

Overcoming Barriers to Manufactured Housing Promising Approaches from Five Case Studies

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Abstract

Manufactured housing holds promise as an affordable form of housing that could expand homeownership opportunities for low- and moderate-income households at a time when house value growth is outpacing income gains in markets across the country. A 2023 report by the Joint Center for Housing Studies showed that manufactured homes offer a significant cost advantage over comparable site-built homes. In a second report published early this year, the Center identified five key barriers to greater adoption of this form of housing for affordable homeownership. This study, the third and final in this series, features case studies of five organizations from the for-profit, nonprofit and public sectors that are leading efforts to expand the use of manufactured housing in markets where these homes have not been widely used. Drawing on these examples, the study concludes with lessons for other organizations seeking to expand the use of manufactured housing.

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Introduction

This study is the third in a series examining the potential for manufactured housing to expand entry-level homeownership opportunities. Manufactured homes are those built in accordance with the Manufactured Home Construction and Safety Standards established by the US Department of Housing and Urban Development, commonly referred to as the “HUD Code.” The first study (Herbert, Reed and Shen, 2023) examined the cost savings associated with manufactured homes relative to site-built housing and found that these homes do offer substantial construction cost savings. According to the authors’ calculations, the construction cost of a basic single-section manufactured home is estimated to be just 35 percent of the cost of a comparable site-built home. The savings for larger homes is smaller but still significant, with a double-section home costing 60 percent and a CrossMod™ home costing 73 percent of the costs of comparable site-built homes.¹ Although adding the cost of land to these homes reduces the magnitude of the cost savings, the advantage can remain substantial—particularly in areas where land costs are low.

The second study (Herbert, Reed, McCue, and Hermann, 2024) examined the barriers to greater adoption of manufactured homes, including the following: lingering negative perceptions of the quality of the homes despite notable improvements in quality over time; zoning and other land use regulations that limit the ability to site these homes in many communities; market conditions that erode the cost advantage of manufactured homes; the unique nature of the supply chain for these homes that makes it difficult for consumers to obtain homes in many urban areas; and limits on access to affordable financing. The findings of that study pointed to the need for multipronged efforts to overcome these barriers, given their interrelated nature.

The present study is intended to provide examples of efforts to overcome these barriers as a means of both identifying promising practices that could be adopted by others and highlighting key obstacles that others are also likely to have to address. In so doing, we aimed to examine the extent to which the barriers identified by our most recent study were evident in the selected cases, whether there were other barriers surfaced by these cases, and what lessons could be derived from these efforts to advance manufactured housing.

¹ CrossMod™ refers to a form of manufactured housing intended to more closely mimic the aesthetics of a site-built home by having a steeper roof pitch; having additional features, including a porch, garage, and dormer, sited on a permanent foundation; and using interior materials and elements, such as drywall and durable cabinetry. For a description of the CrossMod™ home, see <https://www.claytonhomes.com/studio/crossmod-questions-and-answers/> and <https://www.manufacturedhousing.org/new-class-of-homes/>.

The featured case studies were identified through interviews with nonprofit and for-profit organizations active in the field. They are not based on any type of systematic survey of efforts underway nor were the cases selected from a broader set of options based on specified criteria. The cases are best described as a convenience sample identified through expert interviews. Also of note, most of the cases feature projects that are currently in progress and so do not offer insights regarding longer-term outcomes. Still, the examples profiled do yield insights about how different organizations operating in different market contexts are seeking to overcome barriers to the use of manufactured homes for entry-level homeownership that should be of value to practitioners and policy makers.

The next section provides an overview of the methods used to select and execute the case studies and discusses the limitations of the approach used in generalizing findings. This section also acknowledges the prevalence of CrossMod™ as the featured form of manufactured housing in most of the case studies and discusses the rationale for this focus. The third section provides an overview of the five case studies, including the characteristics of the lead organization and the market where the homes are being developed. The individual case studies are then presented. The report concludes with key takeaways from the cases and implications for policy and practice. To preview, the key takeaways include the following:

- It is important to provide education about the benefits and special attributes of manufactured housing to key stakeholders involved in all stages of the development process, including local decision-making bodies, permit issuing agencies, contractors, lenders, and appraisers;
- Challenges may arise at each stage of the development process and if not anticipated can cause lengthy delays; therefore, it is important to map out the process to identify and address obstacles;
- Zoning and local approval processes often represent significant challenges, but they can be overcome by highlighting the quality, aesthetic appeal and affordability of manufactured homes;
- CrossMod™ manufactured housing was found to have several advantages in overcoming obstacles, including countering negative perceptions of quality and design of manufactured homes while addressing appraisal difficulties common for traditional manufactured homes.

Methods

To identify potential case studies for this report, we conducted virtual interviews with several of the leading organizations involved in the promotion of manufactured homes for affordable homeownership. These organizations included Next Step Network, ManufacturedHomes.com, The Lincoln Institute of

Land Policy and their Innovations in Manufactured Homes Network (I'm HOME), Clayton Homes, Fannie Mae, Freddie Mac, and The Pew Charitable Trusts.² The interviews probed for examples of developers seeking to expand the use of manufactured housing for entry-level homeownership. The interviews ultimately identified five organizations that were actively developing homes and were willing to participate in this study.

A common theme of the examples provided was that developers often focused on employing CrossMod™ manufactured housing as a way of addressing multiple barriers associated with conventional manufactured housing or non-HUD-code modular housing. Specifically, the design features of these homes, including a steeper roof pitch, a permanent foundation, more durable materials and finishes, and added elements including porches, dormers, garages, are intended to overcome the negative perceptions of traditional manufactured homes that limit both consumer acceptance of them and public officials' willingness to allow them under existing land use regulations. CrossMod™ homes also provide access to unique lending products from Fannie Mae (MH Advantage) and Freddie Mac (CHOICEHome) that provide more affordable mortgage financing and allow for the use of site-built homes as comparables for appraisal purposes.³ We did seek to identify examples of developers focused on traditional manufactured homes rather than on CrossMod™ homes but were unable to find examples of this type (although several of the case study developers had employed some traditional manufactured homes in the early stages of their work). However, given the somewhat limited nature of our contacts, the failure to identify examples of developers employing traditional manufactured homes should not be taken to indicate a lack of such developers active in this market.

The interviews ultimately identified five organizations that were actively developing homes and who were willing to participate in this study. Given the method used to identify the cases, the resulting sample is best described as a "convenience" sample that is not representative of a broader population. Still, the cases do represent a range of lead organizations operating in a range of market conditions that provide insights from different contexts.

The method for conducting the case studies consisted of a review of available information about the organizations from public sources (mostly websites for the organizations) and interviews with senior staff from the lead organizations. The interviews were semi-structured, following an outline of topics to be covered, but the discussion flowed more like a conversation following additional issues raised by

² See the Acknowledgements section for a list of individuals from each organization that were interviewed.

³ Of note, the loan products offered by both Fannie Mae and Freddie Mac currently require that the CrossMod™ home be double-section, which precludes the use of more affordable single-section homes.

interviewees. We did not attempt to interview other stakeholders in these developments, such as public officials, construction firms, financial institutions, or homebuyers. The case studies thus reflect the experience and opinions of the lead organization only.

In summary, the case studies are not meant to be representative of the current state of manufactured home development. Nor do they include the perspectives of a broad set of stakeholders beyond the lead developer. Nonetheless, the experience of these developers provides insights into the approaches being adopted to overcome barriers to manufactured home development and the principal challenges facing these developers that may be of interest to other practitioners and policy makers seeking to expand the use of manufactured homes.

Overview of Case Studies

Figure 1 provides a summary of the five case studies included in this report and some key characteristics of the organizations, the type of development they are pursuing, and the characteristics of the markets in which they are operating. As shown, despite being a convenience sample, the case studies provide a fair amount of diversity in the nature of the developers, markets and operations. The five cases include for-profit, nonprofit and public agency lead organizations. The for-profit developers specialize mostly in developing entire subdivisions while the nonprofit and public sector-led initiatives are focused more on urban infill projects. The case studies are drawn from markets across the country, including the South, Midwest and West regions of the US. Home prices in these markets are generally fairly low, with only San Bernardino, CA having a value of close to \$500,000 according to Redfin.

The last column of Figure 1 categorizes the counties where each developer operates based on a typology presented in Herbert et al. (2024), which incorporated information on both the prevalence of manufactured housing and the relative level of housing costs. Areas were marked by either a high or low prevalence of manufactured homes and by either high or low home prices.⁴ Herbert et al. (2024) identified areas with low manufactured home shares and low home prices as having the greatest potential for expansion of manufactured housing. Low land values were thought to be conducive to adopting manufactured homes, and the low prevalence of these homes indicated the opportunity for expansion of this market. As shown in Figure 1, the case studies include a range of county typologies.

⁴ High-price counties are in the top quintile (top 20 percent) of counties ranked by median housing value; all others are low-price. The cutoff for being considered high price is fairly low--\$195,400 as of 2021. Low manufactured housing share counties are in the bottom two quintiles (bottom 40 percent) of counties ranked by county ratio of manufactured homes to single-family homes; all others are high manufactured housing share. The cutoff for being considered low-share is below 9.8 percent.

Most of the case studies are in areas where manufactured homes have relatively low shares, although there are two that have relatively high shares (Guadalupe County, TX and Dinwiddie County, VA). Most of these areas are marked by low home values, as even the areas with values above the national median are still just above \$300,000.

Figure 1: Characteristics of Case Study Organizations and Their Markets

Case Study Organization	Organization Type	Market Area(s)	Primary Development Type	Redfin Median Home Price for County	JCHS County Categorization*
MH Advisors	For-Profit	<ul style="list-style-type: none"> • Hagerstown, MD • Harrisonburg, VA • Petersburg, VA 	Subdivision	<ul style="list-style-type: none"> • \$324,300 • \$347,200 • \$271,300 	<ul style="list-style-type: none"> • Low MH/High Price • Low MH/High Price • High MH/Low Price
Spark Homes LLC	For-Profit	Sequin and Marion, TX (San Antonio MSA)	Subdivision	\$323,300	High MH/High Price
City of Jackson MS	Local Government	Jackson, MS	Urban Infill	\$153,800	Low MH/Low Price
Habitat for Humanity	Nonprofit	La Crosse, WI	Urban infill	\$276,400	Low MH/Low Price
Neighborhood Partnership Housing Services	Nonprofit	San Bernardino, CA	Urban Infill	\$495,500	Low MH/High Price

Notes: Median home prices from Redfin. JCHS County Categorization is from Herbert, McCue, Hermann, and Reed, 2024. Counties with a share of manufactured homes below (above) the national median are low (high) share of manufactured homes (MH) and those with a median home value below (above) the national median are low (high) cost.

Case Studies

Each of the five case studies featured in this section begins with a short summary of the profiled work or projects and includes the following components:

- Background on the organizations and/or individuals involved and the local market;
- An account of how sites were selected for the projects and the impact of zoning or regulatory barriers;
- Discussion of how homes were sourced and relevant considerations including retailer and contractor licensing, manufacturer selection, and home model specifications;
- Details on how homes were or would be financed, including considerations and challenges pertaining to the appraisal process; and

- Key takeaways from the cases to inform other organizations seeking to pursue manufactured home development.

Following the case studies, in the final section of the paper, we offer a synthesis of the information gleaned from all five cases, including key takeaways and implications for policy and practice.

1. MH Advisors and EquityPlus LLC



Two of the first homes in Kilpatrick Woods shortly after being sited, awaiting the raising of their roofs. Since CrossMod™ homes have higher roof pitches than traditional manufactured homes, builders often use hinged roof systems which allow the roof to be raised only after being transported and installed on site.

This case study examines the work of Tom Heinemann, a DC-based developer who works exclusively with manufactured housing. Heinemann’s firm, MH Advisors, is in the process of developing four projects across three cities in Maryland and Virginia totaling roughly 430 units of manufactured housing with his partner organization EquityPlus LLC.

Background

Prior to venturing out as a manufactured housing-focused developer, Tom Heinemann had worked in the housing industry in various capacities. Heinemann held roles at the National Association of Realtors, the US Treasury, HUD, and, most recently, the Manufactured Housing Institute, the manufactured

housing industry's national trade organization, where he served as vice president of federal government affairs. Notably, the projects discussed in this case study represent Heinemann's first foray into housing development of any kind, manufactured housing or otherwise.

MH Advisors works as part of a collaborative team which includes EquityPlus, a DC-based affordable housing developer and consultant, and Fortis Construction, a general contractor. The team is supported by Fannie Mae and Freddie Mac, both of which have provided guidance for the appraisal process and worked to help ensure financing availability for homebuyers, as well as Next Step Network, which is providing housing counseling to prospective homebuyers. The team is currently engaged in the following four projects, the manufactured housing components of which are led by MH Advisors.

Kilpatrick Woods is a fee-simple subdivision in Hagerstown, Maryland, a town of 43,701 people in 2022 located 70 miles northwest of Washington, DC on the border with West Virginia and Pennsylvania. According to the American Community Survey for 2017-2021 median existing home values were \$164,400, while median household incomes in the city were \$42,965. Kilpatrick Woods is planned to comprise approximately 240 units of CrossMod™ manufactured housing.

Part of the impetus for the project was recent economic growth in Hagerstown, which has seen an influx of warehouse distribution and healthcare services in the surrounding area. However, according to Heinemann, home prices are "out of reach for workers with fewer than four to five years of experience." Kilpatrick Woods will offer two-, three- and four-bedroom homes, with prices ranging roughly from \$250,000 to \$350,000. A goal of the project was to build homes accessible to homebuyers between 80 percent and 120 percent of Area Median Income (AMI).

Infrastructure development for the subdivision began in July of 2022, and the first eight homes were sited as of January of 2024. More homes will be sited as homebuyer demand grows. All of the manufactured homes will be built by Eagle River, a Pennsylvania-based builder. The development team projects that the full project will be completed in 2027. According to Heinemann, Kilpatrick Woods will be the largest fee-simple (that is, homes titled as real estate) manufactured housing-only subdivision on the East Coast.

Bluestone Town Center, a joint venture with the Harrisonburg Housing Authority, is an 897-unit affordable housing project in Harrisonburg, Virginia, a city of 51,158 people in 2022 located 120 miles northwest of Richmond in the Shenandoah Valley. According to the American Community Survey for 2017-21 median home values were \$231,300 while median household income was \$51,055. The project will feature a variety of housing types, including roughly 130 units of CrossMod™ manufactured housing.

In 2020, the City of Harrisonburg conducted a comprehensive housing study which highlighted the need for affordable housing in the community. The Bluestone project was conceived as a means of meeting this need, with a particular emphasis on “missing middle” for-sale units to serve the city’s workers. In addition to the 133 units of manufactured housing, the development will also comprise 324 townhomes and 440 apartments. Only the manufactured homes will be built for sale. At prices ranging from \$250,000 to the upper \$300,000 range, the manufactured housing will be affordable to residents earning 80-120 percent of Harrisonburg’s AMI.

The Bluestone development was approved by Harrisonburg City Council in February of 2023. Construction of the project is expected to span ten years, with the first phase set to begin in Q3 of 2024. The development team has yet to select a supplier for the manufactured housing.

Homes in the Heights is an 18-unit scattered-site project in Petersburg, Virginia, a city of 33,394 people in 2022 located 25 miles south of Richmond. According to the ACS for 2017-21 median home values were \$119,200 while median household income was \$44,890. The project will include 10 single-family CrossMod™ homes and four duplexes, which will be built using modular housing. MH Advisors is a 20 percent partner in the development, which is led by EquityPlus.

Sites for the Homes in the Heights development are located in several predominantly Black, Indigenous and People of Color (BIPOC) neighborhoods including Battersea, Poplar Lawn, and Delectable Heights, the latter of which is engaged in a revitalization project that the Homes in the Heights development supports. All of the sites were previously city-owned vacant lots and were individually selected for the project by Heinemann.

Homes will be built by Eagle River and will start in the low \$200,000 range. Both 3- and 4-bedroom homes will be offered, with an average size of 1,300 square feet. The first homes in the project were delivered in November of 2023 and sold by January 2024. The development team plans to complete the project by 2024.



One of the first infill homes sited as part of the Homes in the Heights project. For this home, in the interest of maintaining affordability, the developer opted to forego the garage or carport that is commonly included with CrossMod™ homes.

Dorsey Homes and Flats is a scattered-site infill affordable rental project also in Petersburg, Virginia. Of the 96 units, the “Dorsey Homes” half will be CrossMod™ manufactured housing, which will leverage Low-Income Housing Tax Credits (LIHTC). Apartments built as part of the historic rehab of the closed elementary school that currently occupies the site will comprise the other, “Dorsey Flats” half. MH Advisors is a 20 percent partner in the development, which is also led by EquityPlus.

The Dorsey project is part of a broader effort to revitalize Petersburg. The manufactured housing units will be built on formerly city-owned vacant lots near the Virginia Avenue Elementary School, which has been closed since 2008. The school itself will be renovated for reuse as roughly 50 units of multifamily rental housing, which will cater specifically to residents aged 55 and older. Manufactured homes in the Dorsey Homes development will have an average price of just under \$200,000. All units in both Dorsey Flats and Dorsey Homes will be affordable to households earning 60

percent or less of AMI. Rental prices for the manufactured housing units are expected to range from \$1,100 to \$1,500 per month.

Notably, the Dorsey Homes manufactured housing units will be operated as affordable rental housing and then become available for purchase at the end of a 15-year “compliance period” which is necessitated for LIHTC eligibility. In addition to LIHTC, which comprises 40 percent of the project’s financing, the Dorsey Homes and Flats development will draw another 24 percent of its funding from a combination of federal and state historic tax credits applied to the cost of redeveloping the school. Construction for the project is expected to take place between spring 2024 and spring 2025.

Zoning Barriers and Site Selection

Heinemann emphasized that for all four projects, the most important component of site selection from the development team’s perspective was that homes would be able to tap into existing municipal utility infrastructure, thus requiring that sites be located within city limits. Heinemann and his partners also analyzed the demographics, market characteristics, and existing housing stock of each of the three cities within which the projects are located to confirm that there would be sufficient demand for new units within the targeted income ranges.

Zoning was an important element as well, but the variability of both existing zoning language and how municipalities interpret that language makes the viability of manufactured housing development unpredictable, Heinemann said. For example, one of the cities that MH Advisors is working in prohibits “mobile homes” (employing the outdated terminology for manufactured homes) but allowed CrossMod™ manufactured housing to be developed without a variance on the condition that the homes would be sited on permanent foundations. In another city, the requirement was that the new manufactured housing would be eligible for conventional mortgage financing.

Community opposition to manufactured housing was also an obstacle that Heinemann had to work to overcome. To combat this perception, he sought to educate community members about the aesthetics, quality, and appreciation characteristics of the CrossMod™ homes that the developments would use. In Harrisonburg, the development team was able to gain the confidence of a city council member, which played a critical role in moving the project forward. The Bluestone Town Center project was approved by the city council in a 3-2 vote.

Sourcing Homes

Some states require that any developer of manufactured housing register with the state as a manufactured housing retailer. In Maryland, where the 240-unit Kilpatrick Woods subdivision project is

located, Heinemann needed only to register with the Attorney General's office as a homebuilder. While Virginia does require that developers obtain a retailer license to work with manufactured housing, Heinemann shared that the process was straightforward. "We just had to fill out some forms on a website, which we did through our general contractor who met the insurance and bonding requirements and would oversee the homes' installation," Heinemann said.

While it was not an obstacle in Maryland or Virginia, they did find that the licensing process could be a barrier in other states. At one point, Heinemann and his team were exploring a development opportunity in Washington state, which issues a finite number of retailer licenses. They ultimately opted against pursuing the opportunity because of the state's burdensome retailer approval process.

Financing

Heinemann stated that he expects most buyers to utilize either CHOICEHome or MH Advantage, the CrossMod™ lending products supported by Freddie Mac and Fannie Mae. While both products offer conventional mortgages comparable to what one would expect for a site-built home, Heinemann noted that Freddie Mac's program is more infill-friendly because unlike Fannie Mae's MH Advantage, the CHOICEHome program does not require that homes have a driveway. In some instances, Heinemann opted to forego driveways, which add \$10,000-20,000 to the cost of each home, to ensure that homes would meet the affordability criteria targeted for each project.

Takeaways

While none of Heinemann's projects are complete, a key to his team's success in getting through the pre-development process – which required overcoming barriers related to both zoning and social perceptions of manufactured housing – was the way that they positioned the product as uniquely well-suited to the housing needs of each community. Hagerstown and Harrisonburg each faces a growing need for "missing middle" housing that makes the affordability of manufactured housing especially compelling. In Petersburg, the key attraction was the prospect of revitalizing the neighborhood using new housing stock, which was enabled, in part, by the affordability of manufactured housing.

Heinemann, whose projects all utilize CrossMod™ manufactured housing, also called out the importance of aesthetics. "Homes built to MH Advantage and CHOICE [the GSEs' CrossMod™-specific lending programs] specifications are attractive, and opposition to manufactured housing stems from antiquated notions of what mobile homes look like," Heinemann stated. Heinemann credits this attractiveness for his ability to build local support for MH Advisors' work.

Finally, Heinemann emphasized the significance of low-down payment mortgage financing options made available through the GSE lending programs. He shared that these programs were a factor that he pointed to when making the argument for manufactured housing to community members and city leaders.

2. Spark Homes LLC



A home in Spark Homes' most recent subdivision in Marion, Texas. For Spark, one of the main appeals of developing with manufactured housing is that the reduced cost relative to site-built construction allows the developer to build on large, one-acre lots, giving buyers the space they desire while still maintaining an affordable price point.

This case study examines the approach of Spark Homes, LLC, led by Dustin Arp, in utilizing manufactured housing in the San Antonio-New Braunfels Metropolitan Statistical Area (MSA), Texas. Spark Homes has developed over 60 manufactured homes for sale in the San Antonio-New Braunfels area of Texas.

Background

Originally involved in the retail automotive industry, Dustin Arp shifted his professional focus to housing around 2017. Arp's initial foray into housing was as a licensed mortgage loan officer. He founded his development practice, Spark Homes, in 2018. Since the inception of Spark, Arp has focused almost entirely on HUD-code manufactured housing, the few exceptions being modular homes. Arp developed Texas's first CrossMod™ manufactured home in 2021. Since then, all of Spark's projects have used CrossMod™ manufactured housing.

Of the 60 manufactured homes Spark has developed, over 40 have come from the developer's two most recent subdivision projects in Seguin and Marion, Texas, both of which are part of the San Antonio-New Braunfels MSA. According to the 2017-2021 ACS, the median home value in New Braunfels was \$244,800 while the median household income was \$76,890. These subdivisions in these two towns comprise 21 and 50 lots, respectively, although only 21 of the lots in the latter development were occupied by homes at the time of publication. Arp reports that Spark is currently exploring expanding into the development of land-lease manufactured home communities, with three prospective projects in the pipeline.

Zoning Barriers and Site Selection

While Arp's more recent work has been focused on subdivision development, Spark started with scattered-site projects of just one or two homes at a time. However, for various reasons, Arp found that this approach "wasn't really a viable business." For one, as will be discussed more below, the appraisal challenges associated with manufactured housing are easier to overcome in the subdivision context. As Arp puts it, "You can't count on the appraisal you want unless you build your own set of comparables, which means building a subdivision."

There's also the matter of neighborhood appeal. Arp's initial projects, which were scattered-site urban infill, faced challenges related to the appearance of the surrounding homes, as well as issues with neighborhood crime. In Arp's view, these challenges effectively magnified the stigma that comes with manufactured housing. By building in a subdivision, Arp was able to control the variable of the surrounding neighborhood.

Arp's other reasons for shifting to a subdivision model of development were largely related to the economies of scale that this style of project yields. Vetting land is a major time investment and subdivisions offer a greater return on that investment. The same is true for the construction process.

When selecting sites for these subdivision projects, Arp generally considers only land that is outside of city limits. In Arp's words, "We only want to develop in places where we are wanted, so developing within city limits is not attractive to us. Why fight if we don't have to?"

Spark's earlier infill projects included homes that were within city limits. Due to zoning codes that explicitly prohibited the use of HUD-code manufactured housing, Arp utilized modular construction for these homes. However, Arp admitted that while the homes cost more to build than a comparable manufactured home would, the curb appeal was equal at best.

"For cities, it's easier to say 'No HUD-code homes' than to say 'No ugly HUD-code homes.'" Said Arp. And in cities in his market area where manufactured housing is allowed, it comes with a higher cost. "In the city of New Braunfels, where we're based, we look at over \$20,000 in impact fees," Arp added. In contrast, the more rural communities where he opted to build did not impose impact fees on new development.

Sourcing Homes

Arp was introduced to CrossMod™ by a contact at Champion Homes as part of a corporate initiative to get the then-new product adopted by developers in Texas. Spark built the first CrossMod™ home in the state and has since used CrossMod™ homes exclusively in its developments.

From Arp's perspective, the primary benefit of CrossMod™ is the homes' aesthetic appeal. Before CrossMod™, Arp said that it was difficult to build manufactured or modular homes that were both affordable and aesthetically appealing. To Arp, the increased aesthetic appeal of CrossMod™ is a function of both the higher roof pitch – a minimum of 4/12, instead of the 3/12 that is typical of standard manufactured housing – and the capacity for an attached garage. Prior to adopting this form of manufactured housing, Arp found that comparable curb appeal could be achieved only using a modular home with a site-built detached garage and necessitated a higher price point on the home as a whole.

Spark Homes is a licensed manufactured housing retailer in Texas. Getting licensed required some mandatory training through the Texas Department of Housing and Community Affairs, but Arp stated that the process was fairly easy on the whole. "This was one of the surprisingly positive experiences in entering the HUD-code housing market," Arp said.

Financing

Arp stated that the vast majority of Spark's homebuyers use FHA or VA loans, with only a small share using the CrossMod™-specific mortgages offered by Fannie Mae and Freddie Mac. "We are running roughly 20 percent conventional, 40 percent FHA and 40 percent VA. Government financing is much

more forgiving for mid-range credit scores and less punitive on pricing. This is affordable housing so your prototypical first-time homebuyer doesn't qualify for conventional."

From a lending perspective, CrossMod™-specific financing programs like Fannie Mae's MH Advantage and Freddie Mac's CHOICEHome were helpful to Arp's homebuyers in that they set forth appraisal parameters to help prevent CrossMod™ homes from being undervalued relative to comparable site-built homes. This encouraged agencies like the FHA, the VA, and the USDA to follow suit. However, Arp noted that the biggest benefit of these programs was that they legitimized the CrossMod™ category of homes. Even with the favorable lending guidelines, the challenge of getting the homes fairly and accurately appraised persists.

"Getting a good appraiser is like rolling dice," said Arp. While both of the GSEs – as well as the FHA – have issued guidance for appraisers that allows CrossMod™ to be appraised using site-built homes, rather than traditional manufactured housing, as comparables, this guidance doesn't guarantee that appraisers will assess Spark's homes at the prices Arp is targeting. However, if appraisers can compare new CrossMod™s to existing CrossMod™s in the same neighborhood, then there's no room for interpretation. This, Arp explained, is a big reason why Spark now exclusively develops multi-home subdivision projects.

Arp cited the forms that appraisers use as emblematic of the challenges faced by CrossMod™ developers. Appraisers use the Uniform Residential Appraisal Report – known as Form 1004 – to document their inspection of a site-built property. For manufactured housing, a similar form – Form 1004C – is used. While the two forms are comparable in most respects, Arp noted that the site-built version offers five different rating options for appraisers to assess quality of construction. Form 1004C, however, offers no such ratings for CrossMod™ or manufactured homes. As such, there's no way for appraisers to formally recognize the distinctions between different types of manufactured housing. This, Arp said, is yet another reason why getting a "good appraiser" is so important.

Takeaways

One critical factor in Spark's success thus far may have been that Arp was effectively "starting from scratch" when he entered the manufactured housing industry. While Arp had some experience in mortgage lending, prior to that, he had worked in the automotive industry. And, upon pursuing his first development projects, he had no experience with development of any kind – site-built or manufactured. Arp commented that while some in the manufactured housing industry may be "desensitized to the negatives of the homes' appearance," he came into the industry with "many of the same preconceived

notions and attitudes that people outside of the industry carry towards manufactured housing. As a result, we were motivated to improve the aesthetic and exterior elevation for marketability.”

Arp also emphasized the importance of controlling the surrounding neighborhood. “A lot of the bad things associated with manufactured housing stem from the environment within which they are displayed. Controlling the neighborhood is how you can overcome these issues,” said Arp of the stigma problem that the industry battles with.

3. City of Jackson, Mississippi



A "Coming Soon" sign on the lot in Jackson, Mississippi where the first of four city-developed manufactured homes will be sited.

The city of Jackson, Mississippi is leading an effort to deliver manufactured homes sited on lots owned by a local church to demonstrate the viability of manufactured housing as a means of providing residents with affordable, high-quality homeownership options. The pilot project, which will comprise a total of four homes, is led by the City of Jackson’s planning department under Mayor Chokwe Antar

Lumumba and Director of Planning Chloe Dotson. But it is a collaborative effort which draws on the resources of several partner entities:

- The Mississippi Manufactured Housing Association (MMHA) is acting as a consultant to provide expertise specific to manufactured housing.
- The sites were sold at a steep discount by Rosemont Church.
- Neighborhood Assistance Corporation of America (NACA) is providing financial counseling and access to the organization's "Best in America" mortgage program.
- Chris Nicely, president of manufacturedhomes.com, assisted the City of Jackson with manufactured housing-specific technical expertise.

Background

As noted, the project in Jackson is the product of contributions by several organizations and stakeholders. Leading the effort within the City of Jackson is Chloe Dotson, Jackson's director of planning. The four-home project in Jackson was conceived after Dotson saw a presentation on manufactured housing by Chris Nicely. Dotson was interested in finding a means of providing Jackson residents with a more affordable homeownership option. "There's no new construction product available to the average family in the city of Jackson, which is a family of four making between fifty and sixty thousand dollars. That means that a product available to the average family would need to be \$140,000 at the max," said Dotson.

Dotson, a professionally trained urban planner, joined the City of Jackson in 2020, bringing with her an interest in planning for urban decline that made her well suited to the city. With a population of 153,701 as of the 2020 census, down 11.42 percent from the 2010 count of 173,514, Mississippi's capital is the fastest-shrinking major city in the United States. Jackson also has the highest percentage of Black residents of all major cities in the country. "The city has doubled in [geographic] size but is operating on much less tax income because 70 percent of the white population left over the past several decades," Dotson explained. The city is also marked by low home values and low household incomes. According to the 2017-21 ACS, Jackson had a median home value of \$92,900 and a median household income of \$39,969.

Zoning Barriers and Site Selection

Jackson's local ordinances had to be updated to allow the project to take place. "One of the legacies of Jackson's growth was a moratorium on mobile/manufactured homes. This tied back to ideas of race and class in Jackson – sharecroppers, low-income whites, other folks seen as undesirable," Dotson explained.

To build manufactured housing within Jackson city limits, the zoning code had to be rewritten with new language which distinguishes between manufactured and mobile homes. In the new language, “one definition concentrated on mobile homes, which continue to not be allowed within Jackson, and the other focused on manufactured homes,” Dotson said. However, rewriting the language itself was just the start. The ordinance had to be approved by Jackson’s planning board and city council in order to be actionable.

Dotson admitted that the process for building support for the new ordinance was arduous. “It took us about a year because folks were strongly opposed to the idea of ‘trailers’ because of the negative stigma,” Dotson said. “Initially, I got a lot of negative responses equating manufactured homes to trailers, mobile homes, or even modular homes. A lot of people don’t understand that mobile homes are no longer being built.”

The reeducation effort was ultimately a success – the new ordinance was accepted, and Dotson’s department was even able to update the definition of modular homes in Jackson’s zoning code. However, the city still requires a discretionary use permit for new manufactured housing construction. The use permit stipulates that the manufactured homes to be sited must be less than ten years old and a good fit with the neighborhood character.

Land for the project was sold at a steep discount by Rosemont Human Services, a nonprofit formed out of Rosemont Missionary Baptist Church. The land was originally acquired by Rosemont as part of an effort to establish a community land trust in Jackson. The first step in that effort was the 2017 demolition of an abandoned home on the property. Services for the demolition were donated by Revitalize Mississippi, a local nonprofit.

The new homes will be sited in an area of West Jackson known as “The Bottoms” due to its susceptibility to flooding. However, Dotson noted that the specific lot for which the new homes are planned is located outside of the flood zone. Mayor Lumumba said that the community has not seen new development in more than 50 years.

Sourcing Homes

Ordering homes from a factory for the first time can be intimidating, with order forms that are typically over ten pages long for each home. The City of Jackson was supported through this aspect of the process by the MMHA and Chris Nicely, who helped select homes from Clayton Homes, which operates factories in neighboring Alabama.

Financing

Financing for the properties is supported by the Neighborhood Assistance Corporation of America (NACA) through its “Best in America” mortgage program. The nonprofit will also provide housing counseling to homebuyers. The city plans to offer its down payment assistance program as well, with up to \$40,000 of assistance available.

Once homebuyers are qualified, they’ll get the opportunity to see a model home that will be placed on-site. From there, they’ll be able to decide on details like color and other customizable features of the homes. While sales of the homes have yet to close, Dotson stated that the build price without land is about \$129,000 for a 1,300-square-foot three-bedroom, two-bath home with an appliance package, a kitchen island and a front porch. Infrastructural improvements totaling roughly \$10,000 per lot will also be necessary, but the city is using Community Development Block Grant funds to offset those costs.

Takeaways

The fact that Dotson and her team took the time to educate the community and build support for manufactured housing organically played a significant part in the successful ratification of the zoning changes that the project required. The process was slow, taking about two years altogether. And even today, a discretionary use permit is required to build manufactured housing in Jackson. However, according to Dotson, this incremental approach to both winning stakeholder support and implementing manufactured housing projects ensures that the city is able to get comfortable with the new housing product at its own pace.

Jackson’s affordable housing pilot project will comprise just four homes. Still, Dotson hopes that these four homes will be just the start. While this may seem like too few to result in measurable impact, Dotson says that if things go as planned, more will follow.

“Our hope is that once we do these four pilot homes, we’ll have the momentum for investors and developers to jump on board. The City of Jackson will continue to do infill development but there are lots of folks watching to learn from our example. We’re just taking on the risk of being the first to jump in the water,” Dotson said.

Dotson acknowledged that the sort of infill development being demonstrated in Jackson can be difficult to make affordable for their target market without subsidies. However, Jackson’s blight crisis plays a key role in the vision Dotson described. Close to 12,000 of the city’s 72,000 homes are unoccupied. As a result, both developable land and subsidies to enable development are abundant. “There’s probably 300 blighted properties in Jackson and thousands of vacant infill lots that you can get

a discounted rate on from the State of Mississippi. Essentially, there's a large pipeline of land and a large pipeline of people who might be interested in these [new] homes.”

4. Habitat for Humanity, La Crosse, WI

This case study examines the work of Habitat for Humanity of the Greater La Crosse Region, led by the organization's executive director, Kahya Fox.

The La Crosse Habitat affiliate has obtained licensure as a dealer and set contractor for both manufactured and modular housing, allowing them both to facilitate the use of factory-built housing by other Habitat for Humanity affiliates and nonprofit developers and to develop their own manufactured housing and modular projects. To date, the organization has developed or collaborated with other Habitat partners on a total of eight modular homes.

Background

“A few years ago, we talked to our volunteers, we talked to our staff and board. What we heard from the community was basically, ‘We really like you as a brand, but you're not actually doing much. You're not building a whole lot of houses.’” According to Kahya Fox, executive director of the local Habitat for Humanity affiliate in La Crosse, Wisconsin, this was the prevailing sentiment in the community in 2020, shortly before Fox first moved to leverage off-site production in their homebuilding projects.

The La Crosse Habitat affiliate has since embraced the use of factory-built housing as a means of delivering homes more quickly and efficiently than is feasible with site-built construction. The organization's work in the sphere comprises several pending and completed projects built directly by Habitat La Crosse. In addition, in 2022, the organization became a licensed manufactured and modular housing dealer and contractor, allowing them to place factory-direct orders for other local Habitat for Humanity affiliates and nonprofit developers and support the homes' installation.

“We have a network set up with the factory we work with and Habitat affiliates from Minnesota, Wisconsin, and South Dakota. They can all order houses through our chapter. [...] We do the ordering, help them get set up with a set contractor, do trainings and presentations for their construction staff, and help affiliates get on board with the housing type,” Fox said of the La Crosse chapter's role in facilitating greater use of factory-built homes. “This thing we thought was just going to be a way to offset the rising price of housing in our service area has now become multi-state.”

Fox started her career at the Couleecap Community Action Agency in Wisconsin, where she was introduced to factory-built housing through a handful of whole-home replacements that Couleecap completed as part of a weatherization program it offered. While the program was relatively small, it

made Fox familiar with the licensing process for factory-built homes in the state of Wisconsin. It was also during this time that Fox connected with Next Step Network, a prominent nonprofit in the factory-built housing space.

While the La Crosse Habitat chapter has plans to participate in several pending manufactured housing projects over the next year, thus far, its use of off-site construction has been limited to panelized and, more recently, modular methods. Cost savings on the affiliate's factory-built projects have been significant, with a per-square-foot cost of \$79, compared to \$139 for site-built. However, Fox looks forward to utilizing manufactured housing more in future projects, acknowledging that "modular offers great price savings, but manufactured housing is even better."

La Crosse is a city of 51,380 people located about 150 miles southeast of Minneapolis and an equal distance northwest of Madison, WI. According to the 2017-2021 ACS the median home value in the city was \$161,200 and the median household income was \$47,067.

Zoning Barriers and Site Selection

The city of La Crosse prohibits the use of HUD-code manufactured housing outside of land-lease "park" communities, so the La Crosse area Habitat affiliate has built several projects within the municipality using both modular and panelized construction, which are allowed. Fox hopes to eventually get manufactured housing allowed in the city and cited her affiliate's partnership with Next Step Network as a major resource in striving to achieve this. In the meantime, however, Fox is actively pursuing manufactured housing-focused projects in other municipalities.

Interestingly, in spite of La Crosse's restrictive stance on HUD-code housing, the city generally supports Habitat's use of modular construction. Sites for Habitat's modular projects were purchased from the city at discounted rates as part of an effort to revitalize land in the floodplain of the Mississippi River (the tradeoff for the discount was that Habitat had to bring the properties up to base flood elevations before building on them). According to Fox, when Habitat initially expressed interest in purchasing several of the properties, the city pushed back, expressing concern that because of the way Habitat builds homes, utilizing sweat equity from local volunteers, the lots would continue to sit vacant for years before Habitat actually completed homes on them. Habitat ultimately won the city over by putting together a proposal that highlighted the use of modular construction in the sites' development as a means of accelerating construction timelines.

Fox said that the approval process is the "biggest time suck" on the modular homes that they've built. Several different committees must sign off on each project, and not everyone is enthusiastic about the nonprofit's use of modular construction.

Sourcing Homes

In Wisconsin, specific licenses are required both to purchase factory-built housing directly from the factory and to install or “set” the homes on site. The La Crosse Habitat affiliate obtained both of these licenses in 2022. Fox said that the licensure processes were fairly straightforward, although the installer license did require 18 hours of training. Thanks to these licenses, Habitat is able to purchase and site homes with no third-party markup.

Habitat has sourced modular homes from Friendship Homes in Montevideo, Minnesota, but is in the process of onboarding into Clayton Homes’ Builder Blocks program, which offers resources and support for developers building with CrossMod™ homes from the builder. Fox noted that as Habitat scales up its factory-built housing operations, she expects that their demand may exceed Friendship Homes’ production capacity, so the connection with Clayton, which operates a factory in nearby Redwood Falls, Minnesota, is valuable.

Since sweat equity is a key piece of Habitat for Humanity’s development model, Fox requests that homes are delivered from the factory with elements such as flooring, siding, or appliances excluded. The excluded elements are then installed by volunteers on-site. While the labor is technically free, Fox admitted that these exclusions ultimately don’t reduce the finished cost of the home and can add over a month to the time required to complete a given project. However, the total timeline is still typically less than half of the nine months that Fox would expect for site-built projects.

Financing

Habitat follows roughly the same process for the financing of its factory-built homes as it does for site-built homes. This means that they originate the mortgages themselves. They also sell many of their loans to a banking partner who gets Community Reinvestment Act credit in exchange, and using modular construction has not impeded that aspect of the process, either.

Fox acknowledged the importance of working with an appraiser who understands the factory-built product. As with building inspectors and lenders, Fox noted that it can be necessary to “shop around” at a project’s outset to avoid running into challenges later. For Habitat’s projects in La Crosse, Fox works with an appraiser who is familiar with modular and manufactured homes, so no issues have arisen on the appraisal front.

Takeaways

Fox said that partnerships have played a big role in ensuring that her team has the tools and knowledge to navigate effectively in the factory-built housing space. Prior to taking on their first modular project,

Habitat had good relationships with their appraiser, inspector, and the financial institution that purchases its loans. However, Fox said that they still took the time to check in before starting the project, to ensure that everyone had the knowledge necessary to make it a success.

Similarly, Fox emphasized the importance of checking in with – and educating, if necessary – the municipality where the homes are to be built. Fox admitted that she didn't take this step initially and, as a result, faced increased opposition that might have been avoided had she touched base with stakeholders ahead of time.

Finally, Fox credits support from Next Step as having played a pivotal role in the success of Habitat's modular projects thus far. In addition to advocating for factory-built housing at the municipal level, Next Step provided training sessions for the installation process as well as a set of design standards to help ensure that the homes Habitat purchased were both high-quality and the right fit for their desired application.

5. Neighborhood Partnership Housing Services (NPHS), San Bernardino, CA



A factory-built home in San Bernardino, California, built as part of NPHS' "Homes by NPHS" social enterprise. The home, which included a backyard ADU, was sold on a 99-year ground lease to permanently preserve affordability.

This case study examines the work of Neighborhood Partnership Housing Services, Inc. (NPHS), a nonprofit organization based in Rancho Cucamonga, California, and operating in various municipalities throughout California's Inland Empire region. NPHS has three main focus areas: financial education and social services; community lending as a Community Development Financial Institution (CDFI); and

community development, which includes developing scattered-site single-family homes for homeownership. NPHS's manufactured housing operations are managed under Homes by NPHS, a for-profit social enterprise that NPHS started as part of the community development arm of the nonprofit's work. In total, NPHS has completed eight units of manufactured housing all in San Bernardino, California. The organization also has several pending projects in Palm Springs and Los Angeles.

Background

NPHS's first foray into off-site construction was a three-unit modular development in Chino, California. The organization was incentivized to try building with modular construction after encountering difficulties making projects pencil out in past single-family projects that it had undertaken. After the initial project in Chino, NPHS undertook several more projects in San Bernardino, this time using HUD-code-adherent manufactured housing, which the organization found to be even more cost-efficient than modular housing. NPHS's average cost of developing a 1,400-square-foot factory-built home is roughly \$300,000, compared to \$425,000 for a newly constructed site-built home of the same size (not including land costs).

Homes by NPHS, which operates as a licensed manufactured housing dealer, was created to offer an alternative pathway to the efficient delivery of manufactured housing. NPHS envisions three main lines of business for this social enterprise, all of which will utilize manufactured housing: single-family development by NPHS, sourcing of accessory dwelling units (ADUs) for property owners, and provision of manufactured housing (operating as a traditional "dealer") to other nonprofits pursuing this form of development.

Zoning Barriers and Site Selection



The second half of a NPHS-developed factory-built home being sited on a lot in San Bernardino. The NPHS team noted that for infill development, narrow streets and small lots can present a challenge for the efficient siting of homes. Where space is especially limited, a crane may be required to maneuver the home into place, adding significant expense to the project cost.

California passed legislation in 1981 (Section 65852.3 of the Government Code) which made it illegal for cities and counties to prohibit the use of manufactured housing on lots zoned for single-family dwellings. Thanks to this statute, NPHS has faced no major zoning issues related to its manufactured housing projects, most of which are built on land that is donated to NPHS by the city. Permitting, however, has been much more complicated.

“The largest [regulatory] hiccup is with the permitting process,” said RaShawna Fahie, manufactured housing program manager at NPHS. “Unfortunately, permits have been taking about six months or so. This definitely holds up our projects because we could have units online in about 30 days.” The issue is largely due to a lack of understanding of manufactured housing within the permitting offices of the cities in which NPHS builds homes. The inspection process has been especially burdensome, Fahie explained, because for manufactured housing, the inspections are done in the factory, as opposed to on-site. “In traditional construction, you get so far and then the inspector comes

out and inspects, and then you get to the next phase, and the inspector comes out again, and so on,” Fahie added.

Sourcing Homes

NPHS has worked primarily with Silvercrest, a Corona-based builder of manufactured housing that primarily serves the Western US. However, future projects will likely also be supplied by Clayton Homes, which has a factory in Perris, California, and Skyline, which has a factory in San Jacinto, California. All three are within an hour’s drive of NPHS’s Rancho Cucamonga office.

While finding suppliers for NPHS’s manufactured housing projects has been straightforward, sourcing contractors who can install manufactured homes has proven much more complicated. In California, contractors must obtain the General Manufactured Housing Contractor license – also known as a C-47 – in order to install, alter, repair, or prepare any type of manufactured housing. And C-47 contractors are in short supply, creating a bottleneck for NPHS as well as other organizations who might attempt to replicate the nonprofit’s manufactured housing-focused development model.

“When you’re talking about barriers to adoption and scaling, it’s going to be a challenge if we don’t have enough C-47 contractors for other developers to get [similar] projects off the ground,” said Clemente Mojica, president and CEO of NPHS. Jesse Ibarra, NPHS’s chief business officer, added that the organization has gone as far as to put calls out on social media to find eligible contractors. “It’s a very volatile relationship,” said Ibarra, referring to the need to tread lightly when dealing with contractors to avoid inadvertently alienating a valuable business contact. Looking forward, the organization has considered getting into the general contracting business and obtaining its own C-47 license as a means of circumventing the issue.

Financing

“We transitioned to CrossMod™ because of appraisal and valuation,” said Fahie, alluding to issues that NPHS faced in its earlier projects which utilized traditional manufactured housing. Appraisals, which were the main issue with the non-CrossMod™ projects, have gone smoothly since the organization made the switch.

NPHS sees the facilitation of manufactured housing ADU development for property owners looking to install these units as a significant part of the value that the Homes by NPHS social enterprise can offer. However, financing barriers in the ADU space initially prevented that line of business from growing. “A big reason that we haven’t moved more ADUs is the financing piece,” said Ibarra. “When we initially launched our enterprise, a lot of the folks that reached out were interested in ADUs but didn’t

know how they'd be able to obtain financing – the only options were HELOCs [home equity lines of credit] and cash-out refis.” According to Ibarra, neither option was particularly attractive or always available to homeowners.

Responding to this need, NPHS created its “ADUgo,” a second mortgage financing product that offers low-income residents loans up to \$200,000 to have a factory-built second dwelling unit installed on their property. The loans come with minimal fees and a below-market interest rate. Mojica and his team hope that the new lending product will help generate sales as the social enterprise scales up its operations.

Takeaways

The first three factory-built homes that NPHS built were hindered by a few factors. For one, as with any new type of project, there was a steep learning curve. From permitting to appraisal and financing, the factory-built housing development process varies significantly from that of site-built homes. Naturally, some trial-and-error came into play with the first few projects as the NPHS team familiarized itself with this new process. Among the key lessons picked up along the way, however, was to expect the unexpected, particularly when dealing with city permitting processes. “It appears that [dealing with] each city or different staff from the same city poses challenges due to the incongruity in product knowledge, procedural guidelines, or a mixture of both,” Ibarra said.

The NPHS team did acknowledge that many of the challenges that arise along the way, permitting included, can be mitigated with enough preparation. Specifically, building partnerships – with municipalities, regulatory agencies, tradespeople, and peer nonprofits – and planning ahead to better anticipate obstacles are the two key factors that the NPHS team highlighted as critically important.

Lessons for Policy and Practice

Taken together, the case studies profiled in this report offer a series of insights for policy and practice about what efforts are needed to expand the use of manufactured housing for entry-level homeownership. This section summarizes the principal insights gleaned from these case studies.

Educating Local Officials and Other Stakeholders is Job One

In virtually all of the case studies, the developer reported having to devote substantial attention to educating local officials and the broader community about the overall quality and aesthetics of the planned manufactured homes in order to overcome lingering negative perceptions and biases about these homes and their residents. In most cases, these efforts were needed to change existing zoning or

obtain special approvals to allow for manufactured homes (as will be discussed more below). In the Jackson and Habitat for Humanity cases, particularly, the interviewees noted that these efforts were time-consuming and arduous. Kahya Fox of Habitat for Humanity noted that she wished she had started earlier the process of checking in with public officials to identify and address their concerns with manufactured homes to make the process go more quickly and smoothly. Chris Nicely of ManufacturedHomes.com pointed out that having a champion close to the leadership of the city government – ideally in the mayor’s office, but alternatively in zoning or planning departments – who supports the effort is extremely helpful in gaining the approval of city agencies.

Interviewees also noted that using CrossMod™ homes offered advantages in gaining acceptance given the more appealing aesthetics of these homes. Tom Heinemann of MH Advisors also noted that another important consideration for local communities was the price point of the homes, which would meet the need for modestly priced homes that were otherwise unavailable in these markets.

Another theme was the importance of partnerships with organizations with expertise in manufactured housing, including Next Step Network and ManufacturedHomes.com, to help with the process of educating the community and public officials to earn acceptance for these developments. Several interviewees also noted the importance of bringing along other stakeholders needed at different steps of the process, including city inspectors, mortgage lenders and home appraisers, given that they often were unfamiliar with these homes and the specialized processes required to approve their siting and financing.

Of note, while aesthetics appeared to be an important consideration among stakeholders during the plan approval and review process, none of those interviewed for the case studies identified as a challenge the need to gain acceptance among consumers about the quality of these homes. Tom Heinemann did mention that his company and partners conducted thorough market analysis to ensure that there would be sufficient demand for homes at their price point. Dustin Arp of Spark Homes reported that the aesthetics of the CrossMod™ form of housing was an important selling point, including the steeper roof pitch and the attached garage. Arp also found that it was the quality of the surrounding neighborhood that was a concern, not the quality of his homes, which led him to move away from urban infill projects to his own subdivisions. For consumers, the developers found that the quality of the homes and their price was enough to lure buyers.

Zoning Barriers and Local Approval Processes Are Significant Hurdles to Overcome

Zoning restrictions on the use of manufactured homes were reported as particularly significant obstacles in Jackson, La Crosse and New Braunfels. Despite being led by the city's planning director, the City of Jackson effort entailed an arduous two-year campaign to educate the public, the planning board and the city council about the quality of today's manufactured housing. And even after the campaign's completion, manufactured housing is still allowed in the city only with a discretionary use permit and so requires additional steps to be approved.

Habitat for Humanity of Greater La Crosse has not yet been able to overcome zoning restrictions prohibiting manufactured housing in La Crosse, but is hopeful that ongoing efforts supported by Next Step Network will ultimately be successful in allowing these homes. In the meantime, they are focusing their use of manufactured homes in other communities without this prohibition.

Dustin Arp of Spark Homes reported that since manufactured homes were not allowed in the City of New Braunfels, he opted to develop modular homes in the city. But these homes did not offer enough of a cost advantage, and so rather than take on the substantial effort needed to overcome regulatory barriers in New Braunfels, he opted to develop instead in other areas where manufactured homes were not excluded by local regulations.

Zoning restrictions and difficult local approval processes were also an obstacle for MH Advisors in Maryland and Virginia, although not to the same degree as in Jackson, La Crosse or New Braunfels. MH Advisors also operated in a broader range of communities than the other developers and so had varied experience with zoning codes, noting that variations in both the language used in regulation and how the regulations were interpreted by local officials made it difficult to predict how difficult the approval process would be. In one case, despite there being a prohibition on HUD-code homes, Heinemann was able to gain approval for his development as CrossMod™ homes on the condition that they were affixed to permanent foundations. In another community, the homes were approved on the condition that they be eligible for conventional financing, which in the eyes of the local officials would distinguish them from "mobile homes" that were prohibited under their zoning code. Heinemann reported having to work to educate the community and local officials to obtain approvals, but in the end in each case he was successful in these efforts.

The only case that did not report that zoning was an obstacle was NPHS in the San Bernardino region. They noted that state law outlawed discrimination against manufactured homes so they could not be prohibited. However, while zoning itself was not a barrier, they still found the process of

obtaining building permits to be time-consuming and difficult due to a lack of familiarity by local officials with this form of housing, once again requiring significant effort to bring these officials along.

Overall, the experiences of developers in our case studies all point to the significant effort needed to work with local officials and the broader community to overcome regulatory barriers to the use of manufactured homes. In areas where zoning prohibits this form of housing and negative perceptions are entrenched, the education efforts can be time-consuming and substantial. In the case of Spark Homes, the challenges posed by these regulatory barriers led Dustin Arp to focus his business in other communities that did not have prohibitions. In La Crosse, the process of changing local regulations is still ongoing. In cases where developers have succeeded in changing zoning and educating local officials, there is the potential for greater expansion of manufactured housing going forward, but the efforts examined are still in early stages of development, and so it remains to be seen if these efforts have indeed paved the way for larger-scale development in the future.

Site Selection Can Be a Key Element, Impacting the Cost and Appeal of the Developments

Several of the case studies noted the importance of site selection as it related to both the cost of development as well as the consumer appeal of the homes. In all our case studies, the lead organization was motivated to pursue using manufactured homes to achieve greater affordability than was achievable through site-built housing. (In fact, in three of the cases the lead organization also tried using modular housing but preferred manufactured housing because of its greater cost advantage.) In order to maintain the cost advantage of manufactured housing, developers were conscious of how a given site would impact total development costs. Dustin Arp of Spark Homes reported that the imposition of impact fees by the principal city in his market led him to steer clear of development in that jurisdiction. Tom Heinemann of MH Advisors noted that his team looked only at sites within municipal boundaries that offered access to municipal utilities. The organizations involved in infill development noted that the logistics of siting homes could be complicated by the tight spaces afforded in urban neighborhoods. Site preparation costs in these areas could also represent a challenge, as Chloe Dotson in Jackson noted that city subsidies for these costs were important in keeping the homes affordable. On the other hand, she also noted that the City of Jackson had thousands of vacant lots, and so there was enormous potential for where homes could be sited.

For Dustin Arp, challenges related to site selection ultimately motivated a pivot in his development strategy from infill to new subdivision. In one of his earlier projects, Arp became aware of the potential for surrounding properties in poor condition to have a negative impact on his

development. Arp also found that the process of vetting individual sites was prohibitively time-consuming. Both of these issues were mitigated by a shift to subdivision development.

Challenges with site selection or costs were not reported by either NPHS or Habitat for Humanity. NPHS did give an example of a home where the utility connection process was time-consuming and complex given the requirements of the municipality for repaving the road, but this issue was not unique to manufactured home development.

Obtaining Dealer Licenses Is a Necessary Step but Not Onerous—at Least in the States Profiled

Historically, manufactured homes have typically been sold through a dealership model. Dealerships serve as an intermediary between the end-homebuyer and the factory and stock display models for customers to browse and purchase on-site. Notably, however, in all but the Jackson case, the lead organization sought to obtain its own dealer license, effectively circumventing the traditional dealership model and allowing homes to be acquired directly from the factory at a wholesale price.

The process and requirements of being licensed vary by state, but in our case studies, none of the organizations found this process to be burdensome (which of course contributed to why the case studies occurred in these states). On the other hand, Tom Heinemann reported that his firm considered undertaking a development in Washington state, but the process of being approved as a dealer was too burdensome to make this worthwhile. One example of a burdensome process is that some states require that manufactured home dealers have sites with model homes on display for customers, a requirement which would not be consistent with the business model used in our case studies.

Finding Contractors to Site the Homes Can Be Challenging

Since manufactured homes generally must be installed following state regulations, contractors must be licensed by the state to undertake this work. This step in the process was not identified as a barrier by either of the for-profit developers profiled. Nor was it an issue for Habitat for Humanity of Greater La Crosse because their in-house construction manager was able to obtain the necessary license with only a few days of required training. The Habitat affiliate did note, however, that Next Step Network was helpful in providing technical assistance to learn about this process. The City of Jackson's efforts were also aided in their pilot program by their partnership with the state manufactured housing association and Chris Nicely, of ManufacturedHomes.com, who provided assistance with the development process.

However, NPHS in San Bernardino identified a shortage of licensed contractors for manufactured home installation as a significant barrier for expanding their efforts. There were few of

these contractors operating in their market area and these existing firms were also reluctant to take on the added complexity and risk of siting homes in urban environments with time-consuming approval processes. NPHS sought to identify potential contractors through a variety of means, including soliciting recommendations through social media. They were also considering bringing this expertise in-house, but since they do not currently have construction managers on staff, this would be a significant expansion of their capacity that they were considering carefully.

Appraisal and Homebuyer Financing are Important Considerations in Planning These Developments

Given the focus of all five of the case studies on providing affordable homeownership opportunities, it is not surprising that the availability of lower-cost mortgage financing was an important consideration of all those interviewed. Two of the case studies had access to specialized sources of mortgage financing that met this need. The City of Jackson had established a relationship with NACA that provided access to low-cost financing and down payment assistance. In keeping with Habitat for Humanity's typical approach, Habitat La Crosse provided low-cost funding for homebuyer mortgages, although these loans were often subsequently sold to local financial institutions seeking to meet their Community Reinvestment Act obligations.

In each of the remaining three cases, the developers noted the importance of access to more affordable conventional mortgage lending products with more flexible appraisal guidelines as a strong motivation for turning to CrossMod™ forms of manufactured housing. In fact, Tom Heinemann noted that the availability of conventional mortgage financing for these homes was an important selling point with local communities.

Aside from assuring that borrowers would be able to count on qualifying for mortgage financing (and not just home-only or 'chattel' loans that have much higher interest rates and shorter terms), the more flexible appraisal process was a key consideration for developers. But even though the lending guidelines allowed for site-built homes to be used as comparables, each of these developers noted that they still had to work with appraisers to be sure they understood these program rules and sought out appropriate sales for comparison. Even Kahya Fox, whose organization provided the initial mortgage, highlighted the need for care in selecting and working with appraisers.

Dustin Arp of Spark Homes noted that a large majority of his buyers relied on FHA or VA loans as they often had lower credit scores that made it harder to qualify for conventional mortgages from Freddie Mac or Fannie Mae or to obtain as favorable an interest rate. Tom Heinemann noted that small details in these loan programs were also potentially important: for example, he favored Freddie Mac-

backed loans because their underwriting guidelines did not require a driveway, and the absence of that requirement allowed him to save on development costs to meet his target price point.

Time Savings in the Construction Process Can Be Another Benefit, but the Pilots Often Found This Difficult to Achieve

As with all development projects, the cost of financing site acquisition and construction adds to the total development cost. Since manufactured homes can be sited and completed quickly, they offer the potential for streamlining the development process to support further savings. But, in some of our cases, challenges at different stages in the process ended up delaying development timelines, adding to time and costs. This was most evident in the case of NPHS where issues with permitting, finalizing home installation, and acquiring buyer financing led to lengthy delays in some of their initial projects.

Hopefully, the lessons learned from these earlier experiences will allow them to avoid such delays in the future, both by improving their own management of the process and thanks to the improved understanding of these homes by the jurisdictions.

Summary and Conclusions

Manufactured housing has the potential to expand affordable entry-level homeownership options at a time when market conditions have made attaining homeownership extremely challenging for moderate income households. As documented by Herbert, Hermann, McCue and Reed (2024), there are a variety of obstacles to greater adoption of this form of housing. This report has documented several efforts underway across the country to address these barriers and expand access to manufactured housing in areas where these homes are not commonly available. While the case studies examined vary in the types of lead organizations, the scale of the efforts, and market conditions, there are a few high-level lessons for other organizations that would like to spearhead similar efforts.

1. *Plan to educate a range of stakeholders involved in the process from planning to execution.*

In areas where newer manufactured homes are not common, there will be no escaping the need to educate local policy makers, town officials and inspectors, contractors, lenders and appraisers about the virtues of these homes and specialized processes associated with installing and financing them. Starting early and engaging partner organizations can be helpful in ensuring the success of the process and reducing the time needed.

2. *Anticipate what will be needed at each link in the supply chain, including gaining local approvals, sourcing the homes, installing them, and financing them, to avoid getting stuck along the way.*

The case studies differed in the point at which obstacles arose, but in each case there was at least one link in the chain that posed challenges and delayed projects. These delays add both time and cost to the development, undermining the cost advantage of manufactured homes.

3. *Zoning and gaining local approvals are often significant challenges, but they can be addressed by making the case for these homes based on their quality and affordability.*

In every case, obtaining local approvals took a significant effort on the part of the lead organization—even when the lead was the city’s own planning director. Efforts that were ultimately successful were able to document the high quality of the proposed homes and the community need for the affordable option they would provide.

4. *CrossMod™ homes have a distinct advantage in addressing multiple barriers.*

Virtually all of the case studies had a particular focus on the CrossMod™ form of manufactured housing, both because their aesthetic appeal countered misperceptions about the quality of manufactured housing and their eligibility for mortgage financing helped ensure their ultimate affordability.

One other question raised by the case studies is what type of organization is best suited to lead this process. The examples presented here include efforts led by public, nonprofit and for-profit organizations and so illustrate that there is more than one path that can be followed. The role of public agencies, however, may be best thought of as priming the pump. The City of Jackson’s efforts are intended to clear a path for private and nonprofit developers by changing the regulatory environment and providing real-world examples of attractive and affordable HUD-code homes. It will be interesting to see if this pilot effort does induce others to enter this market.

While the case studies were at different stages of development, it is notable that the for-profit entities were on pace to achieve much greater scale than the nonprofits profiled. In part, this difference reflects the focus of the for-profit firms on undertaking development at the subdivision scale rather than relying on infill development using land made available through public sources. The nonprofit organizations also lacked a substantial development team that might scale these efforts. But both NPHS and Habitat for Humanity of Greater La Crosse had ambitions of becoming a source of homes for other nonprofit organizations and so may yet facilitate a greater scale of development as their efforts mature.

We are hopeful that the lessons offered by these case studies will inspire others to follow their lead. These cases may also lay the groundwork for future research to see what elements of these efforts are important for their expansion to greater scale.

References

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