



Tiny Homes on Wheels and the Affordable Housing Crisis

THE PROBLEM: Population density is increasing as more and more people migrate to major cities and towns to meet their basic needs. Economic pressures have made the average 2,300 square foot home too expensive for many people. At the same time, there are others voluntarily choosing to live with less and, thereby, avoid accruing substantial mortgage debt. In both cases, there are building codes and zoning issues that are preventing these population segments from their right to a safe place to call home. And then there is the issue of who and how buildings are certified. We are going to show how to help people have safe Tiny Houses on Wheels to live in.

THE ISSUES:

1 – Building codes

There are many building codes here in the United States that apply to how varying classes of buildings are to be constructed. Let's take a quick look at some of them.

The American National Standards Institute (ANSI) A119.0, *Recreational Vehicle (RV) Standard* is the code used to build RVs like pop-up tents, campers, camp trailers, and motor homes - all units with minimal insulation as they are typically in use for only a few months in the summer. This is obviously not the correct code to use for THoWs.

A step up is ANSI A119.5, the *Park Model Recreational Vehicle (PMRV) Standard*. Units built to this standard, while under 400 square feet, are required to have wall insulation, windows and doors similar to those promulgated by the U.S. Department of Housing and Urban Development (HUD).

Next up the ladder are the HUD guidelines for mass-produced factory-fabricated manufactured homes. These guidelines do not seem fitting since these homes will end up on a semi-permanent foundation and are much larger than a THoW.

For purposes of our discussion, the final standard to consider is the International Residential Code (IRC) established by the International Building Code (IBC). In most states, the IRC regulations are the basis for construction of single family homes with a foundation, as well as Accessory Dwelling Units (ADUs), cabins, cottages, and modular homes. In some states the National Fire Protection Agency (NFPA) 5000, *Building Construction and Safety Code*, also applies.

2 – Certifying the construction

Currently 48 states (including Oregon as recently as January 2017) allow third-party inspection and certification of RVs, Park Models and HUD homes. Only two states require direct state agency oversight: Nebraska and Washington.

Tiny Homes on Wheels and the Affordable Housing Crisis

Washington State Labor & Industries (L&I) has jurisdiction to approve plans for, inspect, and certify PMRVs using the ANSI A119.5 code; however, as noted above, this is primarily applicable for PMRVs built in a factory.

Some people want to build their own homes, which has spawned the Tiny House on Wheels (THoWs) movement. The current certification system, set up for mass production in a factory, is too cumbersome for most owner-builders so they just don't do it, which can lead to less-than-safe homes in some cases. A simple and easy to apply code is needed.

3 – Zoning

Currently many states cannot seem to figure out where to allow people to live in a THoW, other than in an RV park. In our area (i.e. Oregon and Washington) there are not very many year-round RV parks and the ones we have are full.

Many newer developments, with small lots, are not a good fit for a THoW. However, there are many older neighborhoods with large lots, and rural areas can offer ideal locations.

THE SOLUTION: Amend current building codes and zoning laws enough to make Park Model Homes, Tiny Houses on Wheels and small homes on foundations safe, legal and allowed

What building code should apply?

With respect to tiny homes on a foundation, the IRC already allows homes under its 2015 version with room size as small as 70 square feet. There are some additional (and excellent) changes coming to the IRC through "Appendix Q," which introduces new terms with definitions and primarily addresses the dimensions of habitable lofts, and safe access to and egress from them. These changes will go into effect with the 2018 version of the IRC (or where adopted sooner by state building code officials).

This should take care of anyone who wishes to build a small home on their property as a primary residence or as an ADU.

Two additional items could make it easier and more affordable to build these smaller homes:

- 1- Simpler foundation systems, like [Screw Pile Systems](#) or [Pin style piers](#).
- 2- A reduction in the R-Value requirements for residences under 400 or 500 SF.

Regarding THoWs, it is our assertion that the ANSI A119.5 standard with some minor amendments for year-round living is the correct code. It has all the information necessary to build a safe home, including a design for the trailer (chassis), and the attachment of the floor system to it. It also has tables for framing sizing, just like the IRC. Plumbing and electrical are

Tiny Homes on Wheels and the Affordable Housing Crisis

covered as well as gas piping. It should be noted that in Washington state, THoWs are already considered Park Model homes.

Due in part to the minimal insulation value requirement, the Park Model standard currently restricts year-round occupancy. A few suggested changes would make this code a viable option:

- Increase required insulation levels to a Minimum R-13 in the floor, walls and roof, if intended for year-round occupancy.
- Allow year-round use if the THoW is set on blocks with wheels removed, strapped to the ground, and skirted like a manufactured home. (Note: the PMRV code already requires attachment points for the strapping system.)
- Require egress from a loft with a window or skylight and a drop-down ladder.
- Either cover the RV style electrical cord or provide more permanent wiring between the unit and the electrical pedestal.
- Owner-builders should be allowed to use the third-party certifiers of PMRVs recognized by 48 states to assure that their construction methods meet minimum code standards. At least two national companies currently do this for owner-builders as well as factory-built Park Models.

The last thing we want any agency to do is mix apples and oranges by trying to make a THoW fall under a code designed for a home permanently attached to the ground; they are too different in design and construction.

Perhaps as the American Tiny House Association has suggested a New ANSI code that takes most of what is in A119.5 and adds what is needed for full time living is the way to go, thus developing a separate code just for THoWs, giving it a new number so we can get away from the RV moniker.

Where should they be allowed to park and be lived in?

PMRVs should be allowed on any site that is zoned for a mobile home; that is, wherever potable water, electrical hook-ups and waste sanitation are provided, or on an RV-pad anywhere in the state. In Zone(s) _____.

PMRVs / THoWs should also be allowed where a temporary manufactured dwelling hardship is granted, in place of a manufactured home, which is often much larger than is needed for this purpose.

This could provide thousands of affordable homes immediately.



Tiny Homes on Wheels and the Affordable Housing Crisis

It would appear that there are three different types of zoning issues to address.

- 1- Single units placed on private property as stand-alone units, like a mobile home.
- 2- A secondary unit placed on private property, similar to an ADU or as a temporary unit for an aging or ailing family member.
- 3- Groups of tiny houses as a small village or larger groups like an RV or trailer park.

Currently most jurisdictions allow a property owner to park an RV or THoW on their property as long as covenants, codes and restrictions (CC&R's) do not restrict it. Some jurisdictions also allow continuous occupancy for up to 30 days. With an uninsulated RV, this probably makes sense. However, in rural zones (e.g. R-1 on up) many properties have an RV pad with potable water, electricity, and sewage, so why couldn't a property owner place a properly insulated Park Model / THoW on the pad and have someone live in it full time?

With aging baby boomers, often referred to as the silver tsunami, there is an increasing demand for affordable housing for this segment of the population. It should come as no surprise that many of these people, or their children, cannot afford to pay out \$3,000 to \$5,000 a month for assisted living. In fact, some cities have already allowed THoWs to be placed as ADUs with some restrictions.

There are several Tiny House communities being built around the country with setups much like any RV or trailer park. The responsible land use authorities could make sure that zones amenable to a small or large Tiny House community are identified so developers know what they are available.

The Conclusion:

Tiny Houses on Wheels are being built at an ever-increasing rate - either by owner-builders or in start-up factories across the country. It is the responsibility of the federal government, and every state, to agree on an easy-to-implement path for builders of THoWs. Everyone has the right to a clean, dry, warm place to live for themselves and their loved ones no matter what their income level.

We all want people to be safe in those homes, so let's agree on a simple, easy-to-understand and implementable path to accomplish that goal and get it in place. Of course, it will change over time. All codes do. We can amend it as we move forward.

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