



# Prefabricating Supportive Communities for the Homeless

Based on the original article by Andrew Wilson

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To support our organization internally as well help inform the general public and serve as a useful resource for interested parties, Homes 4 the Homeless is summarizing articles and research papers related to the homeless problem and proposed solutions. Analysis and opinions expressed in this summary are that of the original author and do not necessarily reflect the attitude of Homes 4 the Homeless as a whole.

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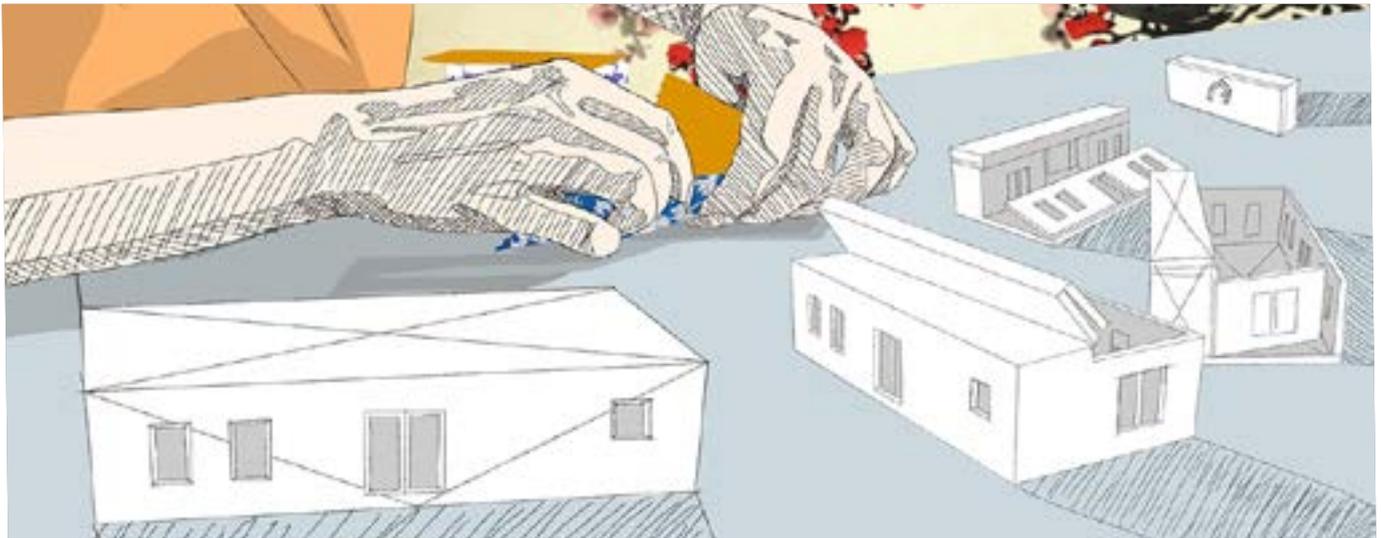
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# Prefabricating Supportive Communities for the Homeless

## OVERVIEW

In this [thesis](#) submitted to the Graduate School of the University of Cincinnati, Andrew Watson (B.Sc.) defines homelessness, identifies its structural causes, describes common solutions and how prefabricated shipping container housing can fit as a solution. The paper also details how these subjects can be applied specifically to Seattle, Washington.



## UNDERSTANDING THE HOMELESS AND HOUSING LANDSCAPE

Homelessness can be defined as individuals suffering from “poverty with a lack of stable housing.” Demographics of those homeless vary from children, families, single adults, to veterans.

Homelessness is rising in many largely populated cities, with three main factors that can be attributed as the cause: health expenses, low income, and a national housing shortage.

Those with major health issues (disabilities, disease, drug abuse, mental issues) are at a much higher risk of experiencing homelessness at some point in their life. Just those living in shelters are two times as likely to have a disability compared to the general population. “Being unable to afford healthcare causing a downward spiral for those experiencing health problems.”

Low income, including the minimum wage (\$7.25 nationally) is a likely factor of homelessness, making it

difficult to afford rent. Families who earn minimum wage typically pay 50% or more of their income on housing. Even those spending the recommended 30% of rent on income are still at risk of eviction, as unexpected expenses in other areas of life can throw their finances out of balance.

The shortage of affordable housing in America is also a primary factor in the rise of homelessness. Watson states, “By the mid 1980’s affordable housing growth was diminishing, rents rose, and wage growth had halted. This is in part due to the legal structures put in place by the government which cut off funding for affordable developments. Today, finding affordable housing is scarce due to the low number of existing rentable housing. The conditions of the housing left from the emergence of many in the 1970’s are mostly inadequate and unlivable. The building of new affordable housing is few and far from the needed amount of the United State population looking for it.”

## TYPES OF HOUSING SUPPORT SERVICES

Watson describes three types of housing solutions most relevant to the prefabricated housing solution.

**Emergency Shelters:** The quickest and cheapest of the services, focused on short-term housing with a maximum stay of 90 days, often leaving occupants to venture from one shelter to another.

**Transitional Housing:** A step up from emergency shelters, transitional housing is a longer term service that provides a place to stay as well as assistance with rebuilding support networks as the individual makes the effort to move on to permanent housing.

**Permanent Supportive Housing:** “Known for combining rental/housing assistance with support services for people with higher than normal needs or chronic homelessness. Individuals usually have possible physical, mental health, developmental disabilities, or substance abuse, who acquire the services provided.”



## PREFABRICATED HOUSING AS A SOLUTION

“Prefabrication can be defined as a building system in which the essential pieces of the structure are sent to the site on which the finished edifice will be constructed partially or completely assembled.”

Watson points out the benefits of using prefabrication are the cost-effectiveness of construction and building materials, the flexibility of their use, modularity, and mobility. Of these benefits, the cost and mobility are the most relevant. “A major advantage of building with prefabricated elements compared with traditional construction techniques in the constant quality level achieved by production in plants. This reduces the construction time on site and, with it, cost.”

Watson goes on to say:

“Making each of these units off-site will increase the production efficiency and lower the amount of assembly on the actual site. Preparing the fully equipped, fitted-out room modules will make up almost all the prefabrication of the building. Prefabrication has become the standard for a more flexible and customizable mode of building, responding to new design requirements under the banner of ‘mass customization’ ... Conventional construction can be more expensive and can take twice as long as through prefabrication ... thus making modular units that can be made faster and with better quality off-site will prevent the population increase. Using the ‘housing first’ concept, homeless people will be able to adjust and get acclimated to living at their own pace using optional and voluntary

supportive services. As for designing a modular unit that will house individuals or families, the use of shipping containers is a cheap and flexible solution.”

He concludes that once modular units are finished, they can be taken to the site and placed, resulting in less disruption on site such as traffic, noise, and waste.

Strongly highlighted in this analysis is the use of shipping containers as prefabricated housing, “Economically, shipping containers can be a cheap solution to create a mobile community that can move throughout a certain urban context easily.”

Because these sites are constantly changing and moving, the shipping container offers the useful benefit of mobility. Ideally, containers would be able to freely move throughout the city where they are needed most.

The flexible mobility of shipping containers offers improved long term viability as a housing solution, as standard sanctioned homeless encampments in Seattle have been difficult to sustain due to public disapproval.





Homes 4 the Homeless Modular Design Mockup

## THE ROLE OF HOMES 4 THE HOMELESS

Homes 4 the Homeless is focusing on shipping container, prefabricated, modular housing as a solution to the homeless crisis.

This model is intended to serve as a solution to the housing shortage factor of the homeless crisis. By using shipping container housing as Watson details, Homes 4 the Homeless hopes to provide the affordability and mobility necessary to creating long term and scalable housing for either transitional or supportive homeless programs.

To learn how you can be of assistance, check out our Volunteer or Donate pages.