



Parking Minimums and Affordable Housing

Iris Nott, Legislative Policy Analyst

Years of advocacy for parking reform has resulted in more communities shifting from requiring off-street parking for new development and redevelopment to reducing or eliminating minimum parking requirements (MPRs) also known as parking mandates. This is a significant and recent change. Minimum parking requirements took off throughout the U.S. during the post-WWII boom. During this time, vehicle ownership surged and required parking was a response to the desire for motorists to always have a convenient parking space everywhere they went; until recently, there was very little change (Manville, 2021). Donald Shoup has long been the leading champion for parking reform and has touted three main reforms: eliminate parking minimums, charge for on-street parking, and use the revenue to improve the surrounding area and public transportation.

When it comes to parking reform, there is no perfect size of community. Cities large and small have all enacted changes to eliminate or reduce MPRs. The variation lays in the scope of the reform from downtowns to transit-oriented developments (TOD) to citywide. Cities with a population less than 1,000 to major urban cities such as Minneapolis and St. Paul, and Austin, Texas have eliminated MPRs citywide (Figure 1), while over 2,000 cities and towns have reduced their parking requirements or eliminated requirements in at least part of the city (Parking Reform Network, 2024).

Figure 1 Citywide Elimination of Minimum Parking Requirements



(Parking Reform Network, 2024)

Parking reform is an area with a broad range of support including developers, housing advocates, environmentalists, land use planners and economists, and has received bipartisan support. Eliminating MPRs has been identified as a strategy to encourage downtown revitalization and decrease commercial vacancies, reduce sprawl, reduce climate impacts, encourage infill and

support more affordable housing development. This document primarily focuses on the latter, affordable housing.

The City of Bellingham is facing a housing shortage, as is the greater State of Washington, and combating the housing shortage is a top priority for the city. In 2022, the Whatcom Housing Alliance produced a report, [Parking Policy & Housing Affordability](#) which delves into this topic with a countywide lens. The information herein is intended to complement this prior work, however; the subject necessitates some overlap. Readers are encouraged to look at both documents.

MPRs and Housing Affordability

Scholars have linked minimum parking requirements to higher housing costs through: oversupply of parking, bundled parking costs built into the cost of housing, fewer smaller housing options, and reduced supply of housing.

Parking Supply

The United States has an oversupply of parking spaces compared to vehicles. Analysis of multiple parking studies by Todd Litman suggest that there are between three and six off-street parking spaces per vehicle in communities; even more spaces per vehicle when you add on-street parking (2023). Seattle had 5.2 parking spots per household in 2018 (Mortgage Bankers Association). Bellingham has an abundance of private parking because most development that has occurred in the last 50+ years has included parking as a result of minimum parking requirements.

Bundled Parking

There are numerous inputs that affect the construction cost of a parking space, including the cost of land, construction materials, labor, and the type of parking (e.g. unenclosed surface, enclosed, parking garage, underground). The estimated replacement cost of a parking space in Seattle was estimated to be \$118,000 per household in 2018 (Mortgage Bankers Association). Unenclosed surface parking is usually the cheapest, the most expensive is typically underground parking. Parking space construction costs in Whatcom County ranged from \$18,000 to \$23,000 per space in uncovered lots and between \$33,000 and \$45,000 per space in structured above ground parking according to interviews conducted with local developers (Jo, 2022).

These costs are passed on to households because the cost of parking is bundled in the cost of a mortgage or rent. Not all households own vehicles and the lowest income quintile own the fewest vehicles in the U.S.; 30% of the lowest quintile of households did not own a vehicle at all in 2022 (Bureau of Transportation Statistics, 2023). For households that do not own a vehicle, they are still paying for parking because it is built into the housing unit construction cost, which is then passed on to the buyer or renter. One study found a parking spot in a garage increased annual rent by 17% (Gabbe & Pierce, 2017). Advocates for parking reform argue parking is an amenity worth paying more for when desired, just like in-unit washers and dryers, upgraded kitchen appliances or pools. If the household wants parking, they will select the place that offers parking over a cheaper place that does not. Those who do not have a vehicle can select housing without parking and pay less. This can only happen if there are housing options without parking included automatically.

Fewer Small Housing Options

Minimum parking requirements can discourage the construction of smaller units. When faced with the need to reduce the number of units to meet parking requirements, the most affordable ones with no or fewer parking spaces are the first to be eliminated resulting in larger expensive units being built (Lehe, 2018). Lehe argues that when developers are faced with the need to reduce the number of units, they often eliminate the small unit because it is easier to charge more and recoup the cost of the larger unit than the smaller unit. In other instances, parking minimums make the entire development (from one unit up to an apartment complex) too costly and unprofitable, resulting in no new units rather than just a reduction in the number of units built. Average household size has decreased over the last eighty years, while the size of a single-family home grew 20% from 1990 to 2022 (USA Facts, 2023).

Housing Supply

MPRs also increase housing costs by reducing the available housing stock. This is created through larger market conditions that constrain alternative housing options (Lehe, 2018). When there are limited alternatives, developers can charge more for a housing unit. High demand and low supply results in overall higher prices for housing. In this case, the increased cost is linked to lack of supply rather than the passing on of actual construction costs. There are other land use and zoning factors that impact supply, but if minimum parking requirements restrict the amount of housing available, then removing this barrier can help encourage more housing which then shifts the equilibrium price closer to actual costs. In both Portland, Oregon and Minneapolis (mentioned in the case studies below), most new homes were market-rate, both locations saw rent stabilization over a four year period when neighboring communities experienced much higher rent increases, indicating that more housing supply overall helps lower and stabilize the cost of housing in a community (Horowitz & Canavan, 2023).

While there are indications of what has developed before and after eliminating parking minimums in various communities, it is not possible to measure how many projects never happened in the first place. There is no way to track the number of developers or landowners who never made it to the permit stage of development because, after they looked at the local land use regulations, they realized their plan was prohibited or infeasible. Similarly, while this data often exists in some form in a municipality, there is a dearth of easily accessible, compiled research about how many people went through the early stages of permitting, or even made it to the final stages, before scuttling a project due to parking requirements. There are, however, numerous anecdotes about this second situation. In his book, *Paved Paradise*, Henry Grabar (2023) listed multiple instances of developments that were ultimately squashed because the cost or design of parking made the development infeasible or where parking was the scapegoat to nix an affordable housing development in a particular neighborhood such as in Solana Beach, CA, or in the Five Points neighborhood in Denver.

State Level Parking Reform

Western states have enacted legislation relaxing or eliminating parking requirements for certain types of development. Much of the legislation has focused on parking in relation to residential uses and housing rather than commercial use. In Washington, the focus includes eliminating or reducing

parking requirements for certain housing types or locations, creating parking maximums, and more relaxed requirements for the type of parking required.

The primary focus for most of these legislative efforts is reducing barriers for housing development, such as Washington House Bill 1110, which aims to make it easier for development of the “[missing middle](#)” housing. The missing middle is housing that lies between the detached single-family house and mid to high rise apartments and includes ADUs, duplexes, triplexes and fourplexes, as well as small apartment complexes. At the federal level, bills have been introduced, such as the [People Over Parking Act](#), but congress has not passed any legislation. Enacted legislation for Washington, Oregon and California is listed below.

Washington

[Senate Bill 5689](#) (2022) – The Supplemental Transportation Budget called for the Washington State Department of Transportation (WSDOT) to identify and recommend changes to laws and rules that would support reducing vehicle miles traveled (VMT) in the state (Washington State Legislature, 2022). The 2023 final WSDOT report found that “Strategies such as land use, road pricing and parking policy offer the highest average effect on VMT with percentage reductions of 65, 25, and 20 percent respectively” (Washington State Department of Transportation, 2023, p. 22). The report recommends that the state ideally remove MPRs everywhere, but at a minimum, remove parking requirements for communities with efficient transportation. Other recommendations include implementing parking maximums, allowing bike parking to substitute for vehicle parking, and reducing barriers to shared parking agreements.

[House Bill 1110](#) (2023)– Eliminates the State Environmental Policy Act (SEPA) requirement for eliminating parking minimums. Eliminates off-street parking requirements near major transit and changes parking minimums to parking maximums for middle housing.

[House Bill 1042](#) (2023) – Exempts additional residential units in existing mixed-use buildings from additional parking requirements but may require the retention of existing parking.

[House Bill 1337](#) (2023) – This bill reduces barriers to the development of ADUs to increase housing supply and combat the housing affordability crisis. This bill limits local government barriers for development of ADUs. It prohibits local governments from requiring street improvements for ADUs and eliminates off-street parking requirements for ADUs within a half mile of a major transit stop and limits how much off-street parking can be required for other ADUs based on lot size.

[Senate Bill 6015](#) (2024) – Prohibits local governments from requiring garages and carports to meet MPRs for residential developments, counts enclosed and unenclosed parking towards MPRs, allows tandem parking to count, and limits size requirements for parking spaces. Allows up to six existing legally nonconforming gravel parking spaces in a designated parking area to count towards local parking minimums. Limits off-street parking requirements for residential development and redevelopment if tree retention compliance makes the development otherwise infeasible.

Oregon

[House Bill 2001](#) (2019) – The legislature passed HB 2001 to create more housing choice and increase middle housing. The legislation legalized middle housing up to fourplexes in all single-

family zoned areas for medium to large cities throughout the state, with limited exceptions for deficient infrastructure. It also eliminates off-street parking requirements for most ADUs with an exception for ADUs that are vacation or short-term rentals. The bill regulates and limits local government's power to require off-street parking as outlined in the state administrative code ([OAC 660-046-0000 – OAC 660-046-0370](#)).

California

[Assembly Bill 2097](#) (2022) – Prohibits local governments from requiring vehicle parking for residential, commercial or industrial development within a half mile of public transit, with limited exceptions (California State Legislature, 2022).

[Assembly Bill 1317](#) (2023) Creates a pilot program for unbundled parking in 10 counties for residential properties of 16 or more units starting January 1, 2025, with exclusions for units with built-in garages and 100% affordable housing, Low Income Housing Tax Credit housing subject to Internal Revenue Code sec. 42, or where unbundled parking is otherwise prohibited.

Case Studies

The following case studies look at the way cities have implemented parking reform and what the outcomes were. The cases include large cities and small towns. Because many communities have only recently implemented parking reforms, there is a growing body of evidence, but the number of long-term studies is limited. Notably, many communities started with parking reform in a limited area and have since expanded their reforms.

San Diego, CA – Near Transit – San Diego provides a look at what happens when there is a density bonus for affordable housing development before and after eliminating parking requirements. The city implemented a density bonus for new developments that included affordable housing units, this included reduced parking requirements for very-low, low, or moderate income with a maximum of a 50% density bonus when up to 15% of units are very-low income units (O'Sullivan & Parent, 2022) In 2019, the city eliminated parking requirements for housing units near transit. An analysis of the number of affordable housing units developed from 2016 through 2020 found that there were nearly six times more affordable housing units built in 2020 after the elimination of the parking requirements than the previous year (Curry, 2021). Developments that use the density program have ranged from seven homes to 400 and include mixed income and 100 percent affordable (O'Sullivan & Parent, 2022).

Seattle, WA – Downtown and Near Transit – The city eliminated parking requirements for development near public transit in 2012. The city eliminated parking requirements for multifamily housing downtown and within a quarter mile of frequent transit, and reduced parking along transit routes in other parts of the city. Researchers analyzed new developments between 2012 and 2017. A total of 686 multifamily and mixed-use developments produced 60,361 housing units and 39,350 parking spaces (Gabbe, Pierce, & Clowers, 2020). The results showed that 30% of developments with no minimum parking did not include any parking while 70% still built parking spaces. Housing units in locations with no required parking had an average of .49 spaces per unit, while housing units in areas with reduced parking requirements had an average of .91 spaces per unit. Overall, there was a 40% reduction in the amount of parking built compared to previous minimums.

Buffalo, NY – Citywide – Buffalo, NY eliminated vehicle parking minimums citywide in 2017 as part of a major, 7-year overhaul of their land use code, now known as the Green Code. The city replaced parking minimums with a Transportation Demand Management plan (TDM) for most new construction over 5,000 sq ft. or major redevelopment of spaces over 50,000 sq ft.; the city also implemented bicycle parking minimums (Green Code, 2017).

A study of the first two years of development under the new Green Code found that 36 developments produced a net of 502 fewer parking spaces than were previously required by the minimum parking requirements (Hess & Rehler, 2021). Notably, the study found that mixed use developments saw an overall reduction in the number of parking spaces, while single-use commercial, residential and civic developments produced more parking than the previous parking minimums required (Figure 4). This study only covered the first two years and excluded developments that did not require a TDM including small developments and single family and duplex projects. The study found that, given flexibility, developers still included parking overall, but in different amounts than would have been required previously.

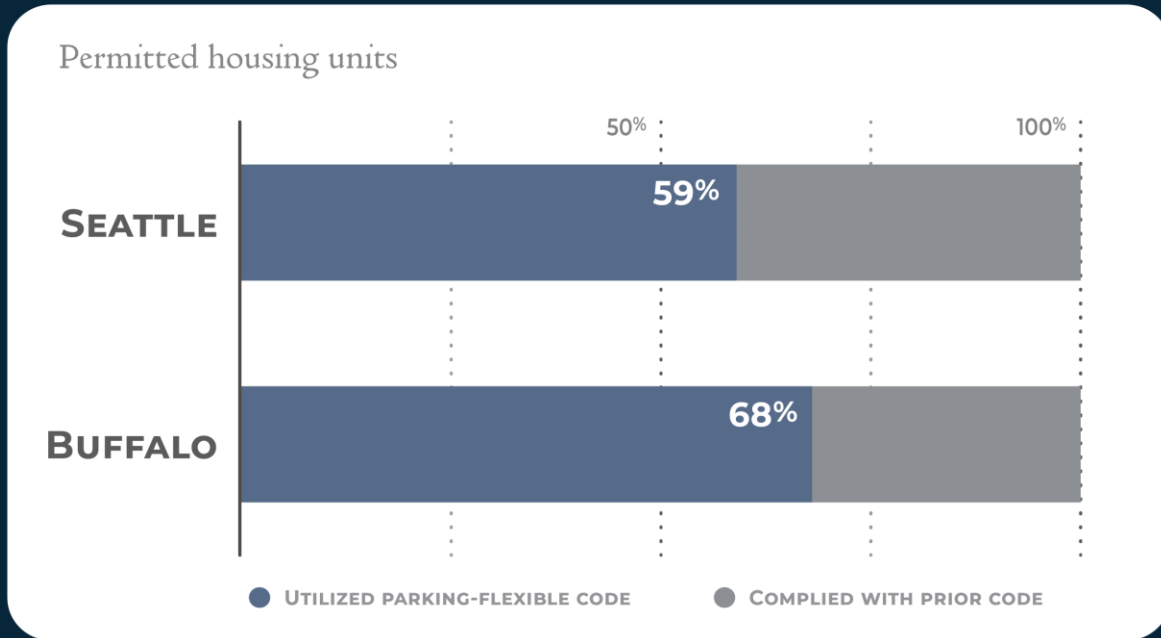
Figure 2 Buffalo, NY Development and Parking Supply

Table 1. Development and parking supply characteristics by land use category (Green Code vs. previous minimum parking requirements).									
Land use category	Developments				Off-street parking spaces				
	No.	Share of total (%)	No. units (residential)	Gross area, ft ² (non-residential)	No. approved under Green Code	Previous MPRs	Green Code approved (as % of previous MPRs)	Total difference	% difference
Mixed use	14	39	1,034	313,193	726	1,539	47	-813	-53
Residential	14	39	566	19,100	760	652	117	+108	+17
Commercial	4	11	0	129,959	291	177	164	+114	+64
Civic	4	11	0	134,358	165	76	217	+89	+117
Mean					54	68	79	-14	-21
Total	36	100	1,600	596,610	1,942	2,444	79	-502	-21

(Hess & Rehler, 2021)

Catie Gould, of Sightline Institute, asked the authors of both the Seattle and Buffalo studies to look at their data and identify how many housing units would have been prohibited under the previous parking requirements. They found that 59% of the housing units in Seattle and 68% of the housing units in Buffalo would have been prohibited under the previous requirements (Gould C., 2023).

The majority of new homes permitted after eliminating parking mandates were illegal under the prior code.



Sources: Hess & Rehler, "Minus Minimums," *Journal of the American Planning Association* (2021); Gabbe, Pierce, & Clowers, "Parking policy: The effects of residential minimum parking requirements in Seattle", *Elsevier* (2019)

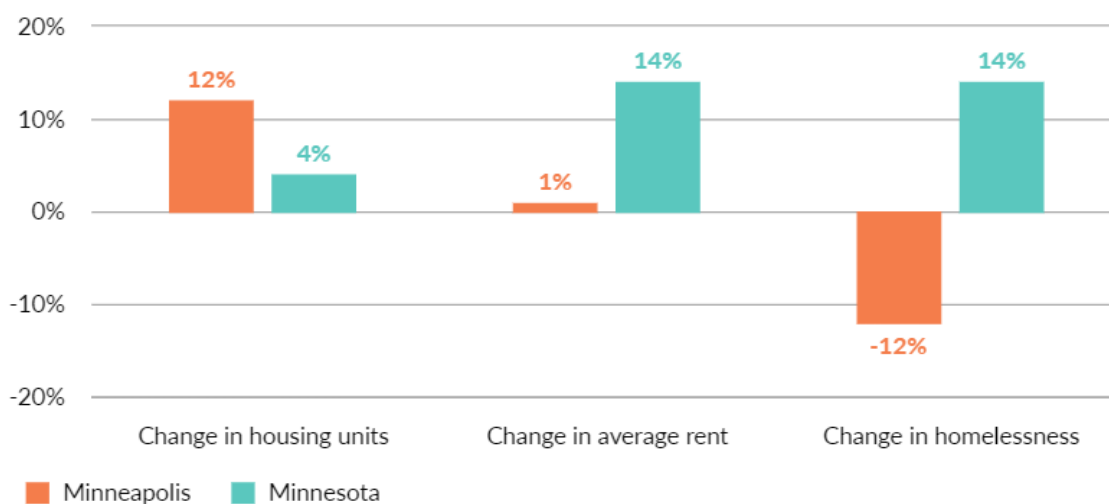
(Gould C., 2023)

Minneapolis, MN – Eliminated Downtown, Then Near Transit, Then Citywide – In 2009, the city eliminated parking requirements downtown. In 2015, the city eliminated parking minimums near transit and in 2021, the city eliminated parking minimums citywide, lowered parking maximums, increased bike parking, and expanded their transportation demand management (TDM) requirements. These changes support the policy goals of the Minneapolis 2040 comprehensive plan. The city made these changes in conjunction with other land use reforms that reduced barriers for housing development such as simplifying the permitting process and lowering lot size requirements. Between 2017 and 2022, the city had a 12% increase in housing stock, a 1% change in average rent, and a 12% decline in homelessness (Liang, Staveski, & Horowitz, 2024). These positive results are not attributed solely to eliminating parking minimums, they are the result of multiple reforms that made housing development easier and more affordable.

Figure 3 Percentage Change in housing stock, average rent and homelessness, 2017-2022 – Pew Charitable Trusts, 2024

Minneapolis' Rent Growth Was Much Lower Than Minnesota's

Percentage change in housing stock, average rent, and homelessness, 2017-22



(Liang, Staveski, & Horowitz, 2024)

Portland, OR – Eliminated, Reinstated, Eliminated Again – Portland provides a look at where parking minimums were eliminated, then reinstated, then eliminated again. Portland eliminated parking minimums near transit in the early 2000s. They later reinstated parking minimums in 2013 for apartment buildings with more than 30 units (1 spot for every 5 units in building with 31- 40 dwellings up to 1 spot for every 3 units in buildings with 51+ dwellings) after there was concern about multiple buildings in the Southeast Division Street Neighborhood developing without parking (Njus, 2013). While some called for on-street parking management rather than reinstating minimums, the city did not take this direction; some attribute this to Portland’s unique government structure which makes creating parking management systems challenging (Gould C. , 2022). A couple years later, the city approved parking exemptions and inclusionary zoning for buildings larger than 20 units, effectively eliminating the parking minimums for apartments again. Then, in 2022, the city eliminated all parking minimums to comply with state law. Between 2017 and 2021, Portland experienced a 7% increase in homes, and between 2017 and 2023, the city experienced a 2% change in median rents (Horowitz & Canavan, 2023).

Port Townsend, WA – Reduced Then Eliminated Citywide – In 2022, the town relaxed their parking requirements to eliminate barriers to the development of more affordable housing stock by reducing MPRs for multi-family housing and eliminating parking requirements for ADUs (Sloan, 2022). In March 2024, the city took additional steps to eliminate parking requirements citywide. A conversation with Port Townsend Planning Director, Emma Bolin, revealed that, while the change was very simple from a zoning perspective, it was not as straightforward for public works. The public works department identified existing conditions for on-street parking as a challenge due to a lack of curbs throughout the city and the need to create barriers to keep people from parking in unsuitable locations. After reviewing two alternatives presented by the planning and public works departments, the council approved an interim regulation that removed city-wide parking minimums by converting the previous minimum from required to recommended. The interim regulation

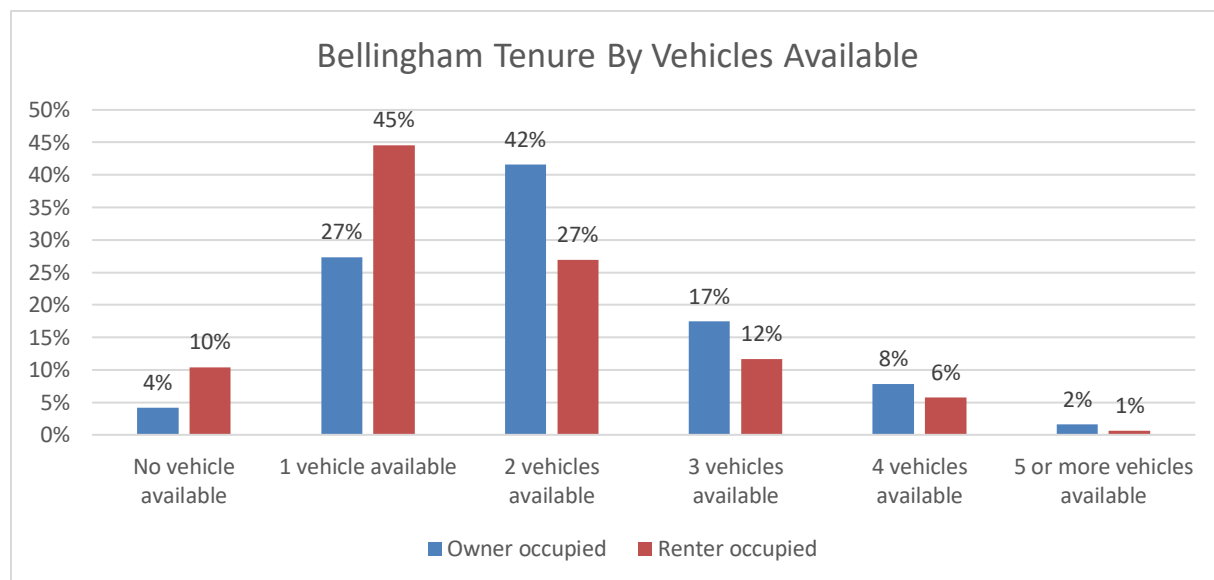
allowed the city to make the change prior to their upcoming comprehensive plan update, when they will consider a permanent change. Less than two months into this reform, it is unclear whether new developments will opt to eliminate or reduce parking or continue to develop parking under the previous standard rather than improve curb infrastructure. Anecdotally, Director Bolin reported some positive effects and potential interest, but it is too soon to tell what the outcomes will be.

Port Angeles, WA – Reduced Near Transit - The City of Port Angeles worked on a form-based code update in 2021. As part of this change, they passed Ordinance No. 3688, which updated the city’s off-street parking requirements and reduced parking requirements near transit (City of Port Angeles, 2021). The updated off-street parking chapter encourages transportation demand management; and lists the criteria that must be met for reduced parking requirements including a 50% reduction in required parking for all developments within 2,500 feet of a bus stop (City of Port Angeles, 2024). The city rounds down when the required parking results in a fraction, so the 50% reduction can effectively result in no required parking for most residential uses in much of the city. Port Angeles is characterized by wide streets with existing curbs and will likely not encounter the same street infrastructure challenges as expressed in Port Townsend.

Bellingham

In the City of Bellingham, more than half of renter occupied households and nearly a third of owner-occupied households have no vehicle or only one vehicle per household (United States Census Bureau, 2021). Just over a quarter of owner-occupied households have three or more vehicles, while just under a fifth (18%) of all renter occupied households have three or more vehicles.

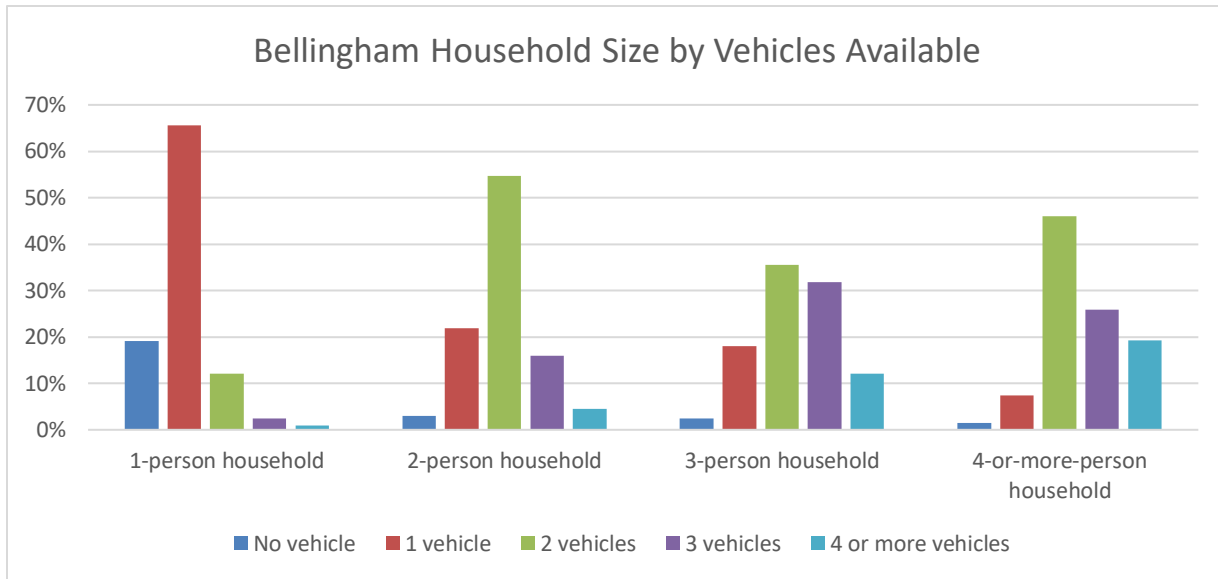
Figure 4 City of Bellingham Tenure by Vehicles Available, ACS 1-Year Estimates 2021



(United States Census Bureau, 2021)

Most one-person households have no vehicle or one vehicle (85%). One- and two-person households make up nearly 70% of households in Bellingham and tend to have fewer vehicles per household compared to households with three or more vehicles (United States Census Bureau, 2022). Forty percent of all households of any size have zero vehicles or one vehicle.

Figure 5 City of Bellingham Household Size by Vehicles Available, ACS 5-Year Estimates 2022



(United States Census Bureau, 2022)

[BMC 20.12.010](#) regulates parking in the city. The code outlines parking requirements by use and gives the planning director the authority to waive or reduce the amount of parking required when certain circumstances are met. The city has provided exemptions in the past, including a reduction in parking for Samish Commons, and for Stateside Apartments.

The city granted Stateside Apartments a parking waiver for reduced parking with an annual parking and transportation report and required implementation of dynamic pricing. The complex houses students attending higher education in the county. In 2023, the complex had 100 on-site parking spaces, leased 88 spaces from the City’s Commercial Street parking garage, and leased an additional 20 spaces from Diamond Parking, split between two locations. All the spaces are within a couple of blocks of the complex. The property management company, Campus Advantage, conducted parking and transportation surveys in 2022 and 2023. In 2023, when asked where residents park, 44% responded that they do not own a vehicle while 21% said they park on-site, 18% park at one of the off-site parking lots and 16% utilize on-street parking (Campus Advantage, 2023).

The complex offers unbundled parking and uses dynamic pricing for on-site parking spaces, where the price for an on-site spot increases as the number of available spots declines. Spots were rented for between \$125 and \$375/month in 2022, and after collecting data, the property management team adjusted the rates for the following year from \$100 for the first spots up to \$305/month for the last spot rented in 2023 (Campus Advantage, 2023). Stateside has 300 bike parking spots and a car-share service as alternatives to personal vehicles.

After recent regulatory changes for ADUs, there was an increase in the number of permit applications. The city received 15 ADU applications between January and the middle of July 2023 and a total of 40 for the year. In 2024, the city had received more than 15 applications by February 14th and is on track to receive over a hundred applications by the end of 2024. Mayor Kim Lund

highlighted this trend during the February 26, 2024, City Council Meeting as an example of how streamlined applications have had a positive influence on local housing supply.

Conclusion

Studies have shown that when parking minimums are eliminated, there is a reduction in the total number of parking spaces built, but not a complete absence of parking for new construction overall. Some new developments in a community have eliminated or reduced the amount of parking developed compared to previous MPRs while others have kept the same or even provided above the previous minimum. The case studies show that removing the requirement for parking results in more density, lower construction costs, and increased supply. Minneapolis showed how efforts to encourage housing resulted in stabilized rent costs through the supply of both affordable housing units and market-rate units. San Diego showed how eliminating parking requirements can complement inclusionary zoning and density bonuses.

The evidence lends itself to the argument that removing parking minimums creates flexibility where developers scale parking based on the other factors involved, including but not limited to the target user (students, seniors, low-income, high income, etc.) existing parking in the surrounding area, multi-modal infrastructure and public transit. It provides the ability to right-size parking. The city is already seeing positive results from reduced regulatory barriers for ADUs. While ADUs are an important piece of the housing shortage, there are more types of housing needed to meet housing development goals.

Whether parking minimums are eliminated citywide, for TOD or by land use, the results have identified some best practices including monitoring on-street parking and implementing parking management when necessary. This is not new for Bellingham, the city has monitored parking and implemented parking management based on a threshold of 85% occupancy in areas such as Fairhaven. Parking management will continue to be important as will multi-modal transportation and coordination with the Whatcom Transit Authority to meet community needs. Advancing multi-modal transportation decreases reliance on vehicles; density and infill create demand for public transit, making it more feasible and effective. Bus stops and bus routes can adjust to demand, parking spaces are immobile.

If the question is whether parking reform solves the affordable housing crisis, the answer is no. If the question is, can eliminating parking minimums be part of the solution because it removes a barrier, then the answer is yes.

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