BY SEAN GROOM

Rise of the ADU

Portland, Ore., known for its drizzly winters, coffeehouse culture, and craft beer, also has made a name for itself with innovative zoning regulations. More than 30 years ago, as an antisprawl measure, the county drew a ring around the city to define the limit of development. Since 2009, Portland's zoning regulations have made the city a hotbed of ADUs.

ADU is shorthand in housing-policy circles for *accessory dwelling unit*—which the rest of us might call an in-law apartment, a laneway house, a granny flat, a carriage house, or a backyard cottage. An ADU is not a duplex, which typically has identical or similarly sized units. Instead, it's an auxiliary home of less than 800 sq. ft. It can be a new, detached dwelling; a converted garage; a basement apartment; an addition; or an apartment carved out of an existing floor plan. ADUs are not a new idea. Wander through an old city neighborhood with a careful eye, and you'll find carriage houses, apartments above garages, servants' quarters converted to apartments, and English basement apartments.

These types of housing are enjoying a renaissance for reasons both old and new. From a public-policy standpoint, ADU-friendly zoning regulations are attractive to local governments because they promote affordable housing without government funding, encourage dense development, reduce carbon emissions, and stimulate local construction jobs. At the household level, ADU-friendly zoning means more affordable housing, flexible space that changes with the family, rental income, multigenerational housing, and space to age in place.

An urban-policy tool

The ADU movement began about 10 years ago when Santa Cruz, Calif., revised its zoning regulations to allow ADUs on most single-family lots in town in an effort to address an affordable-housing crunch. The housing bubble of the 2000s was inflated in Santa

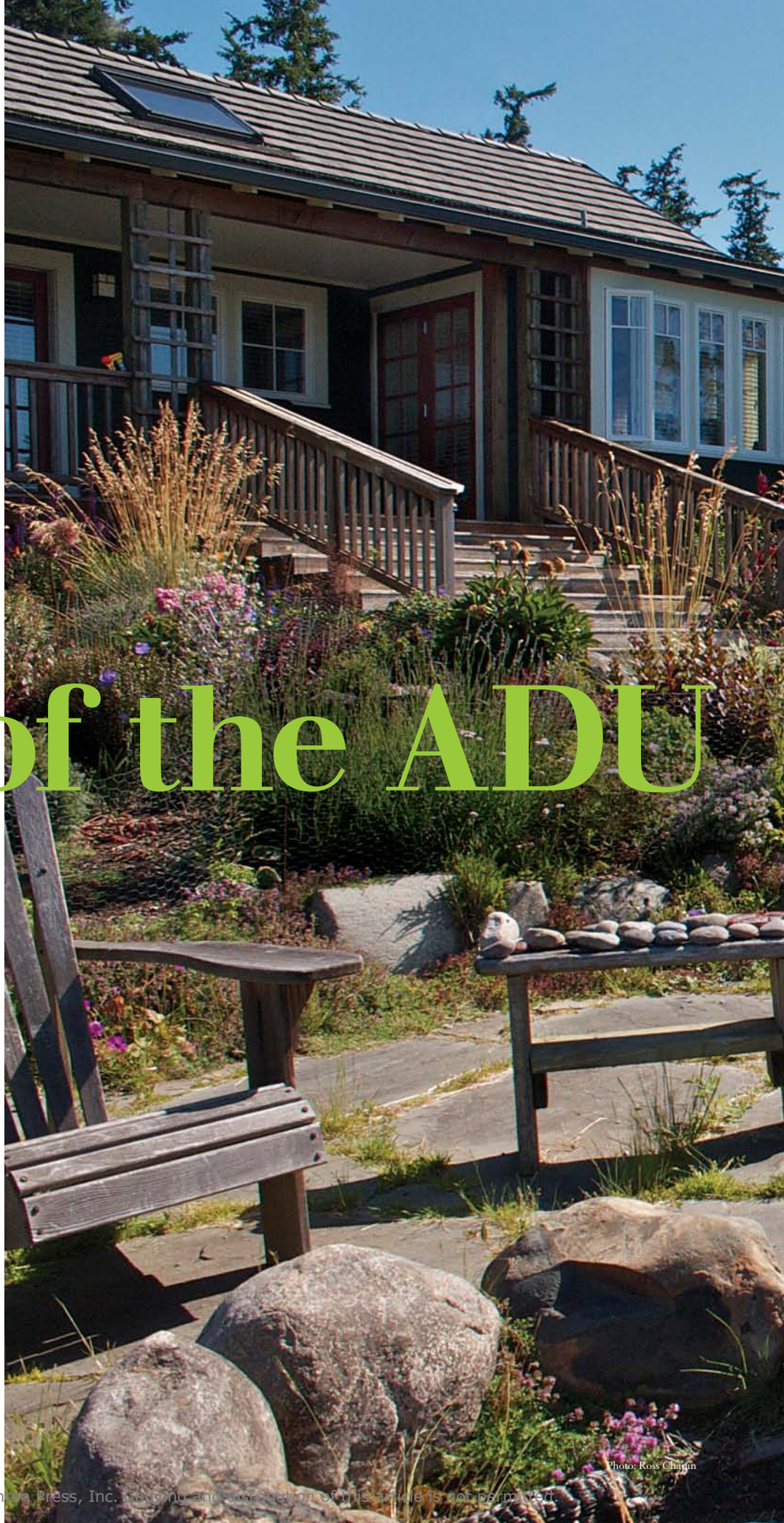
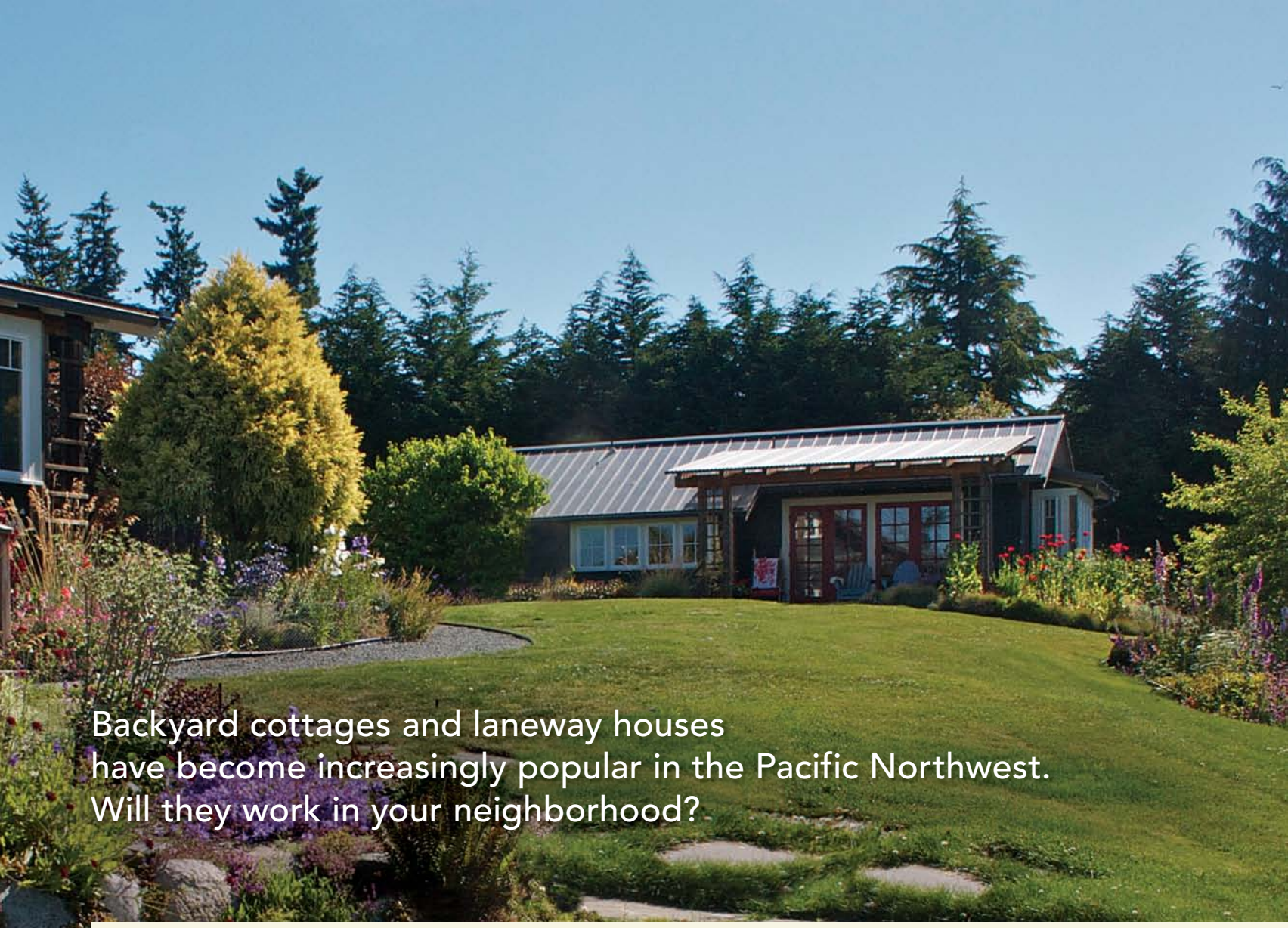


Photo: Ross Chapin



Backyard cottages and laneway houses have become increasingly popular in the Pacific Northwest. Will they work in your neighborhood?

Financing woes

Financing an ADU is fraught with difficulty because there are so few legal ADUs that real-estate agents, appraisers, and mortgage lenders don't know how to value them. Although a permitted ADU is part of a legal two-unit, income-producing property, it's often in a single-family-zoned neighborhood. This apparent contradiction creates problems for real-estate professionals who haven't encountered ADUs.

When a bank originates a mortgage, it follows guidelines from Freddie Mac and Fannie Mae so that the mortgage can be sold. Even if the bank plans to hold on to the loan, it wants the loan to meet Freddie and Fannie guidelines as a hedge. The guidelines from these government-sponsored entities strongly suggest that an ADU is likely to be an illegal rental property and that a bank shouldn't attribute much value to it. This overlooks the ADU's potential revenue stream. In fact, Freddie Mac guidelines say that "appraisals that rely primarily on the income or cost approaches to value in order to estimate market value are unacceptable."

Unfortunately, there aren't many ADUs out there that have been sold, so a comparable sales method of valuing the property doesn't work. Why is this a problem for homeowners? Because the property serves as collateral for the loan. Banks won't lend more than 80% of the appraised value, so if the appraisal doesn't attribute any real value to the ADU, it's impossible to finance the ADU with a mortgage. Most people resort to savings or home equity, if they have enough equity built up. Some people have used a rehab mortgage—also known as a 203(k) mortgage—but there are a lot of restrictions and red tape.

Recently, Portland real-estate appraiser Taylor Watkins and journalist Martin John Brown collaborated on a paper in *The Appraisal Journal* outlining an income method of appraising ADUs. This method of valuation looks at rental-income potential and suggests valuating a property as a multifamily property if that creates a better valuation proposition.

ADU as a business plan

A decade ago, Jake Fry was a finish carpenter in Vancouver working on what he calls "monster houses," a reference to their physical size and their appetite for resources. Looking out from a rear second-story window of one of these houses at the laneway, or alley, below, he imagined the lane peppered with small, well-crafted carriage houses. In 2005, he started Smallworks to build the small laneway houses of his imagination. He built backyard homes, studios, and guest rooms where he could get them approved and then publicized what he was doing. Armed with the Santa Cruz ADU-building manual, he got involved with a city task force pushing for a by-right ADU policy, which was approved in July 2009. Since then, over 600 permits have been issued, more than 40 of them for projects Fry's company has built.

Most of Smallworks' homes are for young professionals building on the rear of their parents' property because they otherwise can't afford to buy into a market where the average single-family home price is $1.2 million and building lots cost more than $800,000. Despite their small size, Smallworks' laneway houses are not cheap. Fry has nine stock models in sizes between 450 sq. ft. and 750 sq. ft. that cost between $185,000 and $230,000. Because water, sewer, and electric service to both houses on the property will need to be upgraded, the utility connections run an additional $100,000.

Although Smallworks does modern laneways, they aren't the most popular style. Fry flips through volumes of 1920s catalog homes for inspiration. "People are drawn to the traditional, more formal style of these homes. It's especially true among our younger clients."

Smallworks is a frame-to-finish contractor that builds the entire house off-site. The floors and walls are panelized in a climate-controlled workshop and arrive on site with windows and insulation attached. The precision of factory framing and the building-envelope system Smallworks has developed result in highly efficient houses. Factory-made trusses keep the process moving so that a house goes from slab to a lockable, dried-in shell in five to six days—something Fry believes is important for a healthful house in his wet, coastal environment. It also reduces disruption to the neighborhood.

Smallworks also designs and builds the cabinets and built-ins. Fry says, "The key to a small house is to make the space as multipurpose as possible." He likens it to a well-outfitted boat where quality craftsmanship improves livability.

Cruz, an oceanside university town within commuting distance of Silicon Valley. By 2002, the median home price was so steep—more than $500,000—that over 50% of the population rented and the vacancy rate had dropped below 2%. The city found affordable-housing programs costly to administer, and pressure in the rental market meant that rents were high. The city embraced ADUs because they functioned as a homeowner-funded affordable-housing program while providing regulation for a cottage industry in illegal garage apartments.

The idea is that the rental income from an ADU (or the main house) helps to make a house more affordable. By providing small, nice apartments at reasonable rents in single-family neighborhoods where there wouldn't typically be rental opportunities, renters gain a yard, more privacy, a quieter environment, less traffic, and access to schools they typically couldn't enroll their children in.

Portland's commitment to limiting sprawl and increasing housing density makes ADUs a natural fit. When the city adopted new ADU regulations in 2009, there were suddenly 148,000 new potential lots in the city that could increase housing density without the need to build vertically. Neighborhoods can retain their character, and building in the backyards of established neighborhoods reduces the demand for expensive new infrastructure. It's a component of "passive design"—using location to conserve resources. By focusing development in walkable, mixed-use neighborhoods with access to mass transit, the city reduces the number of car trips and pollution.

Small buildings are efficient

By virtue of size alone, ADUs are inherently energy efficient. A recent study by Oregon's Department of Environmental Quality (DEQ)

Photos: courtesy of Smallworks

found that about 86% of greenhouse-gas emissions over the 70-year life cycle of a house are generated by electricity and fuel consumption, and that reducing size had the greatest conservation effect of any of the 70 green-building strategies the department looked at. Summarizing the report's findings, Jordan Palmeri, science and policy analyst in the DEQ's Green Building Program, says, "Small outperforms building technology at reducing energy use."

Shrinking home size by 50% reduces life-cycle greenhouse emissions by 36%. Employing strategies such as double-stud walls with additional insulation, air-sealing, and high-quality windows widens the performance gap.

Palmeri's office, which is also concerned with reducing landfill waste and the amount of embodied energy that ends up in landfills, also advocates ADUs because of a mismatch between the state's housing stock and its demographics. The average house size in the United States increased from 1000 sq. ft. in 1950 to almost 2500 sq. ft. in 2005. Over the same period, average household size shrank from 3.4 to 2.6 people. In the Portland suburb of Milwaukie, just 28% of households have a child at home, while almost a third of households are a single individual. Nationally, household size will shrink further as the percentage of the population over 65 increases from about 13% today to 19% by 2030.

An unexpected stimulus program

Two changes to Portland's zoning rules helped to make ADUs a more attractive investment for homeowners: doubling the maximum size limit for ADUs to 800 sq. ft. and waiving the system-development charges (SDCs).

SDCs are one-time fees paid by the developer (or the homeowners in the case of ADUs) for new housing units or remodels that increase occupancy. They are meant to help offset the impact on the city's infrastructure—roads, parks, water-supply systems and sewers, and schools. For an ADU with material and labor costs less than $115,000 and building-permit fees of $4000 to $5000, SDCs were adding $12,000 or so to the cost.

The waiver has been a stimulus to Portland's construction industry. Prior to the waiver, the city averaged 2.6 ADU permits a month. A year after the waiver went into effect, the rate jumped to 8.7 permits per month; by 2012, it had risen to 12.8 permits per month. That may not seem like much, but given the low number of housing starts these days, it amounts to 19% of all permits.

Living large by building small

Some people build ADUs because they're interested in the small-house movement and find smaller dwellings a more sustainable way of living—both environmentally and financially. ADUs fit the small-house advocate's "Build small, live large" motto well because they can be a good investment and a flexible housing form.

For many, an ADU can make the purchase of a home affordable. The utility costs of an ADU are low, and renting out the main house can cover the mortgage costs. If the owners have children later on, they can move into the main house with the kids and rent out the ADU, which continues an income stream. In later years, the ADU might serve as a landing pad for boomerang kids, or it might become the parents' home again when they become empty nesters, with the rental income from the main house providing a comfortable retirement income.

Accessory dwellings are often used to create multigenerational living spaces. For example, in expensive cities like Santa Cruz, Calif., and Vancouver, B.C., the only way young adults may be able to afford a home in the city they grew up in is by building one in their parents' backyard. Sometimes it's a case of grandparents downsizing from a large house and wishing to be close to their grandchildren, or of aging parents who feel more secure when family members are close enough to check in on them.

That's not to say that everybody wants ADUs in their neighborhood. Any talk of zoning changes that allow rental units or that increase density in an established single-family neighborhood is likely to provoke a NIMBY (not in my backyard) reaction, and ADUs are no exception. Traditional zoning regulations are meant to protect home values in a market where change is feared. In short, they preserve the status quo.

Generally, opponents of ADUs fear that rental units will lower their property values. This could be based on prejudice against renters as transient, loud, and disruptive, or it could be fear of unkempt property or concern about loss of privacy and a change in the visual aesthetic of the neighborhood. There is no evidence that these concerns are warranted. Unfortunately, there isn't enough data to disprove them either, because despite the huge growth in the number of ADUs in places like Portland, Seattle, and Vancouver, accessory units are still a minuscule portion of the housing stock.

If the fate of every ADU application is subject to the whims of surrounding homeowners, nearly every proposed project would encounter NIMBY opposition. Towns with brisk ADU development allow ADUs "by right." By-right legislation means that a municipality can limit the size of an ADU and/or set a minimum lot-size threshold, but the permit process does not have any discretionary aspect.

While specifics vary by jurisdiction, codes put limits on ADU development, even in municipalities aggressively promoting them, by governing size, appearance, and occupancy in similar ways. If you live in a town where ADUs aren't by right, the common features of these regulations give a sense of the types of concerns neighbors and zoning officials are likely to express, and they suggest design strategies and arguments that might allay their anxieties.

Planning and proposing an ADU

In keeping with the idea that an ADU is the second dwelling unit on a property, zoning regulations constrain size to ensure that ADUs are smaller auxiliary homes, both in function and appearance. To ensure that a subsidiary relationship exists, some cities limit the ADU to a percentage of the size of the main house. Even the most generous

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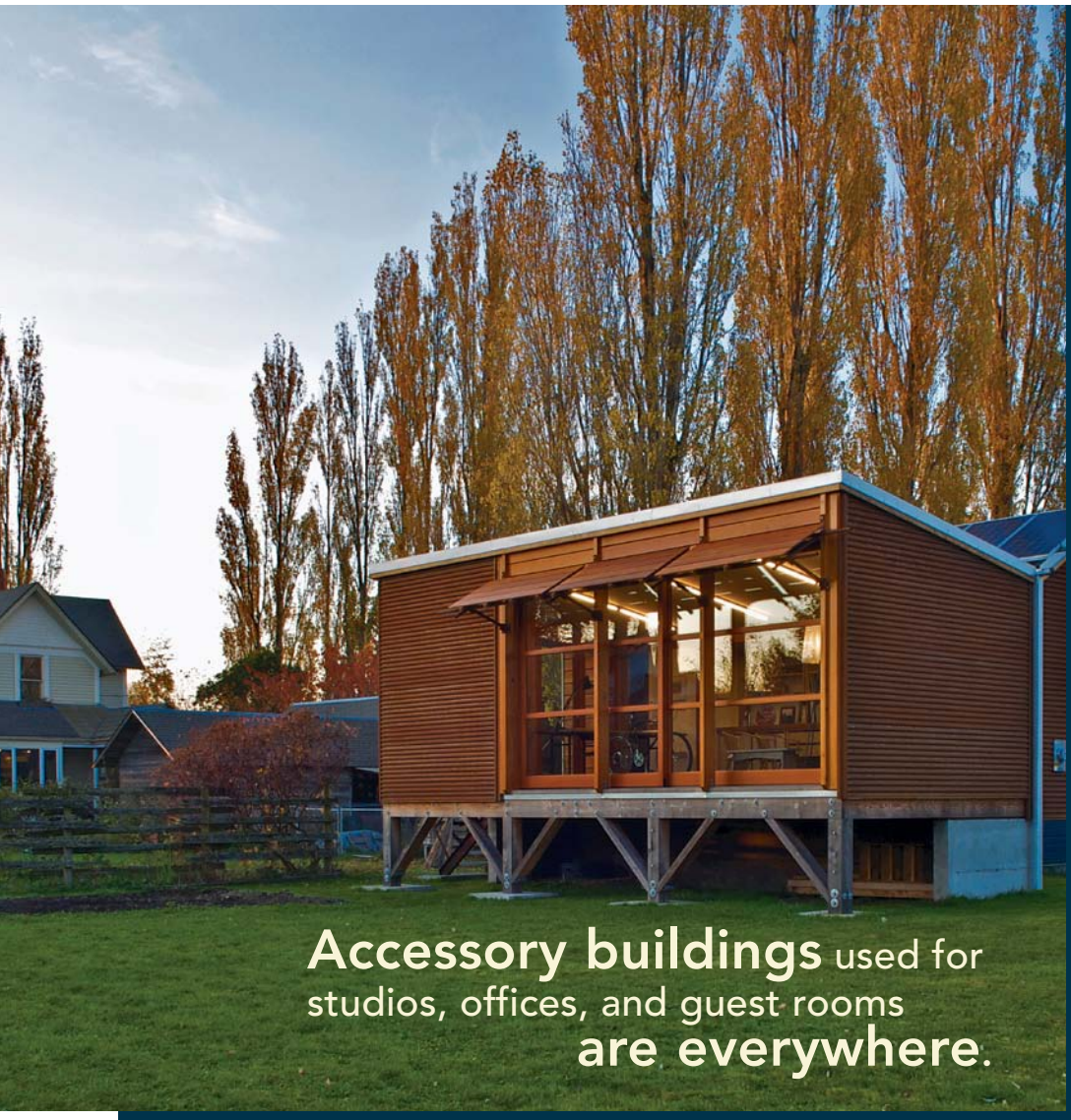
A rural studio



ADUs may be taking off in some urban areas, but accessory buildings used for studios, offices, and guest rooms are everywhere. They're easier to permit without the kitchen that would earn them dwelling status, and they're less expensive to build without the system-development charges that come with new housing.

Architect David Hall built this modern studio in his backyard as a home office and guest room. The simple design is dictated by the site and also takes advantage of the site. Because it's in a floodplain, Hall was required to build 6 ft. off the ground. The large window wall faces due south to maximize solar gain, and it frames views of hayfields and a river. On nice days, the sliding Quantum doors open nearly the whole wall to the outside, and it's like working in the middle of the field. A 4-in. concrete slab absorbs heat and limits the number of days the auxiliary electric-resistance panels are needed. The front side of the butterfly roof is a shallow pitch, but the back side is steeper and clad with a PV array that offsets the studio's electric consumption. With a 16-ft. by 28-ft. footprint, the interior is open to keep the space functional. The rear wall is devoted to storage, with a closet and long built-in drawers for storing architectural drawings.

codes cap backyard cottages at 800 sq. ft.; some codes have height restrictions as well.

Many by-right jurisdictions set minimum lot sizes for an ADU and also might set caps on the accessory-dwelling size based on the square footage of the lot or a particular dimension of the lot.

In addition to setbacks along each property line, a project also can face lot-coverage restrictions to ensure that there's a certain amount of permeable green space and to protect the feel of the neighborhood. It's not unusual for a municipality to limit the amount of the lot covered by buildings to 35%. While these types of regulations affect a property's appearance, they also address neighbor issues such as solar access, privacy, and noise mitigation. In addition, they address safety concerns such as limiting the spread of fire and ensuring access for utility workers, firefighters, and other emergency personnel. Keep these concerns in mind if you have to defend a site plan before a review board.

Because codes treat building an ADU differently from adding living space to an unfinished basement, there are a few budgetary cautions to keep in mind before you do too much design work. Most critically, you'll need to investigate the fees for required utility work as well as the SDCs. Sometimes you can share the existing house's water and sewer lines and electric service; if you're comfortable sharing a meter with your tenant, then this is a lower-cost construction approach. However, in cities with a fire-sprinkler code for new construction, supply lines to the house in older neighborhoods may be too small. The same can happen with sewer lines.

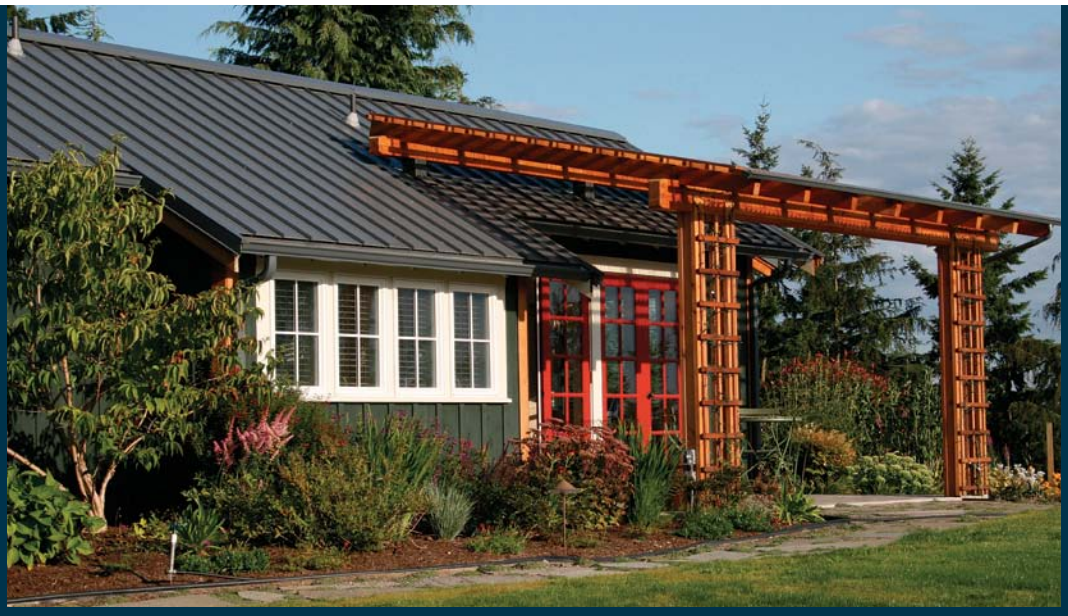
Also to contain costs, you might want to do the electrical work or to plumb the sprinkler system yourself. Typically, homeowners are allowed to do this work on their own houses. However, because ADUs are often used as rental properties, many town codes treat them that way regardless of who will live in them, so these codes require a licensed tradesperson to perform the work.

Appearance matters

Whether presenting a plan for a by-right ADU or preparing for a variance hearing, you'll benefit by explaining how your design fits the

Photos: this page, David Hall; facing page, Ross Chapin.

Backyard guest cottage



Ross Chapin is known for his pioneering work on pocket neighborhoods, and he believes that smaller is a smarter way of building. He argues that we should build to fit the way people live now. The reality is that most households have one or two people, they often work at home, they'd like a place for guests to visit without taking over the house, and they are, or will soon be, living on fixed incomes. Backyard cottages meet these demands.

A couple headed toward retirement had purchased a 930-sq.-ft. house that Chapin had designed, and they were interested in adding on to gain studio space and room for guests, children, and future grandchildren to visit. Chapin counseled building two small additions and a backyard cottage rather than a large addition. Together, the two small houses add more to the property than a single large house. The 637-sq.-ft., two-bedroom cottage is a retreat for guests that doubles as a studio space for painting and a small workshop. The cottage is more efficient than the addition would have been because the space is heated only when it's being used, and with the main house, it creates a courtyard of gardens that focus views.

Chapin believes that with good design, you can build a hardworking one-story cottage. To make the most of the space, he suggests designing for informal living by jettisoning separate living and dining rooms. Built-ins are space efficient and add visual interest. A few strategies that Chapin uses are devoting an extra foot to the hallway and framing it with 2x12s to create a bookcase wall; using beds with drawers beneath; creating alcoves at windows with built-in storage and even a daybed with a curtain for guests; using windows to open up rooms with a view; and building high ceilings to help cottages feel larger.

existing neighborhood and lot. Questions that zoning and planning officials will ask include: Are there historic districts or other design requirements for the neighborhood? Are houses predominantly one or two story? What's the common roofline? Is there a predominant siding type or color? Do many lots have multiple structures (house with detached garage and/or shed)? Are yards open to one another, or do fences and shrubs typically delineate lot lines?

While the zoning code for an ADU likely requires that siding, rooflines, and trim match that on the main house, it also can sometimes further stipulate that window size and orientation match that of the main house.

It's not just appearance that neighbors care about. Privacy is also a concern. There are generally rules governing the location of the entrance to an ADU and the types of screening required to shield neighbors. For instance, in Santa Cruz, the ADU's entrance may not face an adjoining neighbor's property, while in Seattle, the entrance may not face the nearest property line. The idea is to direct foot traffic and noise away from neighbors' windows. High window locations and fencing or screening plantings may be required to shield neighbors from ADUs in some towns.

Where do you park the car?

A city's parking policy plays a critical role in whether an ADU will be feasible. Cities with regulations requiring additional parking spaces for an ADU effectively dampen permit demand.

From a policy standpoint, requiring a parking space for an ADU can be counterproductive to the goal of increasing density in neighborhoods near enough to shopping, employment, and transportation that it's not necessary to own a car. When an ADU creates multigenerational housing so that parents can age gracefully close to their children and grandchildren, there's a chance that the grandparents may no longer drive. If they are still driving, doing away with parking requirements can encourage the household to give up a car and share rides and vehicles among generations. □

Sean Groom is a contributing editor.