

ORDINANCE AND CODE ANALYSIS BY JURISDICTION

This analysis evaluates a wide variety of ordinances and codes for their focus on accessory dwelling units, small lot development, cottage court development, and form-based codes for small to large infill as well as greenfield development.

Accessory Dwelling Unit (ADU) Ordinances

The consideration of ADUs has become a national trend in the last two decades as people moving back into cities have created more pressure on the demand for housing. Cities that never allowed ADUs are now looking to allow them, while other cities are updating their codes to be less restrictive. Some states, such as California, New Hampshire, and Oregon have introduced statutes allowing ADUs statewide by-right. ADUs tend to be the most politically palatable of the four code approaches studied in this section as they typically have the broadest public acceptance. This is understandable given that ADUs represent the least amount of change when compared to individual buildings.

Portland, Ore.—Accessory Dwelling Units (Chapter 33.205)

last Amendment on the existing zoning code about ADU regulations No. 187471, effective 01/01/2016

Code Preparer: City of Portland

Contact: Phil Nameny, City Planner, City of Portland

Background and the reason the amendment was prepared

Portland's code has allowed ADUs in certain areas since the early 1900s. In an effort to spur development of more housing variety and affordability by efficiently capitalizing on existing infrastructure as housing demand became greater in the late 1900s, key amendments were passed in 1998, 2010 and 2016. In 1998, the amendment dropped owner occupancy and parking requirements and allowed ADUs to be developed citywide by-right. The size was capped at the lesser of 800 square feet or one-third of the main house size, along with limited design compatibility requirements. The 2010 amendment increased the allowable size relative to three-quarters of the primary residence and temporarily waived the system development charges (impact fees). The change in 2016 merged the development standards for accessory structures with the standards for detached ADUs. As a result, the accessory structure height was reduced and the ADU height increased. In 2018, the temporary waiver of system development charges was made permanent, if the property owner agreed to a recorded covenant that stated the unit would not be used as a short-term rental.

In 2017, the state of Oregon passed a statute requiring jurisdictions to allow ADUs wherever a house is allowed. There was no impact to Portland's existing code.

What does the amendment allow?

- By-right, an accessory dwelling unit may be added to a house, attached house, or manufactured home in an R (Residential), C (Commercial), or EX (Central Employment) zone, but may not be added to attached houses or duplexes in the R20 through R5 (low-density to medium-density residential) zones that use a provision to gain an extra unit on a corner lot.



- The maximum size is limited to the lesser of 800 square feet or three-quarters of the living area of the main house size.
- Building height is the same as for accessory structures, which was modified in 2016 to allow only up to 20 feet as measured to the midpoint of the gable when located outside of the required setbacks. Prior to the most recent amendment, accessory structures had the same height limit, 30 to 35-feet (depending on the zone), as the primary structure. The height limit was reduced in order to balance the character of infill development with existing neighborhoods. By aligning the standards for accessory structures and accessory dwelling units, this reduced privacy concerns and the incentive to illegally construct ADUs within accessory structures.
- Setbacks for detached ADUs are 40 feet from the front. The remaining setbacks match those of the primary structure; however, one can build within the setback within additional height limitations to keep the building no higher than one story.
- Parking is not required for the ADU. If the construction of the ADU removes a required parking space for the primary building, then that space must be replaced onsite. However, the houses in areas of the city that are within 500 feet of frequent bus service (every 20 minutes during commute times) are not required to provide any parking.
- Owner occupancy is not required.
- Short-term rentals are allowed with the payment of development fees (these fees are waived for long-term rentals).
- The ADU code is administered by-right with no discretionary review, except that some design compatibility with the main house is required for two-story ADUs. The building must match the main house or comply with general design guidelines. There are no design requirements for a single-story ADU.
- Floor Area Ratio requirements were removed in 2002. Since then the building intensity is now regulated through lot coverage standards (45 percent total lot coverage, and the detached ADU cannot exceed the 15 percent of the lot).

How was the code amendment adopted?

The City initiated the code amendment in 1998 with several updates since then, the latest being in August 2016. In 1998 there was neighborhood opposition to the changes. Over time, the amount of resistance has reduced with each subsequent change and more built results. Most of the continued concern has been around short-term rentals and privacy.

Built results

Following the amendment in 1998, there was some uptick in development of ADUs, but they were still very limited citywide, at an increase of 10 - 15 units per year. The greater impact on development numbers occurred since the 2010 amendment, when the city decided to waive the impact fees in order to respond to the development viability during the economic downturn, increase the allowable size relative to the primary structure, and adjust the design guidelines to address recurring concerns about privacy.

In speaking with city staff, based upon a review of the testimony received when the ADU regulations were expanded in 1998, there may have been some challenges in originally expanding the allowances. However, since these regulations did not result in a large influx, and the subsequent amendments have occurred over time, this incremental series of changes appears to have allowed property owners, builders, and neighbors to adapt and get used to the idea of ADUs. There are some continued complaints about the proximity of ADUs to property lines, the potential for noise, and concern over short-term rentals. The code structure and communication with the public were vital for the success of the ADUs in Portland; as developer and builder, Eli Spevak mentioned, "With a good code structure and education, people started accepting ADUs. The educational components include regular tours of ADUs done by ADU advocates, a dedicated website on the process, general word of mouth, and seeing neighbors' homes in progress. All of these elements and the recent amendments have really spurred development, such that the number of permit approvals increased to around 500 a year in 2016 and 2017, up from just 80 plus in 2010.

The people developing ADUs are primarily the homeowner and small-scale developers. According to Spevak, due to the high cost of building, ADU construction is mostly happening in the higher value parts of the city, concentrated in specific areas. It is more profitable than building in low value areas where rental rates are lower. In the lower land value areas, the choice to build an ADU is typically a lifestyle choice (needing room for family or caregiver) rather than an economic one. Over time, though, the ADU typically increases the value of the property.

Incentives for building ADUs

- Portland has made it easier for homeowners to build with good guidance from the planning and development departments about the process. Website pages and walking tours help to inform and educate people about the process and importance of ADUs.
- Prior to the City's 2010 removal of the requirement for System Development Charges on all ADUs, a payment of about \$10,000 - \$12,000 was required for each ADU. After the removal of the fees in 2010, the city saw around a 10-fold increase in the number of ADU permits. However, now that this fee waiver is accompanied by a covenant restricting use as a short-term rental for 10 years, there is a question about whether that will affect ADU development. Initial evidence for the first few months indicates an ADU permit slowdown, but it also correlates with a general recent slowing of permits.
- Several creative financing options have opened up that provide opportunities to pay for ADUs. Some programs propose a trade-off, such as in Multnomah County, where the county would pay for the ADU, but the property owner allows the county to host a homeless family in the unit for five years. Another private program (dweller.com) offers to obtain permits and build the ADU on the property in exchange for a portion of the rents over a period of time. At this time, these programs have resulted in only a handful ADUs out of the hundreds being built.
- Upcoming changes being considered include allowing two ADUs on a lot or 2 - 3 units per lot and modifying the allowed FAR in residential zones when adding an ADU. This is envisioned to be citywide.
- ADU allowance creates land efficiencies in single-family zones through the sharing of common space on the lot, such as driveways and yards.
- The detached smaller buildings provide flexibility to site buildings to fit the topography of sites.

Challenges in building ADUs

- As with most areas, construction costs have increased significantly in the last two decades, making it a challenge to balance rental income with construction cost.
- Conventional financing can be a challenge without comparable or existing rental income to support the loan application. Most are financed through home equity lines and cash. Over time as more ADUs are constructed, more comparables will be available.
- Building code challenges may be an issue when converting existing spaces into ADUs that need to meet current codes.
- On smaller lots, lot coverage limits may constrain the capacity to build a unit.
- Although Oregon has a property tax freeze measure, property taxes were being reassessed after development of an ADU because the county was seeing this change as a rezone, which therefore triggered a reappraisal of the entire property. In some cases this resulted in a 3- and 4-fold increase in property taxes. This was averted through a state determination that building an ADU does not constitute a rezone.
- Portland's code ensures that accessory dwelling units are compatible with the desired character and livability of residential zones, which may help public support but is also creatively limiting, particularly for contemporary styles. Some professionals question why this is needed for structures that are relegated to the rear of the property.
- Setbacks for corner lot/side street conditions are not stated and left to interpretation. If interpreted as needing 40 feet on both street faces, little to no developable area can be found for the ADU unless it is attached to the primary structure.

New Hampshire—New Hampshire Accessory Dwelling Units statute (RSA 674:71-73)

effective 06/01/2017

Statute Sponsor: Initial draft by New Hampshire Home Builders Association sponsored in the state senate by David Boutin, rewritten by Ben Frost

Contact: Ben Frost, Director, Legal and Public Affairs, New Hampshire Housing Finance Authority

Background and the reason the statute was prepared

New Hampshire's state legislature recognized that there is a growing need for more diverse and affordable housing opportunities to accommodate independent living and family caregiving at home. The goal was to increase the supply of housing without having to further expand land development beyond existing infrastructure. When the bill was introduced in 2015, the supporting coalition included real estate professionals, AARP, disability rights advocates, young professionals, and housing advocates. They saw that ADUs offered greater flexibility and affordability in housing options. Beyond the allowance of accessory dwelling units in single-family zones, the law largely establishes what local jurisdictions may or may not regulate as related to ADUs.

What does the statute allow?

- Accessory dwelling units must be attached or within the single-family dwelling. A municipality may permit detached accessory dwelling units, but it's not required.
- ADUs are allowed by-right, by conditional use, or by special exception in all zoning districts that permit single-family dwellings without additional requirements for lot size, frontage, space limitations, or other controls beyond what would be required for a single-family dwelling without an ADU.
- Any regulations applicable to single-family dwellings also apply to the accessory dwelling unit, including lot coverage standards and standards for maximum occupancy per bedroom.
- A municipality may regulate parking requirements to accommodate the ADU.
- Establishing design standards for the purpose of aesthetic compatibility with the principal dwelling unit as a single-family dwelling is allowable.
- Establishing minimum and maximum sizes for an ADU is allowed but it may not be restricted to less than 750 square feet and it cannot be limited to only one bedroom.
- Municipalities are allowed to require owner occupancy of one of the dwelling units, but it shall not specify which unit the owner must occupy. Familial relationships between the units may not be required.

How was the statute adopted?

The statute was introduced in 2015, passed in 2016 and went in effect 2017. Most towns held their town meetings with sufficient time to review in advance of final approval. Each municipality had the option to amend the law for their jurisdiction. Some made refinements based on what the statute was allowing to be regulated, and others accepted the statute as is without further refinements for their municipality. Generally speaking it was a tough public process to get it adopted, as the House has over 400 members with varying interests. Eventually through ongoing dialog the statute passed with a 2-to-1 margin.



There were some minor amendments made in 2017 to the statute. One of them allowed municipalities to prohibit accessory dwelling units associated with multiple single-family dwellings attached to each other, such as townhouses, and also to prohibit ADUs in association with manufactured housing. Another modification stated that ADUs may not be sold as condominiums unless the municipality explicitly allows it; such sales may be allowed either through zoning or subdivision regulations.

Built results

Across the state, ADU development has been slow but incremental. In communities such as Portsmouth and Merrimack, about one ADU a month is being permitted. One of the biggest challenges is the need to communicate the issues and solutions to local decision makers as well as communicating to homeowners that this is available to them (homeowner's guide to the website).

Incentives for building ADUs

- One allowance that helps minimize construction costs is that water and sanitary disposal systems for the ADU may be shared by those of the principal dwelling unit.
- A new septic system does not need to be built unless the existing system is unlicensed or has failed. The applicant for a permit to construct an accessory dwelling unit shall make adequate provisions for water supply and sewage disposal for the accessory dwelling unit, but separate systems shall not be required for the principal and accessory dwelling units.
- If an ADU meets the rental price standards of the Workforce Housing Law, then the municipality may count the unit as part of its "fair share" calculation.
- Annual ADU tours offer community members an opportunity to view built examples first hand, inspiring some to build their own structures and allowing others to see how they are compatible with the surrounding neighborhood.

Challenges in building ADUs

- The state allows local municipalities to adopt discretionary review for design standards and permit process in the form of conditional use permits and special exceptions. Even if limited to prescriptive requirements rather than discretionary ones, having another layer of review extends the approval process timeline and, as a result, the overall project cost as compared to a by-right process.
- The majority of municipalities typically require owner occupancy. While this practice typically garners the most local public support, it also limits the amount of development of this building type. Owner-occupied properties tend to be more likely to be used as a short-term rental or guest house rather than long-term rentals that alleviate overall housing demand.
- The requirement for an interior door between the principal dwelling unit and the accessory dwelling unit can add complication and cost for building this fire wall, especially when dealing with existing conditions.
- While permitting an ADU with an existing dwelling cannot require the construction of a new water system, the modification of the existing one may be necessary.
- If a municipality requires impact fees, whether they will apply will depend on how the local municipality charges their fees (by unit or by bedroom).
- Education of and communication with local decision makers and the broader public needs to be carefully thought through to ensure a successful rate of development.
- Primary public concerns are related to short-term rentals, which the ADU law does not refer to or limit their use for this purpose. Some New Hampshire municipalities (e.g. Portsmouth) are moving ahead with regulations limiting short-term rentals, but this does not mean that an owner cannot create an ADU. There are various initiatives in the legislature to study or regulate short-term rentals, but the state of these efforts is in flux.

Austin, Texas—Accessory Dwelling Units Ordinance, No. 20151119-080

approved 11/19/2015

Code Preparer: The City of Austin

Contact: Greg Dutton, Principal Planner, City of Austin Planning and Zoning Department

Background and the reason the ordinance was prepared

Although ADUs were permitted in various forms prior to 2015, the 2015 ordinance expanded and relaxed regulations. In 2015, the minimum lot size requirement was reduced, and the development standards were amended. For example, previously a driveway was needed to go up to the ADU itself, but with the amendments, parking is allowed in the primary driveway. Also, in 2015 a reduction in the number of required parking spaces passed for areas close to transit corridors. The question of whether the short-term rentals should be allowed slowed down the public process; however, the final suggestion for the 30 days maximum of short-rental passed.

What does the ordinance allow?

- For a two-family residential lot, the secondary unit must: 1) be contained in a structure other than the principal structure (i.e. only detached structures); 2) be located (a) at least 10 feet to the rear or side of the principal structure or (b) above a detached garage; (3) may be connected to the principal structure by a covered walkway.
- One onsite parking spot is required for the ADU unless the property is within a quarter mile of an Imagine Austin corridor served by transit. ADU parking requirements are less stringent than single-family use, which requires two onsite parking spots per dwelling unit.
- Building height may not exceed 30 feet and is limited to two stories.
- An ADU may not exceed 1,100 total square feet or a floor-to-area ratio of 0.15, whichever is smaller, with 550 square feet maximum on the second story.
- An ADU may not be used as a short-term rental for more than 30 days in a calendar year if the secondary apartment was constructed after October 1, 2015. For short-term rentals, a permit is required.
- Impervious cover for the site may not exceed 45 percent.
- Building cover for the site may not exceed 40 percent.

How was the ordinance adopted?

Council initiated the amendment process and asked staff to reduce regulatory barriers to building ADUs. Two public meetings were conducted and staff generated recommendations that were taken to Planning Commission and Council. Most of the discussion at Planning Commission and Council that had public input involved whether ADUs should be allowed in SF-2 zoning, which only allows a single dwelling (ultimately Council decided to not allow ADUs in SF-2 zones). Also, a limitation on short-term rentals was sought by the public and included in the final ordinance. In general the site-development changes got general support, but where ADUs could be built and how they could be used were the points of contention.

Built results

The number of ADUs constructed increased after the ordinance was passed but remains a small number compared to Austin's overall housing needs. The ordinance has not necessarily yielded smaller and more affordable units, as ADUs are typically built to the maximum size the constraints allow. However, this will still yield a home at a lower price point than the typical primary single-family home that is newly built.

Incentives for building ADUs

- Onsite parking is reduced for proximity to transit lines.
- ADUs garnered political support from the public due to the lack of affordable housing options.
- The code is administered by right, making for an efficient and quick approval timeline.
- Owner-occupancy is not required.
- The property may be turned in two condos, which provides an affordable home ownership option.

Challenges in building ADUs

- Financing is an issue for the same reasons discussed under the Portland section.
- Construction costs (including design, permitting and materials) can be prohibitive for individual homeowner at middle-income levels.
- Applicants may need to upgrade water/wastewater lines to accommodate ADU bathroom(s), which can add significant cost to construction and ultimately might work as a barrier to their development.
- ADUs are allowed in two-family residential lots (in SF-3, SF-5 and SF-6 but not in SF-1 and SF-2 zones). SF-3 is the most applicable single-family zone, but it only allows two units max (house and ADU or a duplex but not both). In that case, the owner or builder is more likely to default to a duplex as a more profitable investment, as the final cost is probably lower than an ADU.
- Applicants with smaller sites/lots may have trouble fitting onsite parking and/or building a unit large enough to be easily marketable (unit size is limited to 0.15 FAR).
- Limit of 550 square feet on the second level is a potentially a limiting factor.
- Minimum lot size requirement of 5,750 square feet also prohibits lots smaller than that from having an ADU.
- If the unit is above a garage, the unit is basically limited to one level because of the height restriction.
- Adding a unit will inevitably increase the appraised value and property tax. The property tax re-evaluation happens every year.



Los Angeles, Calif.—Accessory Dwelling Units SB 1069 and AB 2939

Code Preparer: SB 1069: State Senator Bob Wieckowski; AB 2939: Assembly member Phil Ting

Contact: Matthew Glesne, Planning Department, City of Los Angeles

Background

The 1985 citywide ordinance allowed ADUs with a discretionary conditional use permit (CUP). Upon passage of AB 1866 (2002), the discretionary component of the law was no longer enforceable. Later, in 2010, the City halted enforcing the 1985 ordinance altogether and relied solely on the standards in state law, combined with applicable existing local, objective zoning standards. A court decision in 2016 ruled the 2010 zoning interpretation invalid and put a halt on the permitting of any ADUs that relied upon the interpretations.

Since 2017, upon adoption of SB 1069 and AB 2299, Los Angeles is operating under state laws that allow ADUs by right, provided they meet objective criteria. A local ADU ordinance has been proposed to take the place of state law and is currently pending before City Council.

What does the ordinance allow?

- **Parking:** The state law allows local agencies to reduce or eliminate parking requirements for any accessory dwelling units located within its jurisdiction and states that parking requirements for accessory dwelling units shall not exceed one parking space per unit or per bedroom, whichever is less. These spaces may be provided as tandem parking on a driveway. Los Angeles requires one spot for ADUs unless the location meets one of the city's four criteria, including proximity to public transit, then no space is required. Replacement parking is required if an existing garage is converted to an ADU; however, the parking may be located in the front-yard setback in an existing driveway.
- **Height limits:** The regulations default to the same requirements as for accessory buildings, which allows for two stories with no specified numeric maximum.
- **Setbacks:** Same as for an accessory structure, which includes an additional 5 feet from setback for second story.
- **Size:** Up to 1,200 square feet is allowed for a detached unit. Attached units are limited to no larger than 50 percent of the main unit. A minimum of 150 square feet is required for an efficiency unit. Houses on wheels will count as an ADU in proposed ordinance.
- **FAR:** Both units combined are limited to 0.45.

How was the ordinance adopted?

The City is currently operating under state law. In January of 2017, a California state law, SB 1069, took effect that allows homeowners to build an accessory dwelling by right. No local California ADU code can be more restrictive than state law on 10 specific items. Many local existing codes have not yet caught up with state regulation.

Built results

Since state law was adopted in 2017, approximately 6,500 permits have been issued for ADUs, with a current rate of about 350 per month. The number of ADU applications continues to increase, with about 5,400 applications submitted in 2018 alone. Approximately, 800 are in a holding pattern or have been effectively denied due to easement requirement conflicts with power lines. About 45 percent of all ADU permits since 2017 have been conversions within the existing space, either inside the primary structure or the garage. About 35 percent are attached additions and the remainder are detached new construction.

Incentives for building ADUs

- Sprinklers are not required unless the main home required them when it was built.
- Fees overall are lower compared to the average municipality. The largest segment of the fees are LAUSD school development fees. However, school fees are waived if the conversion is less than 500 square feet or is a conversion of already habitable space. Therefore, total fees range from less than \$850 for smaller conversions up to a maximum of about \$6,400 for new construction. Fees also depend on project valuations, which keeps conversions and additions less expensive. For sewer, an extension line is typically needed, but there are no capacity connection charges if it is a conversion.
- Additional electric or water meters are not required.
- Owner occupancy is not required for either structure.
- If you are in a transit corridor, you do not have to provide a parking space, but you have to replace any being removed. The replacement spots are not required to be covered and can be tandem or located on any part of the property.
- There is a housing shortage. Homeowners are seeing the benefits to building ADUs. The reduction in the regulatory barriers, partnered with clear process guidelines, educational materials, and nearby built examples have a significant influence on the number of ADUs that are constructed.
- Efficient permitting system.
- Los Angeles has found success by having their staff be well versed on the state law as well as be strong advocates and facilitators who help applicants through the process, and by encouraging all departments to talk to each other.
- A guidebook developed in partnership with UCLA Citylab is provided to facilitate public education.

Challenges in building ADUs

- Meeting California energy codes can be particularly challenging for conversion projects that have existing structures. The associated fees are high, as they are not proportionate to size and cost.
- Existing garages that fall within power line easements present hurdles for owners wanting to convert those garages into ADUs. Non-habitable spaces, such as a garages, are allowed within the easement, but habitable structures, such as an ADU, are not.
- There are conditions on short-term rentals specified in the city's short-term rental ordinance. ADUs are not mean for short term; it needs to be a permanent residence.
- Financing is the biggest challenge. Most people have to take out home equity lines in order to cover the cost of construction. Banks have been unwilling to grant loans based on potential projected income, which is likely to change as more ADUs are constructed and rented to provide comps.



ACCESSORY DWELLING UNIT (ADU) CASE STUDIES



Garage Conversion ADU Portland, Ore.

- **Code type example:** Accessory Dwelling Units
- **Contact:** Kol Peterson, Owner/Builder

Client/Team

- **Client:** Kol Peterson (homeowner)
- **Designer:** Das Chapin
- **Developer:** Kol Peterson
- **Builder:** Adrian Hutapea

Size and scale

One ADU attached to a primary residence on a 50-foot x 100-foot lot in a single-family residential zone.

Unit size range

- **Primary Unit:** 900 square feet
- **ADU:** 800 square feet

Density

18 dwelling units per acre

Project timeline

The project started in 2018 and took approximately one month to design, one day to permit, and five months to build. The owner worked closely with a designer who has extensive construction experience. The owner did the permitting himself, served as the general contractor for this project, and did about 30 percent of the actual construction as well.

Project costs

- **Soft Costs:** \$1,000
- **Construction Costs:** \$100,000 (\$75,000 out of pocket, \$25,000 sweat equity)
- **Sale Price:** Kol bought the house for \$435,000. After renovating the upstairs and building the basement ADU (totaling \$175,000), the property is worth approximately \$600,000.



Project description

The owner built this ADU on a 5,000-square foot lot (50 feet x 100 feet) located near his primary residence by converting the attached garage on the split-level 1973 house into an ADU. It is an 800-square foot, two-bedroom unit with one bedroom that is fully accessible and a comfortable fit for two people. The primary dwelling unit is the upper level of the same structure and contains 900 square feet, with three bedrooms and one bathroom. Both are long-term residential rental units. One off-street parking spot was required for the primary unit. The spot is located in the front yard setback, which required a variance.

Zoning and neighborhood description

The property is located in a highly desirable neighborhood called the Alberta Arts District in inner northeast Portland, has a Walkscore ranking of 84, and is zoned R5, which is the standard, typical residential lot size and zoning type in Portland. The property is within walking distance of where the owner lives, so it was convenient to develop the property as well as manage it. The site is within one-quarter of a mile of a commercial corridor.

Successes

- The extreme efficiency of the overall timeline, particularly for the permitting.
- Building a nice-looking unit for \$100,000.
- Energy efficient and accessible.
- A good return on investment through the rental. Each unit rents for \$1,850 per month. Collectively, they produce \$1,000 more per month than the 30-year PITI payments.

Challenges/Lessons learned

- The upper unit was vacant during most of the construction of the lower unit. On one hand this was beneficial, as the work was quite noisy all the way through the finish stages of construction, but it also meant loss of income for that unit.
- Despite using all of the best practices for mitigating noise between the two units, step noise was not eliminated. In hindsight, one solution would have been to carpet the upstairs unit instead of installing vinyl flooring.



The Farmhouse, Attached ADU

Portland, Ore.

- **Code type example:** Accessory Dwelling Units
- **Contact:** Lucas Gray, Propel Studio

Client/Team

- **Designers:** Propel Studio
- **Photos:** Propel Studio Architecture

Size and scale

50-foot wide per 100-foot deep lot, two dwelling units total

Unit size range

- **ADU:** 800 square feet over two levels
- **Primary unit:** approximately 1,500 square feet

Density

18 dwelling units per acre

Project timeline

- **Design:** 3 months
- **Permitting:** 3 months
- **Construction:** 6 months
- **Completed:** 2017

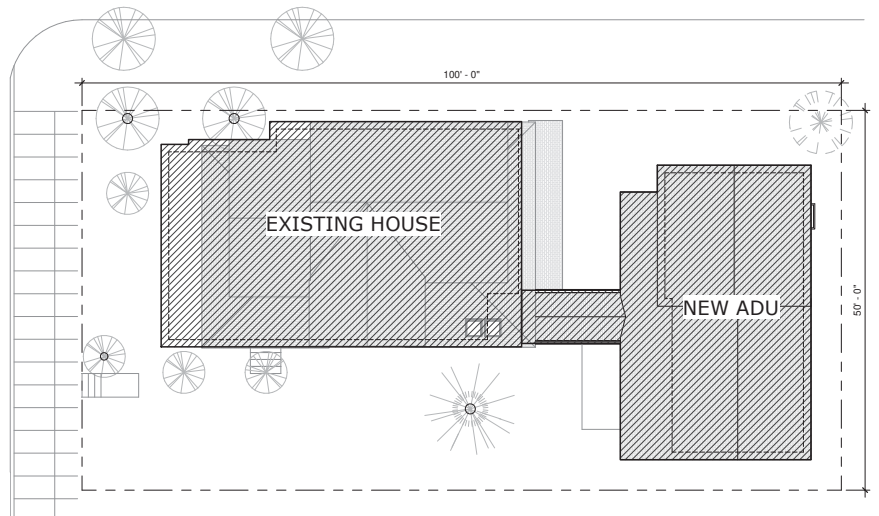
Project costs

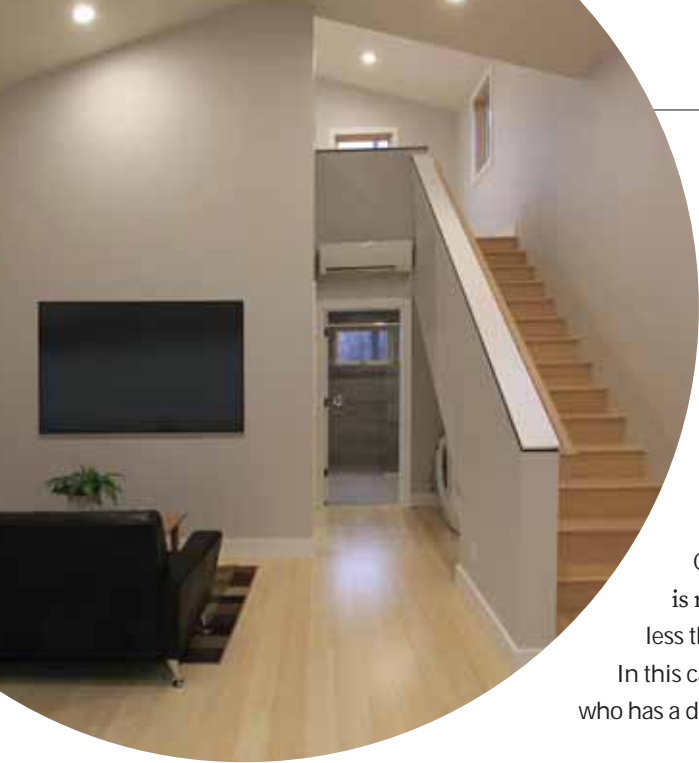
- **Soft Costs:**
 - Architecture: \$15,000
 - Engineering: \$2,500
 - Permitting Fees: \$7,500
- **Construction Costs:** \$200,000
- **Sale Price:** not applicable

Project description

This new construction, two-bedroom accessory dwelling unit is located in southeast Portland Woodstock Neighborhood. The ADU is attached to an existing traditional farmhouse via a covered breezeway. The design represents the traditional, regional farm vernacular, including cedar siding, shingle roofing, and gable roof forms.

Passive solar design principles are incorporated to obtain maximum winter heat gain and summer cooling. A deep soffit overhangs the facade, shading the windows and French doors from high-angled summer sun, reducing heat gain in the summer months. Operable windows allow for cross ventilation.





The ADU also has a high-efficiency building envelope, FSC-certified wood products, an energy-efficient, mini-split mechanical system, high-efficiency LED lighting, occupancy-controlled ventilation, and low or zero VOC/Formaldehyde products selected throughout. The open Living/Dining/Kitchen “great room” faces west, with a window wall and full-glass French doors overlooking the patio and garden. The slab-on-grade construction offers barrier-free ADA accessibility throughout the unit.

Considering the rapidly rising housing costs in Oregon, this project is relatively affordable. It is extremely rare to find a detached home for less than \$350,000, even in farther out, or less desirable neighborhoods. In this case, the owners got to build a new unit close to house their mother, who has a disability, for a lot less than buying a new home.

Zoning and neighborhood description

The project is located in an older, established city neighborhood with a commercial corridor nearby and Missing Middle Housing throughout. The project was developed under the current code which waives the system development fees, saving about \$13,000. Parking is not required for either the primary residence or the ADU due to the proximity to public transportation.

Successes

- Designed for aging-in-place with a barrier-free ground floor and accessible bathroom.
- Upstairs offers a “bonus-room” or a potential bedroom for a future live-in caretaker.
- Built with sustainable building materials.
- Open living area that is spacious for a small dwelling.
- Strong connection to the interior and exterior.
- Designed to fit in with the farmhouse aesthetic of the main house.

Challenges/Lessons learned

- Restrictive/unclear setback requirements made the site location challenging. The code indicates a 40-foot setback from the front but does not clarify how to address corner lots. For this particular site, the only way to locate the structure in a way that was code compliant was to attach the ADU to the main house with a breezeway.
- In certain conditions, the code requires design standards that are quite traditional, which is very limiting to design creativity. It is not clear why this is required for a structure that is behind a primary residence.
- Cost of cedar is rapidly increasing due to current tariffs.
- Site conditions often make it difficult to have easy accessibility all the way from the sidewalk and/or driveway to the ADU unit, even if the unit itself is fully accessible.



Duval, Detached ADU

Austin, Texas

- **Code type example:** Accessory Dwelling Units
- **Contact:** Nicole Joslin, AIA, LEED AP, Executive Director, Austin Community Design and Development Center

Client/Team

- **Designer:** ACDDC
- **Interiors Designer:** Annette Patterson
- **Constructed:** Z Works Design Build

Size and scale

0.24-acre site, two dwelling units total

Unit size range

- **ADU:** two-bedroom, 2.5 bath, two stories, 849 square feet. The unit size range for the Alley Flat Initiative in general is 400 to 1,100 square feet.

Density

8.5 dwelling units per acre

Project timeline

- Design began in July 2014
- Construction began in September 2015
- Completed May 2016

Project costs

- **Soft Costs:**
 - Architecture: \$2,000 (Alley Flat Initiative offers reduced fees through grants for an affordable housing commitment by the owner)
 - Engineering: \$4,000 (includes both structural and civil engineering)
 - Permitting Fees: \$4,100 (only paid water tap fee, all other permit fees are waived through SMART Housing)
- **Construction Costs:** \$163,000
- **Sale Price:** not applicable

The Duval project was developed through the Alley Flat Initiative, which began informally in 2003 with the idea that infill housing in Austin's Boggy Creek watershed could concurrently resolve ecological and social equity problems as a form of "civic environmentalism". That idea expanded in 2005, when a partnership formed between the UT Center for Sustainable Development, the Guadalupe Neighborhood Development Corporation, and the Austin Community Design and Development Center (ACDDC). In 2014, the City of Austin Office of Sustainability joined the





partnership to pursue the Green Alley Demonstration Project, which envisions affordable housing, alleys and small streets as ecological infrastructure. The collaboration continues to grow to tackle more barriers to affordable infill development.

Alley Flats are distinct from other ADUs because they achieve at least a 3-star Austin Energy Green Building rating and participate in the City of Austin's S.M.A.R.T. Housing program for the first five years after they are constructed. Per the program, tenants are limited to households with income at or below 80 percent MFI (Median Family Income,) and rent may not be more than 30 percent of a tenant's household monthly income. The ACDDC functions as a developer, offering services to the homeowner who is building the ADU from design through construction, plus additional educational materials and expertise.

Project description

This Alley Flat is occupied by a single father who is related to the property owner and whose extended family lives in the neighborhood. This two-bedroom ADU nestles neatly into a site that is constrained by setbacks and an existing heritage tree. The family-friendly floor plan was devised in partnership with the future residents in order to maximize privacy and functionality within the small footprint. Generous windows in the double-height living areas allow for filtered daylight through the Live Oak tree to fill the interior spaces. Both the ADU and primary residence are occupied as long-term rentals.

Zoning and neighborhood description

The project is located in the Hyde Park neighborhood, which is located just north of the University of Texas campus. It is mostly comprised of single-family homes, and a section of the neighborhood has been designated as a Local Historic District. This designation adds specific regulations for design standards and other development requirements that might make it harder to develop a variety of housing options.

Successes

- This unit is in the first year of its affordability period. The tenants have a household income below 80 percent MFI and their rent is no more than 28 percent of their income. Like many single parents, if it were not for the affordable rental amount, he would not otherwise be able to live near his family and the social networks he relies on.
- 3-star Austin Energy Green Building rating

Challenges/Lessons learned

- Built a socially, economically, and environmentally sustainable development model that preserves the diversity of our neighborhoods, provides new economic opportunity, and fosters social equity in rapidly changing neighborhoods.

This document is a portion of NAHB's report
Diversifying Housing Options with Smaller Lots and Smaller Homes
[Click here to view the full report.](#)

Diversifying Housing Options with Smaller Lots and Smaller Homes



Photo Courtesy of Ross Schmitt

NAHB
National Association
of Home Builders