Campus Farm Green: A Paradigm for Regeneratively Sustainable Communities

Executive Summary

Heat is the number one weather-related killer (Climate Central 2016). An extreme heat wave in northern Europe in August 2003 killed more than 70,000 people (DeFries 2019). Tucson, already much warmer than northern Europe, has become, and will continue to become, hotter. In addition to the projected future temperature increase mentioned above, in the past, between 2007 and 2016, Tucson was the U.S. city with the second greatest increase in the average number of days in a year when temperatures reached or exceeded 90 degrees (Climate Central 2016).

Tucson communities and buildings, as well as those of the rest of the U.S. have not been designed to adequately incorporate sustainability elements such as energy and water-use efficiency, bikeability and walkability, and proximity to public transportation, that can help avoid increased temperatures. Because of this, neighborhoods and homes in Tucson, as well as the rest of the United States are significant causes of greenhouse gas emissions, and by extension climate change and its devastating effects. Additionally, they use more water than they need to.

Campus Farm Green (The Green) is a residential community created by the real estate developer Tucson Artisan Builders to reimagine communities and homes by integrating regenerative sustainability into design and construction to solve the energy and water problems previously mentioned. The Green will do this by 1. maximizing the energy efficiency of its homes so that they are able to generate and return to the grid more electricity than they use and 2. maximizing the water efficiency of its homes and landscape so that they are able to capture and return more water to the ground than they buy from the water utility.

Following this Executive Summary, the body of this paper will explore in detail the origin, purpose, and implementation of the Green.

Regenerative sustainability was pioneered at the University of British Columbia and The Green's design employs and extends those lessons. Because of the project's innovative nature, approval considerations were more challenging than for conventional projects. To obtain necessary buy-in and approvals, stakeholder partnerships and strategic collaborations were critical.
Demand and supply for sustainable projects appears to be imbalanced. Potential demand appears to be large, while supply is small. The Green utilizes a marketing strategy that reinforces the aspirations of an audience whose values most align with the project's design. It also raises public consciousness about how housing choices impact the local and global environments and introduces the public to new regeneratively sustainable housing-choice opportunities that heal the environment.

**References**