

Improving Community Development through Sustainability And Sustainable Affordable Housing

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Introduction:

This study provides an overview of the importance of improving sustainable community development along with sustainable housing. With the cost of living increasing and homes becoming increasingly more unaffordable, housing for low-income families and their communities are the most discussed topic in today's political arena. As professionals in this field, we must act to creating affordable housing within sustainable communities.

Methodology:
This study uses analytical research needed to improve the development of sustainable communities along with in-depth observation and analysis of what investments are required in using sustainability to make housing more affordable and sustainable.

Creating Sustainable:

The act of developing sustainable communities and housing spaces involves many objectives. The purpose of this study is to examine the low-income communities, and what step are needed for these areas to become self-sustainable.

Affordable rental housing:

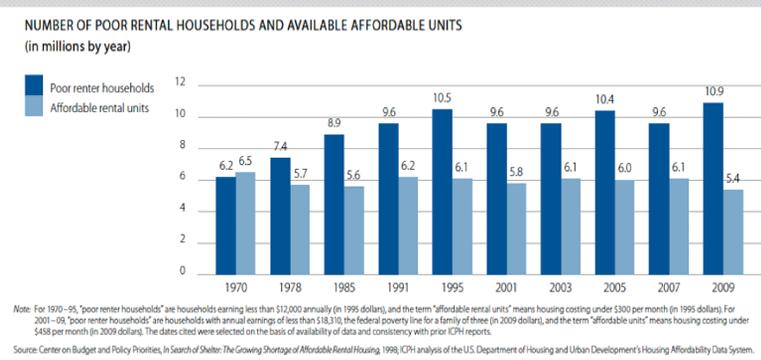


Figure 6- Graph shows low-income renter to affordable rental units available nationwide.

The development of sustainable communities:



Figure 7- Concept drawing of Sustainable Community development.

Housing Opportunities: (single family) (mix use):

The economic strengths of the collective household incomes influences the communities' sustainable possibilities. For those families that have less income, chances are sustainability is a dream. Single family homes, sustainability depending on the size of the home, the capacity of the systems and other key components. Annual energy savings above code for net zero ready construction: Single family: 67%, Duplex: 61%, Quadplex: 57%.
Comfortable Affordable housing concepts:



Figure 9- Sustainable affordable single-family homes in Utah.



Figure 10- Concept drawing of affordable mix use housing Dallas, TX

Economic Price Tag:

Despite the growing recognition of sustainable practices, green products, and high-performance technologies in building design, planning and construction, concerns within the industry continues due to lack of accurate, information regarding the financial and economic impacts of high-performance buildings. The issue is the unflinching connection between capital costs and operating costs. For years, people have searched for a way to live a more sustainable lives. While sustainable life can be beneficial, sustainable living is not

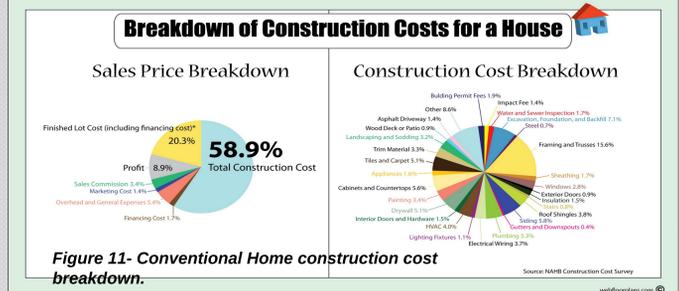


Figure 11- Conventional Home construction cost breakdown.

Total Cost of a Net Zero Home Compared with All Homes

Adding up the costs listed here and using today's average new home size of about 2,400 square feet, the totals are:

- Low End: \$193,700 | \$75.5 per square foot + \$12,500 in one-time costs like well/water and sewer/septic.
- High End: \$369,800 | \$139.5 per square foot + \$35,000 in one-time costs
- National average: \$274,000 | \$97.00 per square foot + \$19,000 in one-time costs

The average home built in 2015-2017 was about 2,700 square feet. The \$19,000 in one-time costs comes to \$7 per square foot. Add that to the construction costs of \$97/square foot, and we get \$104 per square foot.

Figure 12- Displays cost breakdown of Net Zero Housing Units.

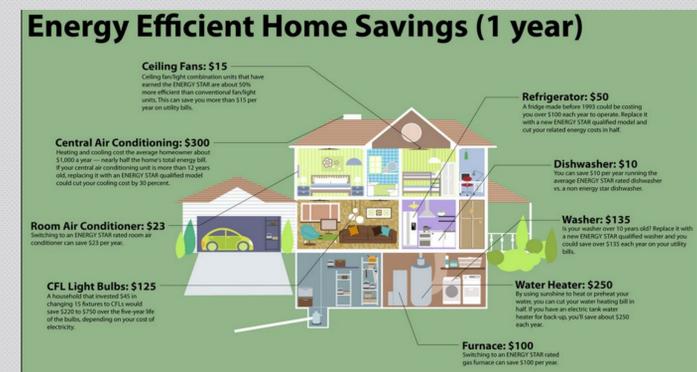


Figure 14- Displays the cost saving of using sustainable housing technologies.

Conclusion:

A sustainable community considers, and addresses, multiple human needs, not just the ones that involve the exclusion of all others. Sustainable communities are places where people of diverse backgrounds and perspectives feel welcome and safe, where every group has a chance to live sustainability, and to live comfortably without draining the natural resources, and where prosperity is shared. Changes of mind set, purposeful investments can make a huge difference altering income inequalities, and social biases. The biggest threats to building strong, sustainable communities is the cost. And how to bring down the cost to make it affordable is the hardest question to answer. But we do know once these sustainable technologies are implemented, they will pay for themselves in the future. The research shown illuminates how effective sustainable community planning filters down to affordable sustainable housing. With simple sustainable planning changes in low-income communities, these communities will be able to see economic growth.

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- Alan C. Clark. (2020). The True Costs of Sustainable Living in the US?. BioEnergy Consult.
- 24plans.com. How Much Does It Cost to Build a Green Home. Copy Right 1999-2019.
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Figure 1- Displays the steps of sustainable community development.

Low-income area in the United States:

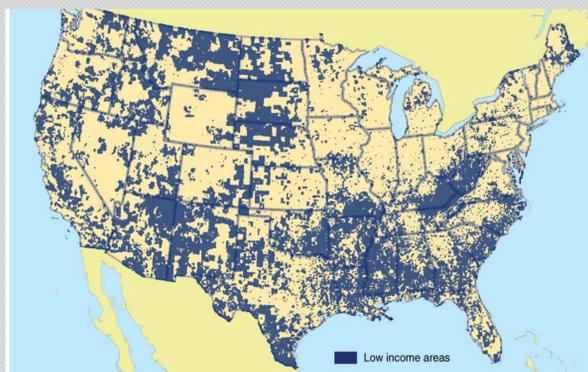
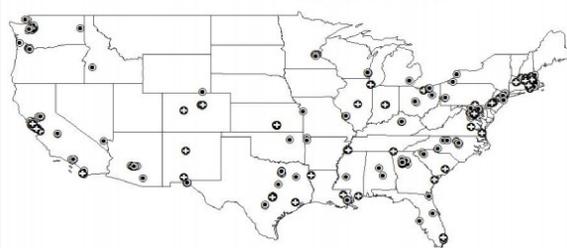


Figure 2 - Displays the US Low-income areas as Sustainable Developments and Affordable Housing United States of America 1990-2010



Total "Sustainable" Mixed Use Developments and Plans: 492
Percent with Affordable Housing: 37%

Figure 3- Displays active Sustainable communities and relation to affordable housing.

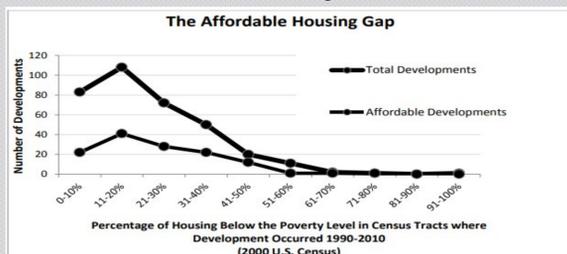


Figure 4- Displays the Affordable housing Gap with Development Communities.