragedy in that (1) it will permanently damage these struggling neighborhoods, and (2) few who are involved with the district or as advocates for the school's plans seem to care.

In fact, in very predictable fashion, the people promoting the off-street parking are adamantly claiming that their motivation is safety. Specifically, safety for the children.

Safety First, or Driver Convenience First?

Call me cynical. I've read the school district's documentation, where faculty indicated that more convenient parking was one of the "top five priorities." I've been in many of these schools, and while I'm sure there are staff members who live in the neighborhoods surrounding the schools, the vast majority do not. These neighborhoods tend to be poor and struggle with disinvestment. While education is not a lucrative career, it is a solidly middle-class career here in Minnesota. Most middle-class people live outside these neighborhoods and drive in. Come February in Minnesota, it's understandable why people driving to their place of employment would want their parking to be more convenient.

It's also easy to understand why a school board and senior administration—none of whom live in these neighborhoods, all of whom drive in—would be intuitively sympathetic to the convenience argument.

[As psychologists have taught us](#), humans tend to reach conclusions based on their intuition and then use reasoning to justify those conclusions after-the-fact. We're going to build parking lots to increase convenience, but we're going to justify it based on safety for children. Alright, so let's talk safety.

The Difference Between Urban and Suburban Environments

The vision for safety that the school district espouses comes from a misapplication of suburban design standards to an urban neighborhood. In a sense, what the district is proposing to do is to convert an urban neighborhood school into as close a facsimile as possible of a suburban campus. In that environment, safety is then addressed in standard suburban ways: separating conflicting uses, increasing traffic flow, and managing points of conflict.

In terms of safety for an urban neighborhood, this approach is an absolute disaster. Let me explain why.

Separating conflicting uses means keeping kids who are walking away from traffic. The theory is that, if we keep them separated, there will be no chance of any accidents occurring. The bus lane, pickup lanes, and surface parking departure lanes are all designated and kept away from where kids will be walking. Everyone in their place.

“The best thing that can happen for the safety of students: people driving through a school zone should be so terrified of hitting someone that they drive very slow and with an extreme level of caution. In other words, the exact opposite of what is being designed.”

I find this approach suspect in suburban schools, but at least there the expectation is that most students will be driven in a car or bus to and from the site. For each of our neighborhood schools, the school district’s policy is to provide no busing for students living within a mile of the school. They are all expected to walk, bike or be driven by someone to school. As the school is in a poor neighborhood with a lot of working families, a high percentage of students walk, and they will be walking in every which direction. Compared to a suburban campus, walking patterns around urban schools are more random and chaotic.

That randomness conflicts directly with the second aspect of the district’s safety strategy: to increase traffic flow. Suburban schools channel personal vehicles and buses into their own designated lanes to help traffic flow more smoothly. This is accomplished by removing conflicts, by giving drivers a sense of security that potential conflict points have been managed. If we don’t expect turning cars, stopping traffic, wandering kids and the like, we feel more confident driving faster. A.k.a., increase traffic flow.

Again, I'm not sold on this as a general concept even in a suburban setting, but in an urban neighborhood, it is an obscene level of negligence. These are random environments by their nature. Students are all over the place, like they should be in a good, urban neighborhood. Doing things that artificially speed up traffic, or give drivers a heightened sense of security, makes the environment vastly more dangerous for a child on foot.

The best thing that can happen for the safety of students is counter-intuitive for those who prioritize convenience of parking and driving: people driving through a school zone should be so terrified of hitting someone or something that they drive very slow and with an extreme level of caution. In other words, the exact opposite of what is being designed.

The third aspect of this misapplied suburban safety strategy relates to managing points of conflict: how we handle instances where children walking or biking must cross areas where buses or cars are driving. This is where we get the greatest insight as to the true motivation of the design, because designers are forced to prioritize one group over the other.

Let's guess which one gets prioritized for safety purposes. Come February in the dead cold of winter, will the flow of traffic for parents picking up their kids, or faculty leaving the off-street parking lot, be halted so that students on foot can cross the street and get on their way? Or will students be expected to wait on the corner while those in their heated cars and on the bus are provided the opportunity to improve traffic flow?

Designers, in the name of safety, will attempt to channel kids on foot to designated locations where they will be collected and then, at intervals that don't excessively interfere with traffic, be allowed to cross. In these situations, the design relies on everyone to follow the rules—or to put it another way, to mindlessly follow the rules, and be more obedient than attentive—and stay in their designated place.

Predictably, this creates the perfect excuse for the well-intentioned when tragedy strikes: “They weren’t following the rules.”

Not: “We should have anticipated that kids don’t always follow rules.” Not: “This is a complex and random urban neighborhood where unpredictable things happen, despite our planning and design.” Not: “We shouldn’t have given everyone a false sense of security.” None of the above.

And all of this reasoning applies merely to the roughly 75 minutes per day people are entering and exiting the school site. For the remainder of the time, and through all evenings and weekends and the three months of summer, this over-engineered design approach leaves a doughnut of desolation around each school, an inducement to drive even faster through this area [where we know slower speeds are the key to safety](#).

From a pure safety standpoint, imposing a suburban design on an urban school is a disaster in the making. School officials who argue that this must be done for the safety of the students do not have the proper sense of how to create a safe environment in an urban setting. For the well-being of our students, and the health of our neighborhoods, we need a different vision for how to implement the will of the voters.

School district officials are smart and our city council has some very good leadership. And despite different concepts of convenience and safety, everyone involved does seem to want what is best for the students. I’m optimistic we can find a way to have a great neighborhood school while still having a neighborhood.

“Designers, in the name of safety, will attempt to channel kids on foot to designated locations where they will be collected and then, at intervals that don’t excessively interfere with traffic, be allowed to cross. Predictably, this creates the perfect excuse for the well-intentioned when tragedy strikes: ‘They weren’t following the rules.’”

MY CAR PAYS CHEAPER RENT THAN I DO

By: Andrew Price



The title of this article would be true, except that I do not own a car anymore. We sold our car when we moved to Hoboken, New Jersey. My wife and I both commute to Manhattan, and we are spoiled with trains, buses and ferries. When we stick around Hoboken, we walk to restaurants, to parks, to church. Much of Hoboken's charm comes from the city being only 1.3 square miles, so pretty much the entire city of Hoboken is within walking distance. Occasionally we want to go off the beaten path and head into more suburban parts of New Jersey, and have used [Uber](#) (our average Uber trip costs around \$10), but in our first four months living here, we used Uber a total of seven times. All of that combined is cheaper than just one month of what we were paying for car insurance.

My point in telling you this is that Hoboken is one of the few places in the United States where not owning a car does not feel like a hindrance. In fact, this was a major selling point for us, and probably for a lot of other people (because the rent is incredibly high, which signifies that there is a lot of demand to live here.) And still, like many cities across the United States, we have parking minimums.

These are the questions I'd like my city leaders to answer.

Why do we have parking minimums?

Seriously: why? What was the discussion going on in City Hall when they thought this was needed? Is it to compete with the suburbs? Real estate prices in Hoboken are extremely high, a sign that there is huge demand to live here. I chose to live here because it is not suburban, so why would we adopt policies that make our city more suburban? Why do we adopt ordinances that would make most of our city's character illegal if we were to develop it from scratch today?

Who decides parking minimums?

Why do the parking regulations for Hoboken say a bowling alley requires two spaces per alley? Why not one?, Or three? Why do “planned unit developments” require one space per dwelling? How did we figure out this was the optimal number?

I work at Google, and we have a saying there: data is king. You can't make decisions without data, especially not ones with long term implications. I would like to see the data that states one parking space per 200 sq. ft (not 100 or 300) of a skating rink is optimal to bring prosperity to the city. Where is the data to show these optimal ratios before they were encoded into city law forevermore?



A parking space is around 250 sq. ft. If we built one parking space per 200 sq. ft of skating rink, we would be dedicating more space to getting there than being there.

In an urban neighborhood where most people walk for local trips, why should local businesses be forced to accommodate cars?

Our mayor said 95% of trips take place on foot. So, what would people in a dense urban community like Hoboken actually need a car for?

1. Commuting to work (if they work far away from the ferries, buses, trains and light rail).
2. Leisure trips.
3. Commercial vehicles.

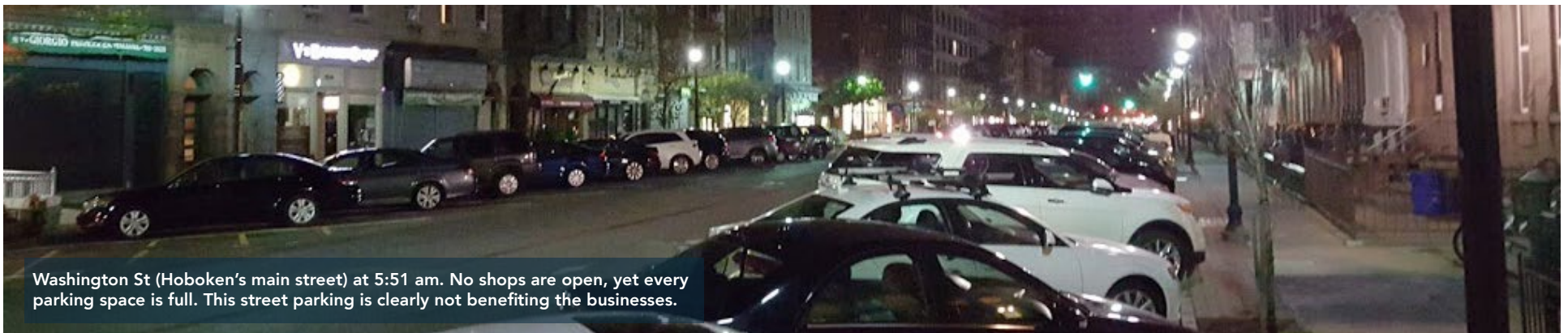
Probably not visiting the local bowling alley.

Why do we think we can act in a business's best interest better than the business?


It's within a business's best interest to make as much money as possible, which means making themselves accessible so that customers can get through the door. Let's assume that the remaining 5% of local trips are done in a car (and not on a bus or a bike). Should a business not be the one to decide if they should dedicate expensive, valuable land to accommodate that 5% of customers that might travel by car, or if it would be better to put that space to productive use to attract the remaining 95% of their potential customer base that travels on foot? Who do the parking minimums help? Not the businesses that would be forced to subsidize a very small minority of customers when they could make more money by putting that land to productive use.

Why do we subsidize and encourage driving?

It seems counterproductive. Hoboken is one of the few places where driving is optional; it is not necessary to have a car to get around. Every time we make it easier to walk, ride a bicycle, or use transit, more people will do so. Likewise, the easier it is to own or drive a car, the more people who will do so. Arguments that "we need to make it easier to drive, because we predict more people will drive" become self-fulfilling prophecies, because they cause us to adopt policies that end up inducing people to drive. The city has initiatives to encourage residents not to drive, yet we cancel them out with every policy that makes it easier and encourages people to drive.



Washington St (Hoboken's main street) at 5:51 am. No shops are open, yet every parking space is full. This street parking is clearly not benefiting the businesses.

A wide-angle photograph of a crowded city street during a festival. The street is filled with people walking in both directions. On the left side, there are several white tents, some with clothing hanging from them. On the right side, there are food stalls and vendors. One stall has a sign that says "ZEPPOLLS FRIED OREC FUNNEL CAKES". Another stall has a sign that says "GINA'S". In the background, there are tall buildings and a traffic light. The sky is overcast.

If parking is such a problem holding the city back, how come the streets thrive with people when closed to cars during special events?

Every city believes it has a parking problem. Enough said.

Washington Street during the Hoboken Arts and Music Festival.



A parking garage in Hoboken advertising parking spaces for \$300/month.

Why should my car pay cheaper rent than me?

An on-street parking permit is [\\$15 per year](#), or \$1.25 per month. Using the garage above as an example, you can rent a parking space for \$300 per month. Let's assume an average parking space is 250 sq. ft. Housing a car on the street costs \$0.03/square foot/month, and housing a car in a garage costs \$1.20/square foot/month. In contrast, housing a human in Hoboken averages around \$3.25/square foot/month.

[Hoboken has an affordable housing problem.](#) Having shelter is a basic human right. Housing a car is not. Why does it cost a person 108x as much (per square foot) to house themselves over their car?



What could we do with a parking space instead?

I am not implying that we should start building parking space-sized homes on our streets, but pointing out the real inequality we get from subsidizing car housing over human housing, both in the public and private realm.

“In effect, parking minimums are forcing property owners to take a loss.”

A parking space in Hoboken would average around \$812.50/month if housing a car per square foot matched housing a person. Naturally, housing a car is going to be a little cheaper, because a car doesn't ask for plumbing and air conditioning and requires little maintenance. But, let's say you had floorspace in a building and wanted to get the highest return out of your investment and you wanted to get as much per square foot as possible. Not many people are going to pay \$800/month for a parking space, and I imagine that is why our large apartment complexes, which were required by zoning to provide parking, are renting the spaces for \$300/month: in order to get enough demand to rent them out. But we have a housing shortage, so if given the choice, would the building owners have preferred the floorspace of their building making 2.7x as much per square foot as apartments instead of parking spaces? In effect, parking minimums are forcing property owners to take a loss. For the record, \$800/month is only \$1.10 per hour. People are willing to pay [\\$10 per hour](#) around here.

In the cities I have looked at it is substantially cheaper to house a car (a luxury item) per square foot than a human. Here are the most expensive major American cities to rent a monthly parking space:

- New York - \$541/month
- Boston - \$438/month
- San Francisco - \$375/month
- Philadelphia - \$303/month
- Seattle - \$294/month

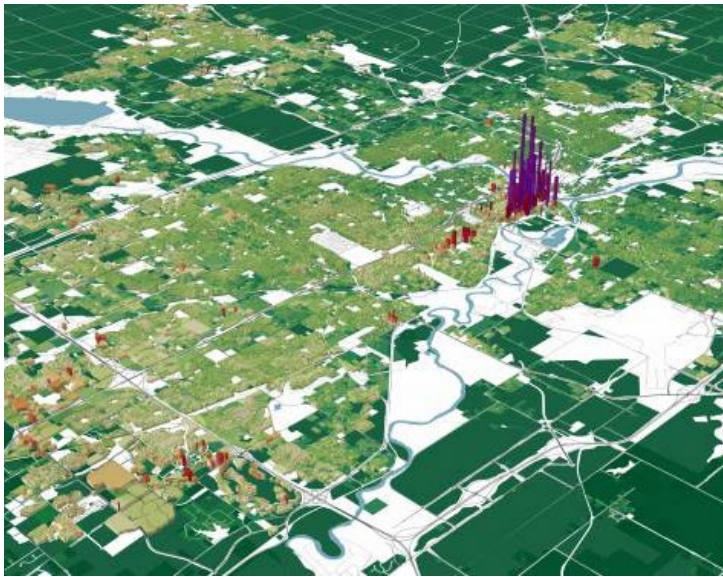
What is stopping us from eliminating parking minimums?

Hope is not lost. We can repeal our parking minimums, and go back to building [great fine-grained urban places](#) that people love, that put our valuable and limited land to productive use, and will make our cities economically resilient and financially stronger. Regulating something just for the sake of regulating it is a dumb approach. If people want parking, let them pay for it. But to force businesses to take a loss to subsidize parking when we have a housing shortage is unnecessary and harmful. It is time for [the United States' most walkable city](#) to join [the list of cities that have eliminated parking minimums](#).

MAPPING THE EFFECTS OF PARKING MINIMUMS

By: Joshua McCarty

What makes surface parking so destructive is that it consumes a finite resource (land) with virtually no direct financial benefit. Our preoccupation at Urban3 is local finance. From that perspective, parking—in particular the vast kind that adorns strip malls and box stores—is dead weight. Local governments, be they in cities, towns or counties, are all constrained by the land they can develop. What they do with that resource is thus paramount to how well they can pay their bills. Tax revenue is but one of many resources squandered by each acre of land devoted to deactivated cars.



Let's delve deeper into the pattern of tax productivity in Urban3's 3D models to focus on the impact of surface parking. Those of you who are familiar with Urban3 will recognize the image to the left as the incredibly common pattern of property tax production per acre.

What's fascinating about this model is that, without knowing the city or county, having no idea what the underlying development looks like, it's nearly impossible not to find downtown. (The image is Des Moines, Iowa, by the way.) Smaller satellite downtowns, new urban developments, and historic districts are similarly easy to find. What's more difficult to find are the typical symbols of economic development. Can you find any of the three major shopping malls in this model? The vast office park headquarters of Wells Fargo? The Bass Pro Shop?

They blend in with the background radiation of suburban housing and are eclipsed by the potency of compact development. It's important to keep in mind that this means an acre of big box store or shopping mall is only marginally more productive than one modestly sized detached house.


Of course, developments like big box stores are not touted as success without cause. They often hold a substantial share of a community's economic activity and produce more property tax individually than downtown buildings. What accounts for this huge disparity in tax productivity though, is configuration. Parking dilutes the substantial tax production of development with fiscally barren waste. When we account for that waste, we see a much different pattern of tax production.

Mapping Land Waste


We can infer a great deal about the urban fabric from models like the one shown above, and we can supplement that understanding with some direct concrete examples. For today's data project, though, we also supplemented with land cover data, which gave us the opportunity to more directly compare compact land use with tax productivity. This data codifies the components of development, building footprints, roads, and, of particular importance, parking.

For hundreds of years, figure ground maps such as this have been instrumental for understanding how development is woven together to form a place, or, what some call, the urban fabric. With these other elements at our disposal we can explore a more perverse kind of map: the distribution of parking in the city. In the map below, parking is illustrated in glaring red.

Let's take a closer look at how different configurations of buildings and parking contribute to tax production efficiency in the example on the following page of the city of Des Moines.



The downtown area has the most compact, "urban" pattern of development and corresponds to the most potent taxable properties. Note the proportion of black (buildings) to red (parking) along the four block wide swath between the rivers. This is also where the road network is the most predictable and uninterrupted. Within these blocks, almost all available space is used for buildings. In short, this is the fingerprint of an urban area.



What a 2D illustration wouldn't capture is the compound effect of not just covering land with buildings but stacking those buildings. You can see what that looks like to the right.

Small Town Main Street

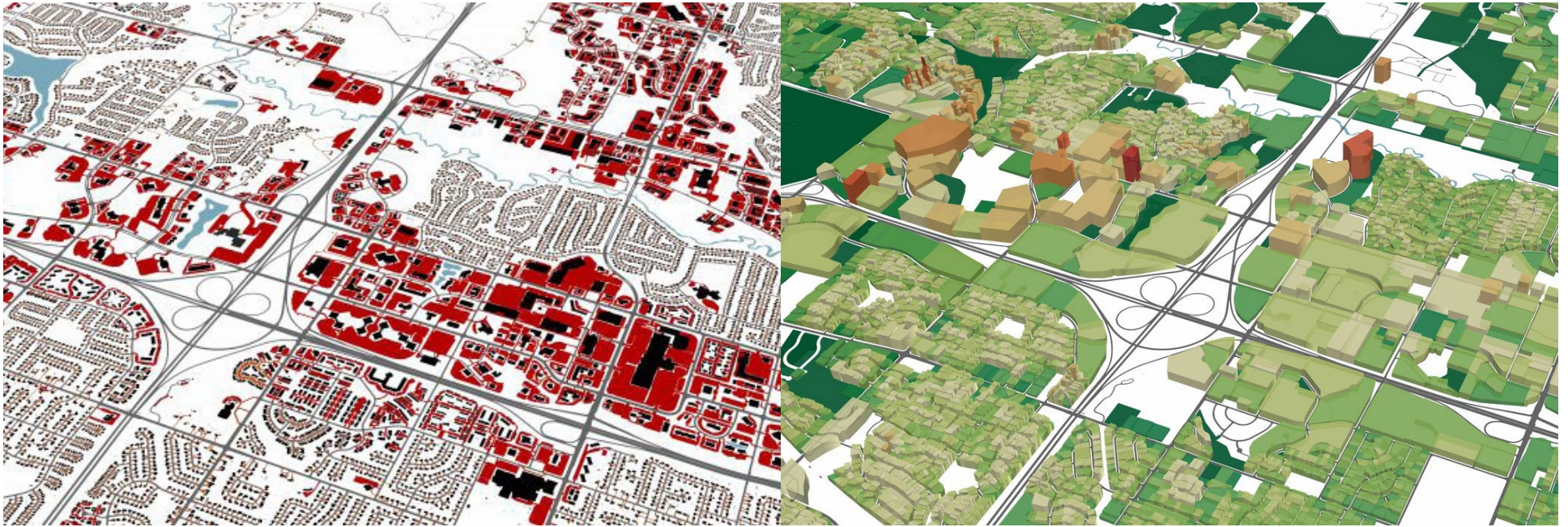
We find this same pattern of tax productivity at a smaller scale even in humble Main Street settings.



Notice how the configuration of the few blocks featured here has a profound impact on tax productivity. These are historic properties built before cars and car storage. The scarcity of developable land encouraged developers to maximize use of their sites. Once again, using at least 100% of a lot for a building is the key to boosting tax production.

Now let's contrast the previous patterns and height with a decidedly auto-oriented development on the following page.

Auto-Oriented Suburb



This is a major commercial corridor nestled along a major interchange. It boasts a shopping mall, numerous retail sites, and a substantial office park. Both the main street and the suburban configurations have considerable amounts of development and even have comparable amounts of pavement. The main street model locks small irregular developments along the street and tucks its parking off to the back in smaller pockets. The primary focus is more recognizably human.

Meanwhile, the auto-oriented model maximizes distance between the street and the building and assembles its parking into large pools. The 3D model clearly shows financial benefits to accommodating humans on foot versus storing cars.



One striking and troubling observation is the extent to which even the downtown is burdened with parking. The entire periphery of the potent urban core is lined with bare pavement. Downtown sits like a shining revenue oasis in a sea of flat pavement. Our small town main street example too comes with its own red ring.

All the more troubling is that much of this parking was built on the remains of irreplaceable historic architecture. The proximity of these red swaths to major highway projects is also no accident. The “meat

axe” of urban highway construction, as Robert Moses famously named it, tends to leave a scar in the form of broken real estate. And even within the intact urban core, parking has a conspicuous presence in the form of multi-level garages. There’s no escaping this ubiquitous pavement.

The Tax Contribution Of Bare Pavement

One advantage of 3D modelling is that it gives us the ability to explore multiple layers of data at once. We typically depict both the height of the property and its color based on its tax value per acre. But we can delve deeper into the question of parking by coloring property based on its relative content.

In this model, height still represents value per acre, but redder properties have a greater proportion of parking, while bluer ones have a larger share of their space occupied by buildings. For our purposes we’ll ignore other uses like open space and we’ll consider driveways as though they were parking.

The result, aside from looking patriotic, is fairly noisy but nonetheless depicts a clear advantage for “very blue” over “very red” properties.



Ultimately, parking is the single most important design feature that dilutes the tax productivity of development. Municipalities for whom property taxes are lifeblood should treat parking for what it is: dead weight.

Sadly the typical outlook found in zoning codes in most cities is to encourage such waste.

(All images copyright of Urban3. A different version of this article was originally published in 2015).

II. THE WAY BACK: RECLAIMING OUR CITIES FROM EXCESS PARKING

LANDSCAPE ARCHITECTS plan and design outdoor places such as:

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ROBUST GROWTH AND DEVELOPMENT WITHOUT MANDATING PARKING

By: Jason Schafer



What happens when you get rid of minimum parking requirements in a downtown district while also adding 4,500 people there? Conventional wisdom might suggest that adding so many people in a short time while removing parking minimums would be bad for businesses because parking spaces would become tougher to find. Conventional wisdom is wrong. Fargo, North Dakota provides a compelling case study showing that downtown businesses can thrive under these circumstances.

Fargo's Story

Fargo leaders wanted to see more development downtown and realized their parking requirements were creating a barrier for developers. So in 1998, they created a special zoning district in the

downtown core and eliminated minimum parking requirements in that zone.

At the same time that Fargo leaders were placing more emphasis on investment downtown, North Dakota State University (NDSU) began locating several programs downtown, including its architecture and business schools. In addition to the programs, a 104-unit mixed-use housing development, called Cityscapes, was built in the core of the downtown. These projects resulted in over 4,000 students and faculty living, working and studying downtown. This all happened in a relatively short time frame.

People everywhere complain about parking. However, Fargo smoothly absorbed the influx of development into its downtown—which is now thriving. Sidewalk-level retail shops, including many legacy downtown businesses, are doing better than ever.



Multi-Modal Transportation is Key

When NDSU increased its presence downtown, the local bus service, Metro Area Transit (MATbus), increased service between downtown and campus (a distance of about one mile). A circulator route between the campus and downtown provides 15-minute service (every seven minutes during peak hours), ensuring students and faculty convenient and reliable travel. This helped reduce car trips and thus the need for additional parking.

This is an important yet often overlooked insight. Parking, like any commodity, is about supply and demand. Too often, the focus is only on supply and not on demand. But if demand for parking can be reduced, then the need to supply more parking is diminished.

In addition to MATbus upping their game, Fargo instituted a bike sharing program that has been a [rousing success](#). “Rousing” might be an understatement actually. Fargo’s bike share program, Great Rides, totaled more than 143,000 rides in six months with 100 bikes available. This is more use than the bike-share systems in Minneapolis and Denver, two much larger cities, received in their first years.

The Fargo-Moorhead metro has more than 25,000 college students, and, as Tracy Walvatne, owner of Josie’s Bakery in downtown Fargo, pointed out to me, “Younger people are less inclined to drive. They are multi-modal.”

What was the Effect on Businesses?

A common argument against lifting minimum parking requirements is that such a move will harm sales at small businesses by making it tougher to find nearby parking places. Fargo has seen no such thing. Downtown shops are thriving and storefronts do not stay vacant for long.

Walvatne, the bakery owner, said that there is plenty of short-term and guest-friendly parking downtown. She said a big challenge has been getting past the misperception that if you can't see your final destination from your parking spot, it must be far away. "Those of us raised in the mall generation have that misperception."

However, in reality, when parking downtown, you are not parking farther away from your final destination than you would be at a mall. Fargo created an overlay map visually comparing walking distances for parking downtown with the West Acres shopping mall.

What Was the Effect on Development?

Eliminating minimum parking requirements has been very positive from a development standpoint. A number of flat surface lots have been developed into housing and mixed-use buildings. This, of course, has two benefits. First, a building creates more value and tax revenue than a flat surface parking lot. Second, these developments bring more residents and their spending money downtown, which is a boon for businesses.

The assessed value in [Fargo's Renaissance Zone](#) (which encompasses a portion of the downtown) was \$190 million in 2003; it recently topped \$600 million thanks to improvements and new development.



Downtown aerial photo with outline of West Acres



The success of downtown Fargo is undeniable and has been the subject of many flattering profiles. The downtown was recognized in 2009 as one of the country's [top 10 neighborhoods by the American Planning Association](#). Fargo Marathon organizers insisted on having their 30,000 participants start the race in the ambiance of downtown. ESPN GameDay has been to Fargo multiple times, but initially, when they proposed to broadcast from Downtown Fargo, some fans were miffed. They couldn't comprehend why ESPN wouldn't host the show from the stadium where the NDSU Bison play, the Fargo Dome, a standard indoor arena surrounded by a sea of parking lots near the edge of the city. The iconic picture above, along with ESPN's desire to return, clearly demonstrates the wisdom of their decision.

While Fargo has been able to accommodate growth up to this point without significant investments in additional parking, many leaders are feeling they have reached a point where it would be beneficial to develop a parking structure to spur development of their remaining flat surface parking lots. So, there is a balance. Some parking is necessary. Nevertheless, the Fargo experience clearly demonstrates that robust growth and development can occur without mandating parking spaces.

[Editor's note: A parking garage was built in downtown Fargo after the publication of this piece. It opened in 2017, and [we profiled it in a post](#) favorably, as part of a pragmatic strategy toward nudging Fargo away from dependence on surface parking.]

It also shows that you don't start with parking. You start with creating great places, developing more infill (which brings people and jobs), and improving transit and bikeability. Do that first, then worry about the parking. Unfortunately, far too many cities start with parking and get hung up.

ONE LINE OF YOUR ZONING CODE CAN MAKE A WORLD OF DIFFERENCE

By: Aaron Qualls



In 2009, as [buildings were being bulldozed for surface parking](#) to meet minimum standards in Historic Downtown Sandpoint, Idaho, city leadership took bold action. Downtown area off-street parking requirements were completely eliminated. The decision was preceded by heated debate and was not unanimous. Now, ten years later, what was the result?

Since that contentious decision by the Sandpoint City Council, millions have been invested downtown—in projects that would not have been feasible but for the elimination of parking requirements. New jobs, building renovations, and expansions by local businesses were essentially made possible by adding a single line of code.

Arguably, no city ordinance is more underestimated for its long term impacts than off-street parking requirements. Many cities are now starting to recognize the [negative effects parking minimums](#) can have on housing affordability, historic preservation, the environment, small businesses, walkability and municipal budgets. In Sandpoint, some of these effects were not hypothetical but happening right before our eyes. The 2009 approval of a 60,000 sq. ft, three-story bank headquarters in the heart of downtown ended up requiring 218 parking spaces. Because only 110 were provided (which was plenty), the bank was subjected to in-lieu parking fees totaling over \$700,000. Well, being bankers, they soon realized the cheaper alternative was to buy up adjacent properties and demolish the buildings for surface lots. Consequently, small businesses were evicted and the much-beloved downtown historic development pattern was diminished.

This experience caused city leaders to pause, reflect, and take action to ensure this would not happen again.

Now we are realizing the dividends paid over time. That single line of code abolishing off-street parking minimums downtown has enabled four distinct projects that would have been otherwise impractical. Each of these projects has enriched Sandpoint by contributing vibrancy, economic productivity and an increase in the tax base.

Four Success Stories Made Possible by Parking Reform

The first was an expansion of a popular taqueria. A modest increase of seating area prior to the code change would have required seven additional parking spaces, or \$70,000 in fees. That's just too many tacos. For a small local restaurant (one which began as a food truck), this would have ended the project before it began. Instead, the venture ushered in other business expansions and downtown improvements.

Soon after, the local winery expanded. The owners were able to transform "...a defunct former furniture store into a vibrant mixed-use showcase blend of old and new materials and design...bringing renewed prominence and economic energy to this corner of Sandpoint's downtown." This description is from Idaho Smart Growth, which bestowed a [Grow Smart Award](#) for the renovation in 2015. Had there been off-street parking requirements in place, it never could have happened.



Joel's Mexican in Sandpoint, ID



Belwood 301 Building

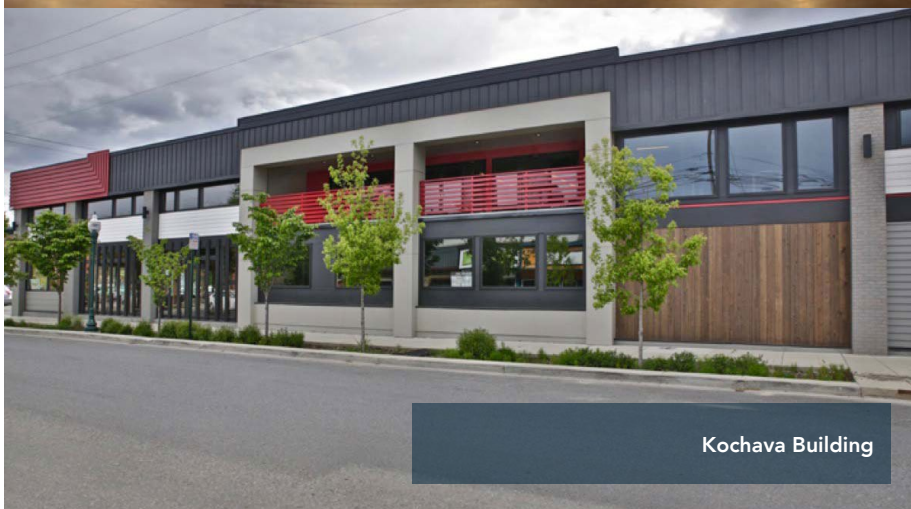


The same is true for Sandpoint's premier music venue downtown which now brings in world renowned musicians consistently and is attended by music lovers regularly—some of whom travel considerable distances from Washington, Montana and even Canada.

More recently, a small local tech startup started to feel extreme growing pains once their platform became [recognized for its innovation](#). Rather than relocating, they renovated an old, dilapidated steel frame building downtown that was originally constructed to house lumber supplies. It is now a modern tech campus, which houses close to 100 full-time employees. Despite having a sizable surface parking lot, the owners would have needed to roughly double the amount of parking (or pay exorbitant fees).

This last example alone, compared to tax assessor data from the year before, resulted in an assessed value increase of over \$2 million. Beyond an increase in property tax, the centrally located tech jobs have had many other positive rippling effects through Sandpoint's economy.

One. Line. Of. Code. At this point you're probably wondering about the fears of those who opposed the rule change. "So, is there now a parking problem?"



If you believe that in a downtown area you should not have to walk a couple of blocks at certain times, then, yes, there is a problem. But is that really a problem or an indicator of success?

A vibrant downtown is where people go to see and be seen by others. If Downtown Sandpoint were vacant and subsequently full of empty parking spaces, why would anyone go there at all? In this sense, the only thing worse than having a parking problem is not ever having a parking problem.

Now, this is not to say the city should ignore the issue of parking altogether. It should also be pointed out that not every new development elects not to provide parking. There are [other solutions](#) beyond mandated parking minimums, however, which won't sack a downtown or diminish economic productivity.

A Positive Precedent

Towards the close of 2018, Sandpoint expanded the deregulated area and completely overhauled off-street parking requirements throughout the rest of the city—substantially reducing minimum requirements. It was much easier this time around. The reason? The City was able to see the millions invested downtown as a result of that bold action taken in 2009. Since that time (even during the recession), Downtown Sandpoint has seen the local winery building expand, a new music venue open, a beloved restaurant expand, and a local high tech startup enjoy relocation and growth to nearly 100 employees right in the middle of it all. Not one of these investments would have been possible under the old paradigm of mandated parking minimums. Was it easy? No. Is there more work to be done? Likely, yes. Has it been worth it so far? Absolutely.

*Aaron Qualls is the Planning and Community Development Director for the City of Sandpoint, Idaho.
Photos courtesy of Winterhawk Construction, Kochava, Belwood 301, The Hive, Joel's Mexican*

III. GET INVOLVED



Our national obsession with abundant, free parking—and our resulting glut of underutilized asphalt—is hurting our communities. It’s hurting our finances. It’s hurting our small, local businesses. It’s hurting our environment, our health, our ability to walk from place to place.

There’s a common-sense first step we can take: End Parking Minimums. No city, large or small, needs to be in the business of telling property owners that it knows better than they do how much off-street parking they need to provide.

If you want to get involved in our campaign to put an end to these wasteful, counterproductive regulations in every town and city in America, here are four easy ways:

1. Join the Strong Towns Movement. Your support helps us create content like this book and share it widely, mobilizing a bottom-up revolution of citizen advocates from heartland to coast, North to South, big city to small town. You can become a member of Strong Towns, and get access to exclusive content such as live Q&A webinars, by donating in any amount. Find out more at strongtowns.org/membership.

2. Participate in #BlackFridayParking. All you need is your camera, a social media account, and a trip to a far-from-full parking lot or several on the day after Thanksgiving. Find out more at strongtowns.org/blackfridayparking.

3. Share your success stories with us. Know of a city that has eliminated its parking minimums, or made progress toward doing so? [Fill out this survey here](#) and contribute it to our crowd-sourced map. Got a compelling story about how they overcame political pushback or addressed other challenges in a creative way? Pitch it to us and we might run your guest post on the site: strongtowns.org/pitch.

4. Join the conversation to get informed and inspired. Our movement includes thousands of advocates across the continent with a huge breadth of experience and wisdom, and someone is sure to have advice or an answer to your specific question. We have lively conversations going on every day on platforms including Facebook, Slack, and our Strong Towns Community site. Learn more and get connected at strongtowns.org/connect.