



# Tiny Houses

By Allyn West



**S**helly Pottorf and Shannon Bryant designed a house for themselves. It has a modest kitchen with a built-in dinner table that doubles as a desk. There's a cushioned reading lounge at one end and a bathroom with a sink and stand-up shower at the other. A sleeping loft is tucked up into the recess of the gambrel roof, which has windows that open out like wings. The exterior is marked by a streamline ellipse where polished aluminum curves into redwood siding. That redwood was salvaged from a deconstruction site in Houston's Memorial area.

The catch is that the house is 150 square feet. It is less than seven-feet wide. Bryant says that a friend of theirs has a wingspan wide enough that his fingertips can touch both walls at once.

Tiny Drop, as Pottorf and Bryant have named their tiny house, was built inside a rented-out unit in an industrial park near the Hempstead Highway. It sits on a wheeled trailer that they had custom fabricated. Eventually, Bryant will tow the tiny house behind her white Ford F-250 to green mountainside acreage in Vermont, where it will become the couple's (and their dogs') summer getaway.

Tiny Drop  
 A Elevation  
 B Longitudinal Section  
 C Floorplan

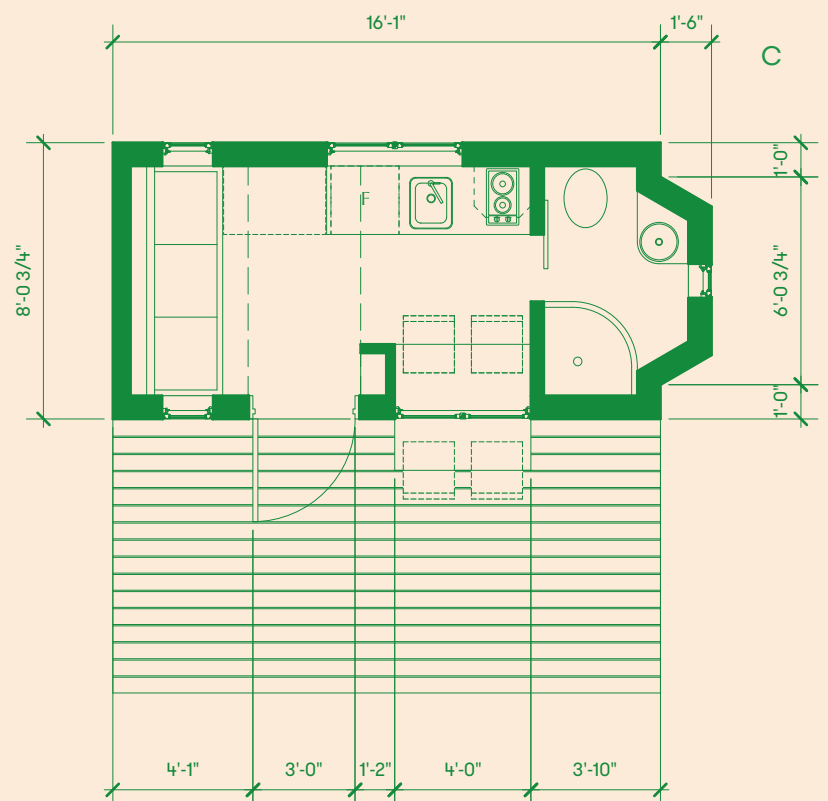
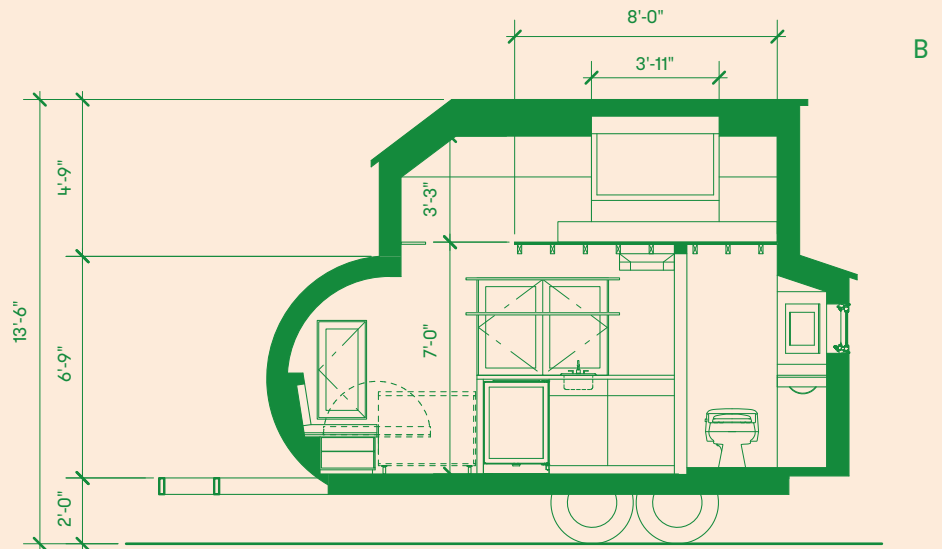
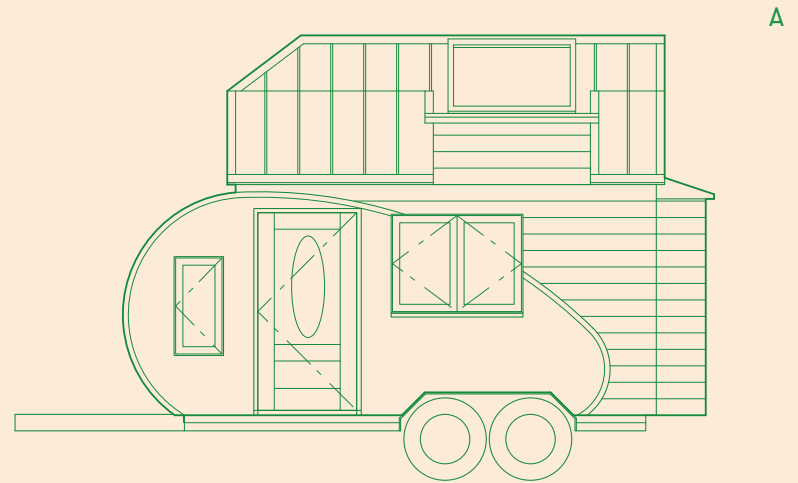
For now, Tiny Drop has been making appearances all over Houston, rolling in the 2015 Art Car Parade and being featured on the television show *Great Day Houston* and outside the Green Building Resource Center at the Houston Permitting Center.

For Pottorf, a graduate of the Rice School of Architecture and licensed architect who specializes in sustainability as principal of the firm Architend, and Bryant, a builder who honed her skills with Dan Phillips—the Huntsville-based visionary who uses license plates, picture frames, and bones as building materials for his quirky low-cost houses—Tiny Drop is an experiment. “We’re building this as a prototype,” says Pottorf, “so that people can see something different.”

“Some people might feel that it’s claustrophobic,” concedes Bryant. “They could never see themselves living in it, but maybe they could downsize from their 3,000-square-foot house where they don’t even use three of the rooms.”

Downsize? The word seems nearly treasonous in Texas, where everything’s—well, you know what they say. And building tiny in Houston, a city as large as the state of New Jersey with a population about as dense as that of Columbus, Ohio, a population that just a few generations ago watched Evel Knievel soar on a motorcycle inside the biggest room in the world, the Astrodome, the stadium where superlatives go to die, seems to stomp on the legacy of the Grand Huckster himself. If you believe the myths—and if you ever take a lap around the Beltway—you might conclude that Houston just doesn’t do tiny. The “Houston Tiny Houses” Facebook group has 320 members, compared with 858 in Austin—and 1,108 in Portland.

Nationally, the appeal of tiny houses started to catch on as people looked for a solution to the economic downturn and housing crisis of the late 2000s. By that time, the size of the average American family had shrunk from 3.1 people in 1970 to about 2.5 people, but the average house had grown almost 1,000 square feet larger. There was an epidemic, quips the Austin-based writer Canan Yetmen, an “obesity of space.” For many, it stopped making sense to build—and, maybe just as crucially, to pay for—larger and larger houses for smaller and smaller families living farther and farther out. Blogs like *thetinylife.com*, *lifeedited.com*, and *cabinporn.com*, as well as a slew of niche books, trade shows, reality television series—even a feature-length documentary film, *Tiny: A Story About Living Small*—all



sang a kind of gospel and contributed to the undeniable popularity of the so-called movement.

Now, most urbanists and sociologists agree that as much as 75 percent of the world's population will live in cities by 2050—a reversal of the direction, and spirit, of Manifest Destiny. Downsizing, considering our environmental footprint, and living smaller have become economically and morally urgent for many, and tiny houses—seen, paradoxically, as both faddish and potentially revolutionary—an extreme response

to alarming conditions. “We get into these 30-year mortgages that lock us down,” says Pottorf. “It’s not working that well financially for everyone. How do you break that cycle? If you’re starting out young, how do you just not get into that cycle? If you’re somewhere in the middle, how do you get out of it? If

a tiny home costs \$26,000, that’s the price of a car. So it’s a different economic model.”

The tiny house suggests a different social model, too. Without space for a well-stocked liquor cabinet, you might walk to the ice house on the corner. You might hike or bike on the bayou greenway instead of crunching along

alone in your living room to *8-Minute Abs*. You might replace your two-car garage with a garden. You might people-watch at the park instead of watching people on television in the dark. Architect and University of Houston professor Donna Kacmar writes in her new book, *BIG Little House*, about Alex Melamed’s 320-square-foot Walnut House, in which he lives with his wife and cat in a “walkable community” in Ohio: “The ability to easily walk to the nearby neighborhood library or local coffee shop makes them feel part of a larger community and greatly expands their ‘living’ space.” Here, the lack of personal space embodied in the very architecture of the tiny house—as with another small typology more familiar to most Houstonians, the shotgun—creates the necessity for a more fully realized, and more thoroughly peopled, public realm. “When you live small, you need the exterior space,” says Pottorf. “Ideally, you need a community space where the things that don’t fit in your home you still have, as a community.”

Because of this potential to radically reconfigure space, the tiny house has become an attractive typology to experiment with. Pottorf, who in addition to her work with Architend teaches at Prairie View A&M, assigned a Spring 2015 studio of undergraduate students to design and build a retail space based on the tiny house. Consulting

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with Natasha Johnson, a 60-year resident and current Independence Heights Super Neighborhood President, the students developed designs for a snow cone stand and business incubator that could be built on a trailer out of recycled materials and easily delivered to a site on North Main Street. Some of the designs incorporated interactive features like a chalkboard; others were almost sculptural. But they all presented an affordable alternative to the traditional storefront for neighborhood residents to sell jewelry, food, art, and other wares.

Similarly, a group of professors including Ben Bigelow and Gabriela Campagnol at the Texas A&M College of Architecture taught a year-long series of upper-level courses for construction science, environmental engineering, and architecture students that led to the design and construction of two tiny houses—houses that were eventually trucked to Austin to be sited in a Mobile Loaves and Fishes master-planned community of transitional housing for people exiting homelessness called Community First. “We started with a discussion of what is a home,” says Campagnol. “The head of Community First came, and we had a workshop [with] the students. We asked: What would be a house that you would like to live in?”

The students submitted designs in the fall. Two were selected—one, says Campagnol, is “Texas, ruddy-style,” and the other “more Scandinavian, IKEA-style”—and refined further to work within a hard \$8,000 budget. In March 2015, the students started construction. Like Tiny Drop,

the houses were built on trailers. They were completed in May. Ultimately, they will be inhabited by just one person, per Community First guidelines. “But the houses work well together,” says Campagnol. “We wanted something that could be a model for family design with a modular system.”

Technically, though, these are not tiny houses. And if you want to build and live in a tiny house—especially in an urban context—you must eventually deal with technicalities. Though these buildings fall within the accepted “tiny” range of 86 to 400 square feet, they don’t include showers, toilets, or kitchens, so they are not subject to the International Residential Code [IRC]. At Community First, the residents’ bathing and cooking facilities are centralized. As such, the City of Houston could not permit them as permanent primary dwellings. “There are a number of IRC issues that come up relative to tiny houses,” explains Pottorf. “If [the sleeping area] is up in a loft, you have an issue with egress. These are health, safety, welfare things. I’m an architect, so I’m responsible for upholding these things. But a lot of [do-it-yourself] people aren’t even aware of [them], because they’re not looking at the residential code.”

The City of Houston would not permit Tiny Drop, either. Not only is the house too narrow according to the

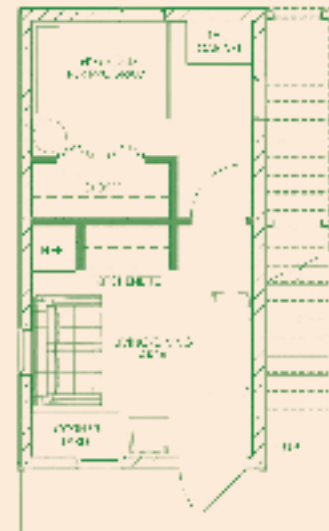
Three residences at the Community First! Village, a 27-acre master-planned community near Austin will provide affordable, sustainable housing, and a supportive community for the disabled, chronically homeless in Central Texas.



# Community First Micro Homes

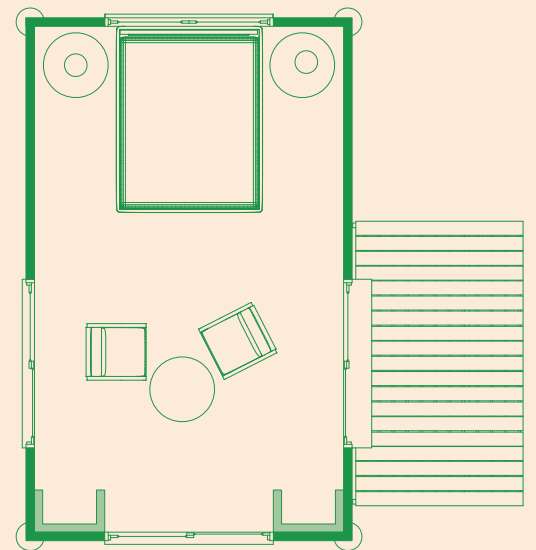
## Rooftop Hospitality Home

This house, designed by Cody Gatlin of Fazio Architects, was among the four winners of the AIA Austin Tiny House Competition. It has the potential to host more guests than would have been possible without the addition of a habitable rooftop space.



## Micropod Home

MicroPod Prefabricated, designed by Stephi Motal, AIA of Black + Vernoooy Architects, also won the AIA Austin Tiny House Competition. It offers a flexible unit that can be oriented to optimize privacy, solar, and ventilation considerations, as well as other site opportunities such as views and trees.



IRC—a permanent dwelling can't be less than seven feet in any dimension—it was not built on site, and it does not have a foundation. Here, it gets even more complicated. Technically, Tiny Drop was prefabricated, which makes it subject not to the IRC but to federal Housing and Urban Development Department [HUD] standards, which are inspected and regulated at the state level. As far as the City of Houston is concerned, says Pottorf, the house that she designed, built, and intends to live in is nothing more than a “load on a trailer.” It might as well be lumber or livestock. “There's this big void that no jurisdiction, no governing body, has addressed. No one has written a code for [tiny houses on wheels],” says Pottorf. “It's not that you can just modify the IRC or HUD. You have to start from scratch and address what [tiny houses] are and what's appropriate for them. It's a whole new genre of permitting.”

The same might be said about the appraising and lending industries, whose conventions are equally unequipped—at least for now—for tiny houses. Austin-based Teresa Lopez, author of *Green Energy Money* and a licensed banker with Westar Pacific Mortgage, outlined some of the challenges at a recent symposium on tiny houses at the Houston Permitting Center. “Appraisers are required to use paired sales analysis,” she says. “You have to compare apples to apples. But there is no way to [do that with] a tiny house. Usually, the only [comparison] available in the [Multiple Listing Service] around the same square footage is a condo, but that's multifamily.”

If the house you want to build doesn't adhere to the market, you can't rely on “conventional sources” of financing, says Lopez. “That's not the end of the world, obviously,” she explains. “But other types of loan come with a much higher interest rate. [And with tiny houses,] you're going to have trouble selling it on the back end. [You] have a property that's not marketable.”

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Building a tiny house is like trying to publish a single poem instead of a 300-page novel. It strains against conventions and practices that aim to regulate and standardize. Part of the appeal of tiny houses, of course, is avoiding those conventions and trying out new practices that might change how we do things as a culture—as well as what we value, what we think we want, and need, in a house. Adherents tend to invoke the authority of Henry David Thoreau, whose own do-it-yourself experiment was carried out beside Walden Pond in a cabin 10 feet wide by 15 feet long—about the same size as Tiny Drop, by the way. Most of the tiny houses featured in slideshows or magazine

spreads are posed like Thoreau's on a picturesque site. There's no one for miles. There's an implication of escape, independence, solitude.


Those qualities have their appeal. But they also undermine the collective intelligence of cities. Thoreau lived off the grid because there wasn't a grid. He didn't enjoy curbside recycling or wastewater treatment. His experiment isn't repeatable for a metropolitan area of more than 6 million people. In an urban context, a single tiny house on a single-family lot seems absurd. We can't live together feasibly or sustainably as a city of Thoreaus any more than we could as a city of Donald Trumps. That's why some tiny house advocates are interested in developing “pocket neighborhoods” of several houses on subdivided single-family lots, but these, too, run into permitting issues—and they also require land-use variances that would bring into effect additional requirements for parking and emergency access.

“There is no silver bullet,” says Pottorf. “Some people are like, ‘This is it! Tiny houses. On wheels. That's the solution, and everyone should live in them!’ That's not the only solution. That might be one solution in a particular situation. [If] we all did tiny houses, it would be disastrous. If we built everything out of wood, it would be disastrous, [just the same as] if we built everything out of steel [or] straw bale and cob. You can't have one form of delivery.”

For Kacmar, whose book explores 20 projects other architects have undertaken that are less than 1,000 square feet, the tiny house might be best understood as neither a post-Thoreauvian fad, nor a revolution—but something between. She would argue that the tiny house is too small for most people to be viable on a mass scale. But it represents another way of searching for “our notions of home.” “The great thing about the tiny house movement and the do-it-yourself movement is that [they give] people a bigger spectrum,” she says. “Before it was a big house in the suburbs or a smaller house closer in the city. And now the spectrum's gotten bigger.”

The popularity of the tiny house allows people to say, explains Kacmar, “I'm not going to think about resale, I'm not going to think about what my neighbor has. I'm going to think about what's essential to me.’ Asking those questions is just as valuable as answering them. How do I want to live? What do I prioritize? We all want a place where we can put our stuff and build a life in.”

Here, you can still defer to Thoreau's authority. “The life which [we] praise and regard as successful is but one kind,” he writes in *Walden*. “Why should we exaggerate any one kind at the expense of the others?” ■



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