

An Introduction to Manufactured Housing in a YouthBuild Program

May 2006

*By Pamela Jons, Helen Hitcher, Kim Phinney
with
YouthBuild San Juan and YouthBuild Dayton*

In this article:

Introduction

Overview of manufactured housing

Definitions

Similarities to site-built, or “stick-built,” homes

Is manufactured housing a good fit for a YouthBuild program?

Assessing fit

Pros and cons

Skill development

Case studies

Next steps

Research

Choose a housing type

Learn relevant building codes

Assess organizational capacity

Create or strengthen relationships

Develop a timeframe

Start small

Look for construction funding

Provide homebuyer assistance

Additional resources

Conclusion

Introduction

Today’s manufactured housing represents a new era in home building. Unlike its earliest version, the single-wide mobile home, manufactured housing now offers more options and provides a viable building alternative for YouthBuild programs. In fact, some YouthBuild programs are already building manufactured housing. This does not mean that it is time to open a manufactured housing plant in every rural community, but it is worth becoming familiar with this housing trend and exploring its viability for your program.

Overview of manufactured housing

Manufactured housing is built, at least in part, in a central location and then transported to a permanent site. This is different than traditional homes that are constructed entirely on the site where they will rest.

Definitions

Manufactured housing can include the following:

Panelized construction

Panelized construction entails the construction of panels of the home, such as side walls, that are then moved to the home site and raised.

Cast (concrete) construction

In cast construction, the side walls are poured and cast in concrete at the factory or warehouse and then transported by flatbed to the home site, where, typically, a crane will then raise the walls.

Modular units

The terms *modular units* and *manufactured housing* are often used interchangeably and refer to homes built in a factory and moved to the home site. But unlike traditional manufactured housing that is designed to remain mobile, modular units are built to be permanently placed on a site's foundation.

Similarities to site- or "stick-built" homes

Unlike the manufactured housing of ten years ago, manufactured housing today can look much like site-built homes. In addition to looking the same, both types of housing may feature Energy Star ratings, green building techniques, fire resistance, the ability to withstand wind gusts to over 100 miles per hour (in targeted areas of the country), and universal design concepts.

Is manufactured housing a good fit for a YouthBuild program?

Manufactured housing provides an opportunity to improve the quality and construction of rural housing stock and gives YouthBuild programs additional ways to increase production, funding streams, and program income. Although there are monetary advantages to participating in manufactured housing, the method must be a good fit with your program.

Some initial issues to consider in any construction project, not just manufactured housing, are:

- Is there community awareness and support?
- Are there any political factors that will come into play?
- Has a needs-assessment been done?
- Is there sufficient internal structure and capacity?
- What financial resources are readily available?

Assessing fit

There are additional issues to think about when assessing fit. These issues include economies of scale, workspace size, workspace environment, waste reduction, and inspections.

Economies of scale. Much of the cash advantage to manufactured housing comes from the ability to purchase materials using economies of scale. When assessing fit, figure out whether your program will be able to obtain funding that will allow purchasing materials for several homes.

Workspace size. In manufactured housing, an assembly-line process is used in a warehouse setting. Does your program have space for this (even as small as framing tables), and will your staff be able to adequately organize, train, and oversee the young people?

Workspace environment. One of the advantages of a manufactured housing situation is that much of the work can be done in a controlled environment that minimizes weather changes and adverse work conditions. Again, what kind of facility space and youth supervision would make this possible?

Waste reduction. Another advantage is that standardization in design and materials can reduce waste. Can your program develop partnerships that will help obtain designs that are appropriate to the areas where your program operates? Would the housing be easy to construct in the available space and with YouthBuild members? Can your program then sell the units to homebuyers for an affordable price?

Inspections. Finally, less time may be consumed with inspections and approvals in a manufactured housing situation than in a site-built situation, but a program still needs to work with local inspectors. What kind of relationship exists between your program and local inspectors?

Pros and Cons for Rural YouthBuild Sites to Consider

Manufactured housing, just as any other type of construction, has pros and cons. Here are a few to consider:

Pros

- **A wide variety of new designs and standards exist;** these are much more viable than the old versions of manufactured housing.
- **Manufactured housing could offer significant cost savings to buyers,** making it truly affordable housing. A lower cost is the most compelling reason for individuals to purchase manufactured housing. According to the Housing Assistance Council, the cost of a manufactured home is approximately \$31 per square foot versus \$55 per square foot for a site-built home (2001 data). This may be a compelling reason why YouthBuild programs take part in the industry. It may allow the program to build homes for a family with fewer resources.
- **Houses can be built in a single location, which helps staff maintain adequate oversight of young people,** and potentially eliminates on-site transportation issues.
- **On the site where the home will stand, grading, excavation, foundation work, and landscaping take place, as well as the installation and set-up of the home.** This can occur simultaneously with the YouthBuild site work, thus reducing the required time and money.
- **Manufactured housing requires less labor.** The National Association of Homebuilders estimates that typical builders spend 20 to 30 percent of their total development costs of site-built homes on labor. Manufactured housing factories utilize about half that level of labor. Labor is required to do site preparation, including infrastructure, porches, garage or carport, and landscape. A YouthBuild program working on such a project would require even less labor and could pass some of the sweat equity of landscaping or painting on to the buyer.
- **Larger economies of scale in building increases the possibility of program income** because programs could plan and seek funding for several houses at a time.
- **If houses are manufactured by a YouthBuild program, there can be a greater positive**

impact on affordable housing in the community, and the ability to revitalize larger neighborhoods could attract additional funding. Research has shown that the growth in ownership of manufactured housing in the past ten years has been by those with 50 percent or less of the area median income. YouthBuild programs, and what they bring to the table in manpower and material resources, can continue to make this trend grow.

- **An opportunity exists in the market for manufactured housing as scattered site (infill) projects.** Since most developers typically do not like doing infill homes because they tend to generate less revenue than subdivisions or clustered houses, a niche exists that YouthBuild could fill.
- **Homebuyers can be assisted with land purchases.**
- **Young people can gain a variety of skills.**
- **Support services can be included.**

Cons

- **The lower cost of manufactured housing contributes to a lower local tax base.**
- **Equity in the home will increase at a slower rate** because the home is lower in value (though not necessarily lower in quality) than a site-built home.
- **The industry has some disreputable dealers.**
- **To be efficient and to take advantage of economies of scale, programs must commit to more than one home at a time.**
- **A program needs a certain level of capacity to undertake this type of project.**
- **Programs may be unfamiliar with specific zoning and code requirements** such as those that tightly regulate the location of manufactured housing.
- **Some communities might not want manufactured housing in their neighborhoods.**
- **The construction of modular homes requires relationships** with local engineers or architects and approval of the drawings by the state.

Skill Development

Once a housing design is drafted, programs can complete the grid on the next page, which can help them determine any changes in skill development required to convert from site-built processes to manufactured housing processes. Keep in mind that original house designs were one-story rectangles with flat roofs and situated above grade on concrete pier supports. More recent designs are two-story and are tailored to make manufactured homes resemble site-built homes.

When the grid is filled in, consider what impact, if any, the required changes will have on the program's ability to become a stronger part of the area's economic-development plan, place young people in living-wage jobs, develop entrepreneurs, and sell the completed product.

Case Studies

YouthBuild San Juan

One of the newest rural YouthBuild programs, in San Juan, Texas, manufactures homes at their facility for approximately \$21,000 each, plus some sweat equity from the buyers, who paint and lay flooring in their homes. The homes are then moved to land owned by the buyer. Homebuyers can be assisted through HOME funds, first-time homebuyer grants, Community Development Finance Authority assistance, and banking consortium and other loans. The mortgage lasts for the life of the loan amount. The buyer makes monthly mortgage payments, which are at approximately 10 percent of their income. So a family with an annual income of \$10,000 would pay back their mortgage at \$100 per month for 210 months. YouthBuild San Juan sells homes specifically to colonias families on the Mexican border.

YouthBuild Dayton

At YouthBuild Dayton (Ohio), building manufactured housing has turned into a job-placement program offering multiple workforce-development activities for the YouthBuild students. According to Dave Burch, operations and construction man-

ager of the ISUS program in Dayton, Ohio, the project has been in the works for nine years and will culminate with the building of a factory in the next year. In this factory, students will mass-produce panels for houses and then sell them to developers and other builders.

The YouthBuild Dayton program has two phases, one for current YouthBuild students and one for graduates. YouthBuild students initially complete a training component where they build a site-built home. When they graduate they can enter the full manufactured housing component. Factory work will be in two shifts to accommodate both the students and the graduates. In the first shift, students can train and master the skills necessary; graduates can be hired for the second shift. "When we undertook this project, we began by setting up framing tables in our warehouse area. YouthBuild still works by this method. With six crews we are able to produce six houses a year. They are not considered manufactured, but much of their work takes place on the framing table in a controlled environment. This eliminates weather conditions as an issue as well as many safety hazards. When completed, the panels are taken to the work site by flatbed trailer."

ISUS plans to purchase a highly computerized panel factory line. The software would scope the blueprints of a design into panels denoting the appropriate measurements for windows, doors, and other parts. Currently, YouthBuild students use the panelized construction method and the software, but are measuring by hand. Local building codes are adhered to because this is "open-wall" construction, meaning that the panels are attached to the frame before insulation is put in, and inspections are done at the site. A fifteen-foot trailer, owned by ISUS, moves the panels. A single donor (who was originally identified as a YouthBuild champion and with whom they have developed a strong relationship with over a number of years) provided the funding for the project.

ISUS will build for homebuyers who have 80 percent or less of the median income. What pres-

Changes in skill development required to convert from site-built processes to manufactured housing processes

<i>construction method</i> <i>skill</i>	Site-built mastery	Manufactured mastery	Comments
Tools			
Equipment			
Foundation			
Rough framing			
Doors and windows			
Roofing			
Electrical			
Insulation			
Plumbing			
HVAC			
Appliance installation			
Cabinets			
Carpentry			
Finish carpentry			
Carpet			
Painting			

ently takes the young people one year to accomplish it is estimated will take only one day. The real program income will come from selling the panels to developers and other builders (thus, their decision for a two-shift factory setup that will train and then hire the YouthBuild graduates). The line will be able to produce three to five houses a day. Plans for the factory include “set crews” that would set up the paneled homes. These crews will provide additional jobs and income for trained graduates. The space needed within the factory to build the panels is approximately 2,000 square feet, which is about the space trainees are working in now. Dave Burch suggests that this basic method of utilizing framing tables increases the efficiency of the YouthBuild students because they are focused on only one task at a time. The production scene differs from that of site-building because it is so controlled. Additionally, the chance for crime and loss of materials and tools decreases.

Next steps

Below are some suggestions for taking your YouthBuild construction component in the direction of manufactured housing.

Research

Become familiar with the manufactured housing models. There are a variety of housing types that are uniquely suited to different regions of the country. One publication that is dedicated to manufactured housing is *Automated Builders Magazine*. Call 1-800-344-2537 to subscribe.

Choose a housing type

Once your program is familiar with the types of manufactured housing, think through what level of construction expertise is required for the type of construction you choose and what kind of physical setup would be needed.

Learn about relevant building codes

Research the HUD, state, and local construction standards for manufactured housing in your region. Manufactured homes are built to qual-

ity assurance standards administered by HUD. Because they adhere to a different set of building standards, the HUD code or local building codes are not always applicable. The HUD code regulates home design and construction, strength and durability, transportability, fire resistance, energy efficiency, and quality control. It also sets stringent standards for the heating, plumbing, air-conditioning, thermal, and electrical systems. Modular homes and panelized construction often need to meet both HUD code and local codes.

Assess organizational capacity

Assess your capacity as an organization. What are you trying to do? How many houses a year do you want to build? What kind of facility can you obtain? Does it have the necessary space? What fundraising will need to take place? Will it offer the skill set you are looking for?

Create and strengthen relationships

The switch to manufactured housing a program should begin slowly. First, ensure that program staff and capacity are sufficient, and that the necessary partners exist.

When developing these relationships, look for a manufactured-housing for-profit developer that wants to help develop affordable housing. Many developers do not want to work with rural scattered manufactured housing because it is not as profitable for them as clustered homes or subdivisions, but they might be open to helping YouthBuild programs with scattered site housing. This type of partnership with a for-profit manufactured housing developer is one that would serve the greater good and provide the developer an opportunity to give back to the community. YouthBuild, in return, could gain all of the building advantages and fill a niche in building not otherwise met, namely scattered-site rural manufactured housing.

You should also:

- Identify and recruit architects who can design plans that address your programs' needs.

- Become familiar with suppliers of good, affordable building materials (for example, local building stores or chains such as Home Depot).
- Get to know supportive town or county staff who will work with you to identify and prepare sites and make inspections.

Develop a timeframe

The timeframe for constructing a manufactured house should be a predetermined percentage shorter than the timeframe for a site-built house. For example, if a site-built home project takes eight months, a manufactured-house project might be given a timeframe of six months—a 25 percent reduction. This shorter timeframe is possible because much of the work being completed within a controlled warehouse environment. The timeframe will also decrease as program staff gain experience in completing the chosen designs.

Start small

One way for a program to begin a manufactured-housing project is to have students work on framing tables with hammers and nails and build some of the house panels within a training facility.

Look for construction funding

Construction funding available for many YouthBuild programs include:

- HOME funds (check state Housing Finance Authority) eligibility HOME activities
- Housing Trust Funds (varies by state)
- Land Trust (varies by state)
- Community Development Block Grant Funds (by state or jurisdiction)
- USDA Rural Housing Funds
- Mortgage Revenue Bonds
- Home Loan Bank funds (may vary by region)
- Foundations such as Washington Mutual
- SHOP funds for land and purchase

Provide homebuyer assistance

To take the manufactured housing project a step further, YouthBuild programs can become involved in the homebuying process, which includes counseling, homebuyers clubs, and down payment assistance. Each step of the process has corresponding certifications and streams of funding available to it. For example, staff members may train to become HUD-certified housing counselors, for which HUD funds are available.

Creativity with the homebuyer is also possible. First, manufactured houses are affordable for groups not otherwise available to purchase: colonias, elderly, disabled. An intergenerational project could well open doors to other funding streams. For example, outfitting homes for the disabled in compliance with the American Disabilities Act may also have sources of funding that can be obtained for that purpose.

Conclusion

The decision to turn a YouthBuild construction component towards manufactured housing will be based on philosophical, financial, and logistic considerations. It is not a decision to be taken lightly. Manufactured housing is not for every site, but it does offer alternatives for rural sites ready to expand. It would also add growth opportunities for trainees and graduates.

One final positive incentive for programs to consider: One of the things that affordable housing developers have said that they cherish most about the process is the personal connection they are able to make with those in the community. Manufactured housing could provide YouthBuild with a wonderful way to really make housing accessible to very low-resourced families and individuals.

Resources

The Manufactured Housing Institute and NCCED (National Congress for Community and Economic Development) provide information about opportunities in developing affordable manufactured housing in underserved communities. For a listing of associations by state, see: www.manufactured-housing.org/html/manufactured_housing_associations.htm.

The Institute for Manufactured Housing
(703-558-0400)

The National Foundation of Manufactured Homeowners (717-284-4520)

The Modular Building Institute
(804-296-3699)

Manufactured Housing in Rural America, *Rural Voices, The Magazine of the Housing Assistance Council*, Summer 2003, Vol. 8, No. 2.