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Unlocking the Potential of Missing Middle Housing

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A growing group of researchers, advocates, and policymakers has begun to recognize the importance of expanding the supply of “missing middle” housing—a term used to describe buildings that range in size and density from Accessory Dwelling Units (ADUs) to small-scale apartment buildings of ten to twenty units—to solving the nation’s housing crisis. In 2018, the state of Oregon passed a first-of-its-kind policy requiring nearly all cities to allow for multiple homes on parcels in single-family neighborhoods throughout the state. In 2021, California passed Senate Bill 9, which allows up to four new homes to be built on most single-family parcels statewide. Similar statewide legislation has also been introduced or passed in Nebraska, Maine, Maryland, Connecticut, and Washington. The Biden Administration is proactively exploring ways¹ to create more of such housing, and cities across the country are considering implementing their own tailored land use changes to facilitate small-scale multifamily housing.

These policy shifts are welcome. Small-scale housing such as ADUs and small multi-unit buildings like duplexes and four-plexes are referred to as “missing” because they have largely been illegal to build in most neighborhoods throughout the United States due to local zoning restrictions. However, it is not yet clear if this wave of state and local zoning changes will result in a significant number of new homes. Several other factors are just as significant—if not more significant—than zoning in impacting whether cities

will see a gradual increase in housing and density in former single-family-only neighborhoods. These factors include regulatory mechanisms such as design requirements, utility specifications, and impact fees. Moreover, market factors—such as construction costs, labor availability, and the ability to attract capital—influence the effectiveness of any broad zoning changes in creating new homes.

This brief examines the barriers that developers of missing middle housing are facing, focusing on the experiences of developers working in markets where some form of zoning reform has taken place. We convened two roundtable conversations with developers in March of 2022. The roundtables included developers from throughout California, as well as from places around the country such as Portland, Oregon, Minneapolis, Minnesota, Boston, Massachusetts, and South Bend, Indiana as well as Texas and Oklahoma. These developers specialize in small-scale development, ranging from ADUs and duplexes up to twelve-unit multifamily projects.

The brief examines the history of missing middle housing as well as why facilitating this type of development has benefits. We then summarize findings from the two roundtable conversations we hosted with missing middle developers from across the country, focusing on regulatory, financing and construction barriers. We end with recommendations for how identified barriers could be addressed through policy change.

Background

Missing middle housing refers to a range of multi-unit or clustered housing types that are compatible in scale with single-family homes, as depicted in Figure 1, but are less common in new homebuilding.² The term “missing” is used because these types of housing have been illegal to build in most neighborhoods throughout the country since the 1920s, even though they were once prevalent across North America.³ Housing developments exist across a spectrum of scales and forms, with detached single-family homes at one end and mid-rise to high-rise apartments on the other; the “middle” of this range includes smaller-scale duplexes, fourplexes, cottage courts, and courtyard buildings. The former popularity of these housing types in the United States is still evident today, with one out of every 13 homes being a part of a two- to four-unit building.⁴

There are several reasons to expand the supply of missing middle housing. The first is to loosen the “stranglehold” of single-family zoning,⁵ and the ways in which zoning has been used for exclusionary purposes. Although racial covenants were struck down by the U.S. Supreme Court in *Shelley v. Kraemer* in 1948, the restriction of building types through the zoning code—with policies such as minimum lot sizes, parking requirements, and height limitations—allowed cities to maintain the widespread exclusion of households of color and lower-income households. The high prices commanded by the resulting, larger single-family dwellings prevent lower-income households—including a disproportionate share of people of color—from moving into single-family neighborhoods, which also often have greater amenities and resources such as

Figure 1. Missing Middle Housing Typologies



Source: Missing Middle Housing term created by Daniel Parolek/Image © Opticos Design, Inc./For more info visit www.missingmiddlehousing.com.

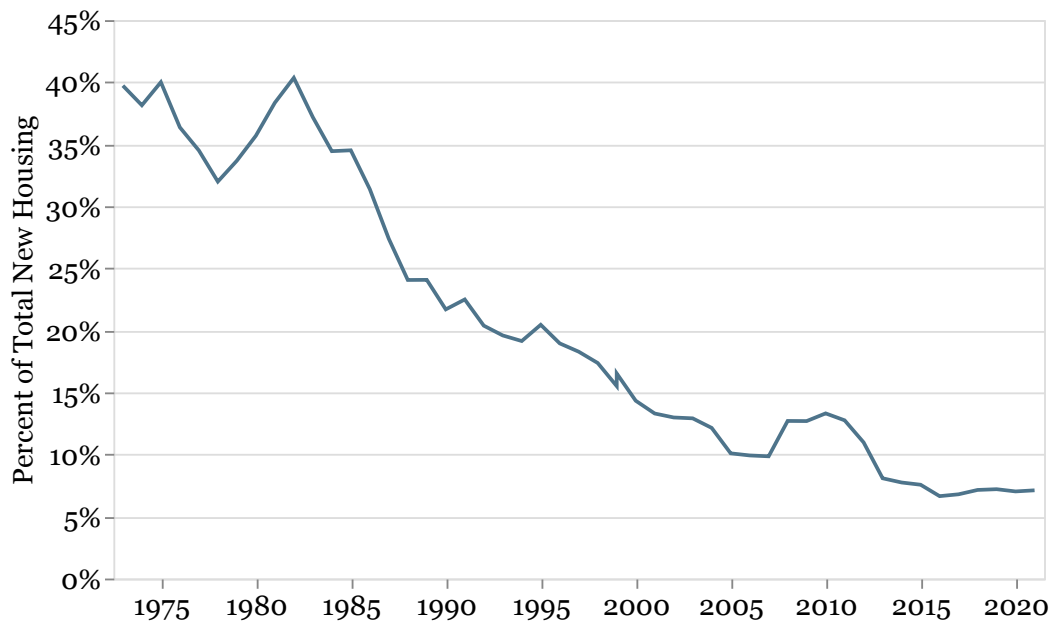
larger investments in schools and parks. The recent passage of local ordinances and state laws like California’s Senate Bill 9 thus signal a desire to move away from single-family zoning in order to redress its racist origins and to increase racial equity in housing and neighborhood access.

Second, the creation of missing middle housing can have a positive impact on the availability of more affordable “starter homes” that allow new buyers to enter otherwise competitive housing markets. Our analysis of census characteristics of new housing data found that the number of new homes that are smaller than 1,400 square feet has decreased steadily since the 1970s (Figure 2).⁶ In 2020, less than ten percent of all new homes built were smaller than 1,400 square feet, with implications for the cost of both owning and renting. Historically, missing middle homes have been a more attainable housing option to lower- and moderate-income families, those who make about 50-110 percent of area median income (AMI).⁷ Missing middle homes are smaller than most conventional single-family housing, making them more affordable by design. Since each home is typically

smaller, more housing units can fit on a plot of land—reducing the overall land cost per unit. The facilitation of missing middle housing types can be a tool to meet market demand for entry-level for sale homes as well as rental housing as they can be offered at lower price points than single-family-zoned homes.

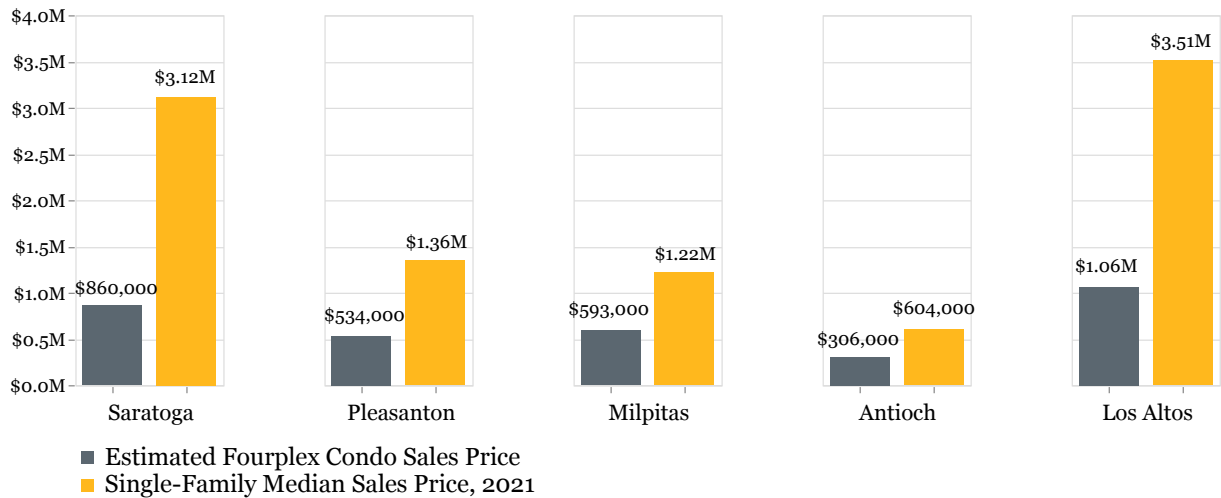
Recent research studies have demonstrated the potential benefits of allowing for more missing middle housing. For example, a study commissioned by California Community Builders modeled the impacts of upzoning single-family neighborhoods to allow for two-four unit buildings in six Bay Area cities (Figure 3).⁸ The research found that single-family homes are on average 2.7 times more expensive in overall price than the condos that would be built as a result of the missing middle upzoning. The required annual household income to purchase a home would decrease significantly: from \$250,000 to \$110,000 in Pleasanton and from \$120,000 to \$70,000 in Antioch.⁹ An analysis in Seattle from the Sightline Institute similarly found that new multi-family homes sell for less than new single-family homes in almost every neighborhood across the city and, overall, sell for less than older single-family homes.¹⁰

Figure 2. Decline of Smaller Home Construction, 1973-2021



Source: Characteristics of New Housing - U.S. Census. | Note: Smaller homes refers to homes under 1,400 square feet.

Figure 3. Comparison of Projected Unit Prices for Fourplex Condominium and Existing Single-Family Home Median Sales Prices in Select California Cities



Source: California Community Builders. (2022). "The Effects of Upzoning Single-Family Neighborhoods on Supply and Affordability." Retrieved from: <https://www.ccbbuilders.org/research/blog-post-title-two-23scr>.

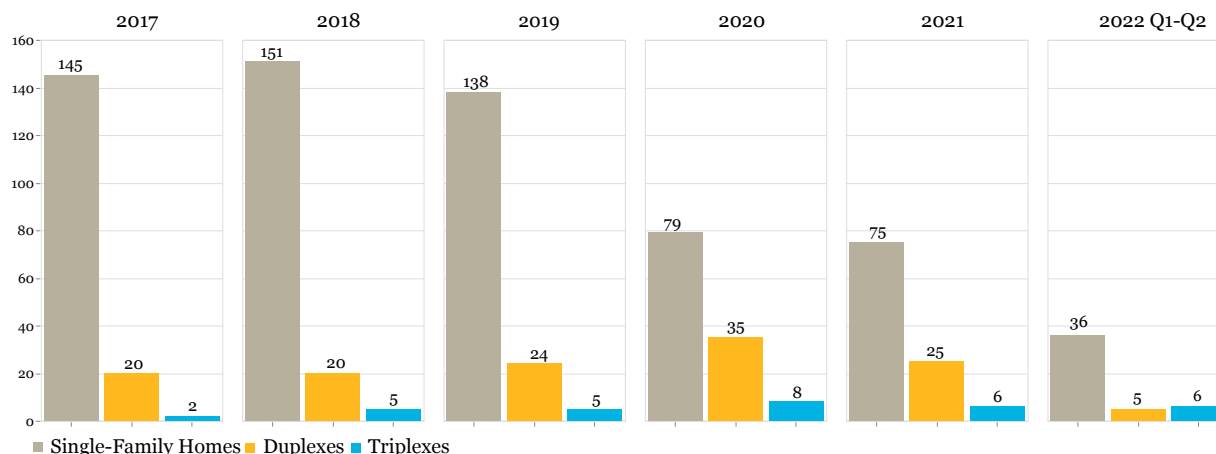
Third, the facilitation of more missing middle housing in existing neighborhoods also generates environmental benefits. The U.S. Environmental Protection Agency (EPA) found that residents in multifamily and single-family attached homes in higher-density neighborhoods use about 40 percent less electricity and 50 percent less water than residents in low-density areas.¹¹ The construction of new homes in existing neighborhoods can also result in residents living in places that are more walkable and result in lower vehicle miles traveled (VMT). The increase in density encourages transit agencies to provide more frequent service and contributes to more residents using public transportation and relying less on private vehicle usage, which accounts for 38 percent of California's greenhouse gas emissions.¹²

Policy Developments and Impacts

Several localities and states have taken significant steps to encourage the expansion of missing middle housing. Minneapolis was the first major city to allow duplexes and triplexes on single-family lots citywide. However, the resulting construction so far has been modest, though it should be noted this period coincides with the COVID-19 pandemic. According to the city's Department of Community Planning and Economic Development, from January 2020 through June 2022, Minneapolis approved 65 duplexes and 20 triplexes (Figure 4).

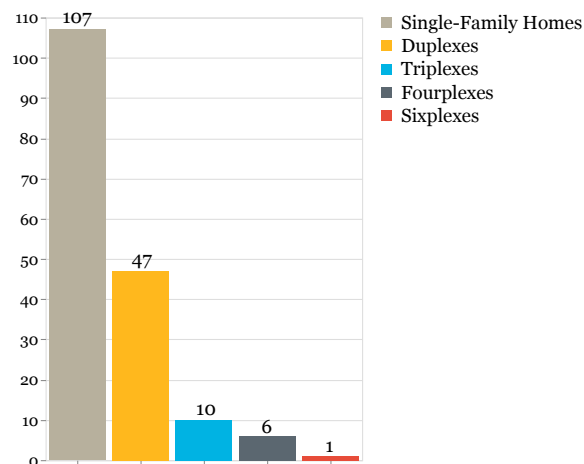
Portland also adopted citywide reforms in 2021. Specifically, the Residential Infill Program now allows the construction of duplexes, triplexes, fourplexes, mixed-

Figure 4. Number of Permitted Units by Type, Minneapolis, Minnesota, 2017-2022



Source: City of Minneapolis.

Figure 5. Number of Permitted Units by Type, Portland, Oregon, August 2021-July 2022



Source: City of Portland.

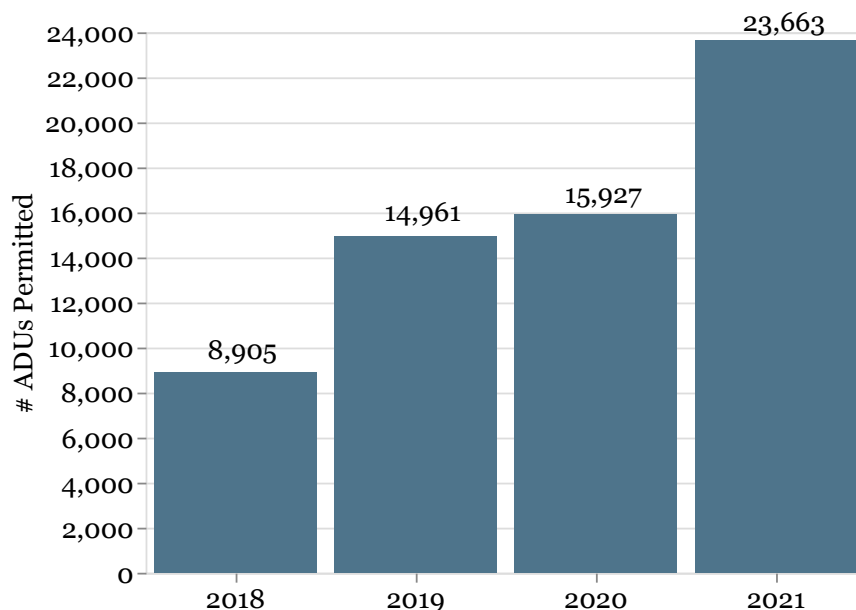
income or below-market sixplexes, or double ADUs in nearly all parts of the city. From August 2021 to July 2022, the program created 367 new units, including ADUs, that were previously not allowed (Figure 5). In June 2022, the city took these reforms a step further by updating some design standards to allow for larger fourplexes and cottage clusters.¹³

State laws to expand missing middle housing production have been introduced in 14 states since 2019 and have been adopted by four: Oregon, Maine, Nebraska, and California. In 2018, Oregon was the first state in the nation to end single-family only zoning with HB 2001. In Oregon, duplexes, triplexes, fourplexes, and forms of cottage clusters are allowed on parcels that were formerly reserved for single-family homes in all cities with more than 25,000 residents. In cities with a population of between 10,000 and 25,000 residents, duplexes would be allowed in all single-family zones. Nearly 70 percent of Oregonians live in a city subject to one of those requirements.

The state of California has also been a leader in missing middle housing reform, having passed a series of new laws since 2016 to facilitate ADU growth. The success of California's ADU legalization provides some insight on how missing middle housing reforms could play out in other states. A series of ADU reforms catalyzed an increase of ADU construction statewide as shown in Figure 6. In addition to requiring ministerial approvals for ADUs, state legislation also mandated standardized development fees and permit timelines, minimum unit sizes, and height to further increase their development and proliferation. ADU legalization has proven an effective strategy to expand the state's stock of relatively affordable, market rate housing; a survey in 2020 found that rented ADUs were on average affordable to median income households.¹⁴

The state has since passed even more ambitious legislation, such as SB 9, which enables homeowners to subdivide a single-family lot to build up to two new homes on each lot. A 2021 Turner Center analysis¹⁵ estimated that SB 9 could enable 700,000 new market-feasible homes, with the caveat that far fewer homes would actually be built given other factors not captured in the analysis and the significant flexibility in implementation afforded to localities.¹⁶ In addition, Senate Bill 10, passed in 2021, provides cities an option to zone for up to 10 housing units on a parcel located within a transit-rich area or urban infill site without environmental review. Adoption of this bill is dependent on local housing element law and general plan updates, with no cities implementing the law at the time of this writing.

Figure 6. ADUs Permitted in California from 2016 to 2021



Source: California's Department of Housing and Community Development (HCD) Dashboard.¹⁷ | Note: Data are not verified by HCD and may not reflect accurate totals.

Findings

While recent changes in zoning across some cities and states have opened the door to missing middle housing, builders may still be facing barriers that make it difficult to take advantage of these changes. The following section examines these barriers and highlights the findings from our roundtable conversations with builders. In general, interviewees told us that there is tremendous demand for the types of projects they are building, but more needs to change in order for missing middle housing to reach scale. Our findings show how a full suite of policy layers impact small-scale homebuilding beyond base zoning changes.

Changing zoning by itself is not enough to facilitate missing middle housing.

While changing base zoning to require homes to be permitted within lower density neighborhoods is a critical first step, such changes alone are unlikely to facilitate significant new home

construction. Our interviewees noted several land use policies that must be recalibrated to effectively accommodate missing middle housing typologies, and described the barriers that are specific to developers who are building this kind of housing.

Design requirements must be flexible to allow for more units on smaller lots.

Our interviewees noted that even with more homes allowed on single-family parcels, cities must also increase allowable building area commensurate with the increase in units. Otherwise, development of multiple units is difficult within the permitted building envelope. Cities dictate the buildable area through a number of design requirements or restrictions that go beyond the base zoning, including specific guidelines for front, rear, and side setbacks, building heights, roof pitch requirements, floor area ratios (FAR), easements, and parking. Our interviewees noted that any combination of these requirements

can greatly limit the effectiveness of base zoning changes in facilitating missing middle development.

In Minneapolis, for example, the changes to allow multiple units on single-family parcels did not include changes in other design requirements that dictate buildable area. In that city, duplex or triplex construction design is held to the same design standards as single-family homes. The lack of differentiated design standards means that new, smaller multi-unit homes have to adhere to the same FAR, setback, or height standards as larger single-family homes. Our interviewees pointed to this as a significant reason why more duplex and triplex projects have not been built in Minneapolis. In California, we heard from interviewees that height limitations have prevented multi-story buildings for ADUs and SB 9 projects, which is critical for smaller parcels where an extra story may be needed to accommodate a new unit. Many times, these limitations are at odds with requirements for single-family homes, which are often allowed to be built higher than ADUs or duplexes as allowed under SB 9.

In contrast, when design changes are made to intentionally support missing middle development, projects are more likely to succeed. Portland has taken a scaled approach to the building

“If we could go 20 feet, then we can start looking at building two stories, but otherwise, they will have to be side by side, and that is difficult for an infill context.”

**- John Perfitt, Restore
Neighborhoods LA**



A cottage cluster project in Portland, photo courtesy of Brian Foulkes.

envelopes of different housing types, allowing projects to grow in size and height to accommodate additional homes. Specifically, Portland allows for additional FAR for each unit through its Residential Infill Program. For example, where a single-family home can be built up to 2,500 square feet, a property owner interested in adding four units can build up to 4,000 square feet. Portland has also recently made additional changes to facilitate a greater array of missing middle housing, including removing design impediments to facilitate cottage cluster projects and allowing town home projects to be built sideways on a lot.

In Minneapolis, while duplex and triplex design cannot deviate from single-family home standards, other intentional zoning and design changes have helped facilitate slightly larger projects. For example, along key commercial corridors, standards for parking and setbacks have been eliminated for missing middle projects as part of the Minneapolis 2040 land use changes. Our interviewees cited these changes in their ability to build smaller multifamily projects, with up to twelve units on small lots.

To catalyze missing middle, allowing duplexes and triplexes may not be enough.

We heard from most interviewees that even with zoning changes that allow additional homes on a lot, the economics of duplex, triplex, and fourplex development are still challenging. This dynamic was particularly true in California, where we heard that high costs in certain markets hamper project feasibility when the builder is limited to adding just one or two extra units. For example, one developer told us he abandoned a project in Sacramento because high land costs, coupled with generally high construction costs and requirements, made the project infeasible given the limited number of units that were allowed to be built on that specific lot. All of our interviewees agreed that allowing zoning for slightly more dense options—along with the commensurate changes in design requirements to facilitate slightly larger projects—would expand where missing middle housing would be feasible. Specifically, several builders told us that the ideal building typology is between eight and twelve units, where more projects

start to become financially viable. This “magic number” allows developers to leverage economies of scale while using less expensive, wood frame construction, without elevators, depending on code requirements.

This aligns with other analyses showing the likely limited use of incremental increases in allowed homes on smaller lots. In 2021, Turner Center’s analysis¹⁸ found that just 1.5 percent of single-family homes in California would have new, financially feasible development capacity as a result of SB 9. Similar analyses have been conducted at the city level. For example, the City of San José’s analysis of its Opportunity Housing proposal found that most projects only become financially feasible at six or eight units, rather than four. An analysis on the City of Portland’s single-family zoning changes¹⁹ yielded similar results.

There is also some evidence from California that cities implementing more expansive changes experience higher numbers of new homes built. For example, an interviewee from San Diego noted that developers there have taken advantage of the city’s unlimited ADU provisions—which go beyond the state-mandated requirements to allow up to two ADUs, a Junior ADU and an ADU, on a single-family parcel—to essentially build cottage clusters of up to ten additional homes on larger parcels, which greatly improves financial feasibility. In turn, San Diego has seen a significant increase in ADUs built.²⁰

“If we really want to start addressing supply we should zone more places for the most cost-effective type of housing: wood-frame, non-elevator buildings up to 3 stories. That’s what we need to scale. And doing so will take rezoning some high-amenity single-family areas to multifamily.”

- Eli Spevak, Orange Splot LLC

Lack of clarity on subdivision and utility rules complicates the development process and impacts the choices that developers make.

In some cities, even when zoning allows for more than one unit on single-family parcels, complicated and contradictory rules—or onerous fee structures—related to lot subdivision, infrastructure, and utilities can limit development activity and influence the final product that builders are able to deliver. These complications can add time and cost to a small-scale project, which is ultimately reflected in the final product price and type. For example, we heard that the complexity around subdividing lots can add barriers to “fee simple” development, a favorable form of for-sale housing that allows buyers complete control over the home, its exterior, and land. The more-complex condominium model requires the buyer to incur additional costs, such as homeownership association dues, places limitations on what the buyer controls, and may impact the financial feasibility of a project overall as the added costs and complexity of a condominium ownership structure lowers the amount that a developer can finance. Together, these conditions can compel a developer to abandon ownership projects in favor of less-risky rental development, limiting the creation of more attainable home ownership options.

One interviewee from Portland told us that there is a lack of clarity around the rules—and thus the cost implications—for the infrastructure to service new homes newly allowed under zoning changes. As a result, the interviewee has decided to build for-sale projects as condominiums rather than fee-simple lots, even though fee-simple might be preferable. However, recent changes from the state of Oregon

through Senate Bill 458 (2021) requires localities to expedite subdivision requests for missing middle housing and address these inconsistencies.

In California, these issues are governed by the Subdivision Map Act (SMA), which governs how new subdivisions must accommodate infrastructure requirements. Although the SMA was designed to regulate larger-scale greenfield subdivision development, it can still apply to small-scale infill development. We heard from our interviewees that the SMA is a severe limitation on small infill development, particularly for for-sale housing.

This act can allow jurisdictions to condition lot split approvals on overly burdensome standards for missing middle developers, such as paying for complete undergrounding of utilities or expanded sidewalks. While infrastructure fees are more easily addressed on larger-scale greenfield projects, these additional costs can be difficult to absorb over relatively few units in missing middle projects.

“The SMA is just an incredible burden for small infill projects. The undergrounding utilities alone [for my recent project] was \$320k for 300 feet of frontage.”

- Jim Heid, CRAFT Development

Conflicting local guidance is also a hindrance at times. We heard from our interviewees that some cities have rules enacted specifically for single-family development that create confusion for both the developer and city staff when they are applied to small-scale missing middle projects, such as ADUs or duplexes. For example, the city of Los Angeles does not allow two water meters to be placed on a single-family parcel, which adds significant complications for creating separate living units for separate households without going through a subdivision process.

A clear and efficient approval process with empowered staff and support from elected officials is key for scaling missing middle housing.

Our interviewees noted that the way in which cities facilitate their rules and processes for permitting and approving missing middle housing is a significant factor in scaling this development type. Given that missing middle developers can be small builders or even homeowners themselves, many times with

“The main thing... that will kill a sale or pursuit of a project is a small mom and pop [property owner] not knowing whether permitting is going to take one month or two years... There’s a lot of fear and uncertainty around that.”

- Annie Fryman, Abodu

a significant share of their capital and professional time tied up in a single development opportunity, consistency and predictability are key for the development of missing middle housing.

To that end, we heard that city planning departments with intentional missing middle processes such as clear and consistent rules, expedited reviews, dedicated staff, and pre-approved plans are the most likely to see success in facilitating small scale development. These can help move projects forward, particularly in places where political will for such development may be tenuous. For example, the city of San José was cited as having a particularly advanced policy towards ADU development, and has created streamlined processes for permitting as well as “off the shelf” project designs that save time and money for homeowners.



A twelve-unit project in Healdsburg, photo courtesy of Jim Heid.

All of our interviewees agreed that the most important factor for cities—once necessary land use and design reforms have been made—is simply the commitment of policymakers to see this specific form of housing succeed. Interviewees pointed to cities such as San Diego and Phoenix, Arizona as places where staff has been empowered from the top down to move more projects through the development pipeline.

“The huge factor of the uptake of housing in San Diego is their culture of ‘yes.’... the leadership of San Diego has said ‘we’re going to say yes to housing projects’ and that has permeated down to staff.”

- Mott Smith, Civic Enterprise

“They (Phoenix) have that attitude of getting to ‘yes’ and figuring out how to do it, and making sure that the smaller developers succeed..”

- Jim Heid, CRAFT Development



A 13-unit project in San Diego, photo courtesy of Rammy Cortez.

With limited access to institutional forms of debt and equity, missing middle developers must rely on local capital and fewer financial resources.

Interviewees reported difficulty in attracting traditional forms of financing and capital for their projects. National banks and large sources of equity—such as private equity firms or pension funds—have not been receptive to missing middle projects, either because they are simply too small in volume to justify the transaction or because these institutions view missing middle housing as risky given the lack of scale in most places. Lack of access to institutional pools of capital to provide debt or equity financing on a large scale poses a significant challenge to developers building missing middle housing.

Instead, our interviewees told us that they relied most heavily on local forms of capital that are more open to risk and smaller returns and that have an interest in seeing these types of projects being built in their communities.

“[Investors] want to have their money in something tangible, that they can see in the neighborhood that they can point to... even though people can make better returns investing elsewhere, and they know that. But they still do it.”

- Eli Spevak, Orange Splot LLC

On the debt side, local sources, such as local banks, credit unions, and community development financial institutions (CDFIs), have generally filled financing needs for missing middle projects. Our interviewees told us that these financiers are more likely to be interested in how new homes are creating value in their communities, and may have a higher risk tolerance than institutional lenders precisely because they have a more nuanced grasp of local market needs.

We heard a similar story regarding equity investments. Interviewees reported that because larger equity funds have yet to show interest in missing middle projects, equity must often be cobbled together from smaller, local pools of funds. Roundtable participants shared that investors in missing middle projects tend to be more civic-minded and engaged at the local level than traditional sources of capital. Rather than large equity firms or pension funds—which are common equity partners in large multifamily development—equity investors tend to be wealthier local individuals.

“For us, the action is all with CDFIs. When we bring opportunities and good projects to our local CDFIs, we get financed.”

- Derek Leavitt, United Dwelling

“Even though returns are less—demonstrably less—at least on a cash-flow basis, they feel a greater sense of ownership and frankly, I think more people come into these projects because they are more valuable to the fabric of the city.”

- Michael Pink, Left Lane Ventures

“People who are interested in their community, it’s not all about return, they have a much bigger scorecard.”

- Jim Heid, CRAFT Development



A two-unit project in South Bend, photo courtesy of Mike Keen.

Our interviewees also reported issues with the appraisal process for missing middle projects, which has important implications for obtaining appropriately-sized debt financing. There are generally very few new missing middle developments built in most cities. As a result, appraisers have trouble finding comparable projects. Appraisers may not understand the project typology and the value created, leading them to underestimate project value, which has negative impacts for the ability of the developer to access debt financing. Some interviewees noted that because there are simply no comparable products being built nearby, they have to self-fund their first projects to “create their own comps” that can be used for future projects.

“Our comps are one hundred years old. Trying to get an appraiser to agree with our comps is unbelievable. ... we have to create our own comps”

- Derek Leavitt, United Dwelling

Missing middle housing presents an opportunity to open up the development industry to small builders, but cities need to be intentional in promoting their success.

The size and scope of missing middle housing opens up tremendous opportunities for small builders, including homeowners themselves to enter the market for homebuilding. Because of the diffuse nature of small-scale projects, larger developers are less likely to enter this space, meaning that the vacuum created by missing middle land use reforms could be filled by builders who have specialized in ADUs, single-family homes, or home remodels. These builders are more likely to be small businesses using local subcontractors, and could serve as an important conduit for increasing the number of developers who are Black, indigenous, and/or people of color (BIPOC). As such, there are significant implications for creating a more equitable development ecosystem by catalyzing this type of housing and expanding the pool of individuals and organizations to a level needed to see missing middle housing built at scale.

“[Zoning changes] have opened up development opportunities to a lot of entrepreneurs—entrepreneurial spirits—who otherwise would not have done so... it’s manageable, it’s approachable”

- Michael Pink, Left Lane Ventures

Interviewees told us that there is a precedent for this with the success of ADUs in California. Changes to ADU laws and the subsequent rise in homeowner interest in ADUs have helped to catalyze a nascent but growing community of California builders who are much smaller in size and scope than traditional multifamily and single-family developers. These individuals and small businesses are the most likely to step into the duplex and lot split development opportunities presented by SB 9 and other local initiatives. We similarly heard about successful ADU development in South Bend, Indiana, where a loosening of land use regulations is presenting opportunities for homeowners and small and/or new builders to enter the development industry in a manageable way.

“We’re trying to create an ecosystem where we support each other. Our way of scaling up is not for one of us to get big... but rather, we’re trying to get 20-25 people out there doing a couple of projects a year.”

- Mike Keen, Hometowne Development LLC

Another key to success in building missing middle housing has been replicability. Given that there is little precedent for building missing middle at scale, individual developers have had to create their own playbooks for what works and what does not. We heard that, in a lesson borrowed from larger-scale development, there is value in cultivating small teams of general contractors and architects who can learn the ropes together and become more efficient as they gain experience with each project, rather than bidding out each project individually.

“We’re repeating the same thing, again and again. Not just the unit, but the site work. We standardized the site work because we know exactly what the footprint is every single time, which enables us to be a full-service provider for people.”

- Derek Leavitt, United Dwelling

Recommendations

Missing middle housing presents an opportunity to address housing supply shortfalls, particularly in supply-constrained markets. In addition to places like Oregon, California, Minneapolis, and Portland, states and cities across the country are exploring reforms that have the potential to facilitate the growth of this housing typology. Reforms allowing for homes such as ADUs have proven effective, particularly at enabling homeowners to create new homes in a manner that is manageable and useful to them. The next step in this evolution is to allow for increases in allowable homes on a parcel, allowing small builders and developers to pick up where the individual homeowner cannot, while still facilitating a more cost-effective and sustainable use for single-family parcels. The following is a set of recommendations for local and state officials to facilitate the growth of missing middle housing development.

States should go beyond zoning to catalyze missing middle housing growth at meaningful levels through other development code changes.

While zoning reform is the first and often the most politically difficult step, more needs to be done to remove other, less obvious barriers. Addressing design requirements that can impede the building envelopes needed to make multiple units on small parcels feasible is a key piece. At the state level, changes could include the creation of baseline standards for small-scale projects that apply to all localities, such as maximum allowed setbacks and minimum square footages or FAR, and flexibility on parking requirements. For example, FAR could be adjusted to accommodate

differing unit sizes so more missing middle housing types fit on a previous single-family-zoned lot. The creation of statewide standards can help to ensure existing local requirements do not hamper broader zoning reform efforts. California's experience with ADUs offers a successful example of this, where statewide ADU enabling legislation was followed by several subsequent reforms to create baseline design and regulatory ADU standards for all cities (e.g., setbacks, size, owner occupancy, etc).

Localities should reexamine existing land use regulations beyond base zoning.

Cities that are interested in creating missing middle housing at scale should take a comprehensive look at their local regulations that would apply to missing middle housing and adjust them as necessary. Specifically, cities should examine how existing height, setback, parking, FAR, easement, and other standards might impede the building envelope of missing middle housing, and assess how those standards impact project feasibility. Portland provides a good example, where planners in that city have thoughtfully created a land use regime that promotes many different types of missing middle housing, going above and beyond state requirements. Cities should also reexamine other rules that could unnecessarily increase costs as well, such as impact fees, utility requirements, building codes, and subdivision rules.

Cities should also develop clear processes and procedures. This can include dedicated staff and pre-approved plans for missing middle typologies. For example, the city of San José has created streamlined processes for ADU development, as well as “off the shelf” ADU designs.

These kinds of strategies for missing middle projects can significantly cut down on uncertainty and time, which are key in controlling costs and successfully delivering new homes. The creation of processes and procedures for smaller development can be supported by additional resources from state and regional governments. For example, grants made through California's Regional Early Action Planning (REAP) and Local Early Action Planning (LEAP) programs can be used to facilitate these types of process improvements at local planning departments.

Localities should consider going above state baseline requirements.

Even if statewide legislation requires or encourages smaller missing middle projects, such as duplexes and triplexes, some cities may consider more ambitious land use changes to help make missing middle projects more financially feasible. This could include conducting feasibility studies to understand how their local markets and submarkets might react to zoning and land use changes, and using that information to calibrate policies to ensure that they result in the creation of new homes. To assist with the feasibility of projects, localities can introduce pre-approved designs for missing middle housing types to reduce the time and cost of adding more housing units. Pre-approved designs could also be made in collaboration with off-site modular construction companies to list approximate price points, which creates security for small-scale developers. In some cases, this approach might find that allowing for one or two additional homes per lot is simply not enough to create a meaningful amount of feasible projects. In these cases, cities should consider allowing slightly larger projects to enable

greater feasibility. This could be done incrementally, rather than city wide. For example, before allowing multiple homes on single-family lots throughout the city, Portland, Oregon allowed up to six homes to be built on corner lots.

Conclusion

Missing middle housing can be an important part of the overall housing solution, providing meaningful amounts of housing in existing single-family neighborhoods without significantly altering the look and feel of those places. Policymakers are increasingly interested in this development type, as indicated by the spate of new laws across the country meant to catalyze its growth. However, policymakers must look beyond "ending single-family zoning" in order to see this housing type built. Changing base zoning is unlikely to yield meaningful amounts of new housing without parallel policy changes.

Appendix A. Roundtable Interviewees

Participant	Company	Location
Derek Leavitt	United Dwelling	Los Angeles, CA
John Perfitt	Restore Neighborhoods LA (RNLA)	Los Angeles, CA
Courtney Banker	Capital A Housing	Austin, TX
Annie Fryman	Abodu	Bay Area, CA
Steve Vallejos	prefabADU	Bay Area, CA
Jim Heid	CRAFT Development	Healdsburg, CA
Rammy Cortez	Rammy Urban Infill	San Diego, CA
Mott Smith	Civic Enterprise	Los Angeles, CA
Michael Pink	Left Lane Ventures	Minneapolis, MN
Sam Day	Dryline Architecture	Oklahoma City, OK
Bruce Brunner	Brunner Properties	Minneapolis, MN
Mike Keen	Hometowne Development LLC	South Bend, IN
Eli Spevak	Orange Splot	Portland, OR
Scott Bailey	Bequall	Sacramento, CA
My Lam	Escazú Development	Boston, MA

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