AMELIORATING HOMELESSNESS THROUGH THE BUILT ENVIRONMENT

by

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(Under the Direction of David Spooner)

ABSTRACT

This thesis seeks to provide a focused design solution to ameliorate the homelessness epidemic by addressing human needs through the built environment. Clinch Memorial Hospital would like to relocate people experiencing homelessness from the Atlanta metropolitan area to Clinch County in a planned community called Homervillage. Homervillage is designed with human needs and ecological democracy as outlined by Maslow and Hester, respectively. Human needs are met by using nature as a healing tool and utilizing the design principles of Alexander's *A Pattern Language* to actualize theory as a design program. The thesis culminates in actionable program items organized in a table as they relate to Maslow and Hester's theory, various case studies, studies on nature's relation to the human psyche, and Alexander's vernacular. These program items are illustrated in a rendered plan and model images to guide the design and construction of Homervillage.

INDEX WORDS: Tiny House, Homelessness, Nature, Forest Therapy, Maslow's Hierarchy of Needs, Ecological Democracy, Design, Housing First, Pocket Neighborhoods, Cohousing

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DEDICATION

I would like to dedicate this thesis to my parents, Ralph and Susan Scoccimaro. My father instilled a love of learning in me from a young age with model rockets, electronics projects, and zoo visits. My mother unceasingly supports me even when I scare her to death. She attended my lectures on venomous snakes despite her fear of snakes. She sent me dog toys when I adopted Rosie the Dog despite her belief that a dog was too much responsibility for a graduate student. She even supported my decision to move to Houston despite never wanting or foreseeing me being so far away. Both of my parents tell me how proud they are of me regularly. I could not have gotten through this thesis without them.

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TABLE OF CONTENTS

Page

ACKNOWLEDGEMENTS v

LIST OF TABLES viii

LIST OF FIGURES ..... ix-x

CHAPTER

1 Chapter 1: Introduction 1-9

2 Chapter 2: Hester, Maslow, and Homelessness Background 10-29

Hester's Ecological Democracy 10-13

Maslow's Hierarchy of Needs 14-17

Homelessness Effects and Causes 18-29

3 Chapter 3: Homelessness Solutions and Case Studies 30-51

Housing First Solution 34-37

Tiny House Solution 37

Case Studies 38-51

4 Chapter 4: Nature as Healing 52-61

5 Chapter 5: Alexander's Principles and Stably Housed Community Case Studies 62-79

Design like Stably Housed Communities 62

A Pattern Language 63-70

Pocket Neighborhood History 70-72

Design Takeaways: Pocket Neighborhoods 72-76

Cohousing Background 76-77

Design Takeaways: Cohousing 77-79

6 Chapter 6: Homerville Background, Inventory, Analysis, and Design 80-103

Homerville Background, Demographics, and Inventory 80-85

Homervillage Design Program 86-103

7 Chapter 7: Conclusion 104-109

Summary of Findings 104-105

Future Work 106-109

REFERENCES 110-114

LIST OF TABLES

Page

Table 1: Thesis Lens Combines Maslow and Hester.....17

Table 2: Homelessness Categories.....19

Table 3: Case Studies that Exemplify Maslow and Hester's Principles.....51

Table 4: Alexander's Connection to Maslow and Hester.....70

Table 5: Case Studies that Exemplify Alexander, Maslow, and Hester's Principles.....79

Table 6: Design Program Supported by Alexander, Case Studies, Maslow, and Hester 91-92

LIST OF FIGURES

Page

Figure 1: Table Evolution Series 6

Figure 2: Maslow's Hierarchy of Needs 14

Figure 3: Maslow's Hierarchy of Needs Revised 16

Figure 4: PIT Survey Count Times 24

Figure 5: Serving Human Needs Through the Built Environment 27, 86

Figure 6: Sleeping Shelter (CARE Montreal) 31

Figure 7: Tent Encampment 33

Figure 8: Tent Encampment 33

Figure 9: ADU Floor Plan 39

Figure 10: Plug-in ADU House in Boston 39

Figure 11: Los Angeles ADU 41

Figure 12: Tiny House Community in Seattle 42

Figure 13: Sand Point Village 43

Figure 14: Sand Point Cottage Model 44

Figure 15: Sand Point Village Plan 45

Figure 16: Community First! Village Plan 46

Figure 17: Community First! Village House Example 47

Figure 18: Community First! Village RV Park 47

Figure 19: Community First! Village Social Areas (Chess Board) 48

Figure 20: Veterans Community Project Campus Rendering (Nested Houses) 49

Figure 21: Veterans Community Project Floor Plan Example) 50

Figure 22: Village Homes Pedestrian Network 72

Figure 23: Village Homes Plan.....73

Figure 24: Radburn Plan 74

Figure 25: Clinch County Topography and Slope 81

Figure 26: Homerville Land Use According to Clinch County 81

Figure 27: Age Hierarchy of Homerville.....82

Figure 28: Homerville Race Demographics 82

Figure 29: Aerial View of Design Site 84

Figure 30: Slope of Area Around Site 84

Figure 31: Employer Distance Relative to Homervillage.....85

Figure 32: Homervillage Bubble Diagram 87

Figure 33: Site Plan at 200 Scale (11x17 Fold Out) 88

Figure 33: North Bisected Site Plan at 100 Scale (11x17 Fold Out) 89

Figure 34: South Bisected Site Plan at 100 Scale (11x17 Fold out).....90

Figure 35: Designing for Diversity and Sociability.....94

Figure 36: Varied Character and Porches 96

Figure 37: Tiny House Front Elevation 96

Figure 38: Tiny House Clusters 98

Figure 39: Pedestrian and Bike Nature Network 100

Figure 40: Community Center Along Nature Network 100

Figure 41: Sacred Wood and Open-Air Chapel.....103

CHAPTER 1

INTRODUCTION

Homelessness is the pinnacle of unmet social and emotional wellbeing (SEWB) needs as it relates to the built environment (Sommet 2012). According to Maslow's hierarchy of needs, a person must secure physiological stability such as food, water, and sleep before one may ascend to the higher levels of safety, love/belonging, esteem, and self-actualization. The upper levels of the hierarchy such as love/belonging, esteem, and self-actualization can only be procured individually but safety and physiological needs can be easily secured for people experiencing homelessness by providing them with a stable home environment. While it may be argued that landscape architects have little power over the policy and administration involved in housing someone, our power and responsibility lies in the third, fourth, and fifth tiers of love/belonging, esteem, and self-actualization. Feelings of love and belonging are procured through feelings of inclusion in a group, organization, family, or social network. Esteem is garnered through respect for oneself from within or through regard and affirmation by an outside source. Finally, self-actualization is defined more ineffable as a mindfulness of oneself within a human experience and using that mindfulness in service of others. Maslow's final tier of self-actualization can only be, as the name implies, developed within oneself. However, landscape architects can create environments in which the pinnacle tier can be met by fulfilling the foundational tiers. As Maslow's needs illustrates, the pyramid is built by stacking one tier on top of the other—in other words—one cannot achieve self-actualization without self-esteem or belonging or safety and so on (Sommet 2012). Because people experiencing homelessness do not possess the absolute base

of the pyramid—food, water, warmth, and rest—we should not expect anyone to reach higher. To be a productive and active participant in society, one must first meet one's psychological needs of belonging and love, and before one can reach that high on the hierarchy, one must first be housed and safe.

The "Housing First" model best illustrates Maslow's Needs being met in practice. The "housing first" model is predicated on the theory that the first solution to solve the issues that cause homelessness is to give the afflicted person a home (Yglesias 2019). People experiencing homelessness cannot simply "pull themselves up by their bootstraps" because safety, food, and shelter are always at the forefront of their mind. When basic safety and shelter are at risk, human beings enter survival mode or fight or flight. Humans cannot function at a higher cognitive level when basic needs are not met. A potential employee is not concerned about being clean shaven and showered for a job interview when they are constantly trying to find their next meal or next spot to stealth sleep.

Two of the major issues when a person is experiencing homelessness is not only the psychological toll that insecure housing and food cause but also the physiological toll that being without shelter, food, and safety causes on the body and the brain. At its most basic outer shell level, it is more difficult to maintain the human body properly without warmth, proper and regular nutrition, access to health care, and properly maintained clothing and hygiene. Without these, the human body is exposed to more risk of infection and more likely to experience fatigue. Another factor to consider with homelessness is the physiological toll that lack of sleep has on the human body. Because sleeping in public places is essentially illegal in most places in the US, the homeless population has limited options for where they may receive the recommended eight hours of uninterrupted sleep. Lack of sleep contributes to several illnesses and most importantly

does not lend itself well to being productive. However, outer maintenance of the body is not the only physiological issues that contributes to the bodily toll of homelessness. The body is under a constant attack of the fight or flight hormone, cortisol, when the bottom two tiers of Maslow's needs are not met. While cortisol is helpful in preparing the human body in acute survival situations, it is immensely harmful when the body and brain are constantly bathed in it because one is without shelter, food, and water. A constant flow of cortisol not only causes inflammation that can lead to cancer in the body but also prevents higher cognitive function in the brain (Esposito and Bianchi 2012).

There are two schools of thought led by Ulrich and Kaplan on how nature can heal the mind. Roger S. Ulrich is a Professor of Architecture at Chalmers University of Technology and is the most frequently cited international researcher in healthcare design (The Center for Health Design). Stephen Kaplan was a Professor of Psychology at the University of Michigan who authored one hundred and twenty publications and four books on Attention Restoration Theory and human functioning and environmental impacts (University of Michigan in Memoriam 2018). While neither Ulrich nor Kaplan deny the validity of the other's research, they each emphasize the effect of nature on different aspects of the mind. Ulrich's research is generally more concentrated on how nature can decrease psychological, physiological, and behaviorally observed stress (Ulrich 1991; Ulrich 1992; Ulrich 1983). Ulrich defines stress as "the process by which an individual responds psychologically, physiologically, and often with behaviors, to a situation that challenges or threatens well-being" (Ulrich 1991). He goes on to define the psychological effects of stress as "cognitive appraisal of the situation, emotions such as fear, anger, and sadness, and coping responses" (Ulrich 1991). The physiological stress response includes mobilizing the body to recruit multiple systems including cardiovascular and

musculoskeletal. Most notably, however, is how Ulrich explains that behavioral responses to stress often manifest in “avoidance, alcohol or cigarette use, and declines in cognitive performance on tasks such as proofreading” (Ulrich 1991). When basic human needs are not met, a person will exhibit psychological, physiological, and behavioral stress responses.

Kaplan adds to the discourse on nature’s effect on the mind by presenting research on how nature can not only be used as a means of stress reduction, but also to recover directed attention (Kaplan 1995). Kaplan explains that “directed attention is an issue of the modern world and involves properties such as effort, focus, voluntary control, susceptibility to fatigue, and controls distraction through inhibition” (Kaplan 1995). He furthers the definition of directed attention fatigue by explaining that “prolonged mental effort leads to attention fatigue...[directed attention] is a key ingredient to human effectiveness” and the effects of directed attention fatigue can “[inhibit] problem solving…can deteriorate normal inhibitions and cause us to exhibit inappropriate behaviors...more impulsivity, and impatience” (Kaplan 1995). People experiencing homelessness are at a severe risk for directed attention fatigue because their constant and primary concern is securing food and shelter. While policy dictates how shelter and security may be provided to people experiencing homelessness, landscape architects can design spaces in which one may not only achieve love, belonging, esteem, and self-actualization, but also recover directed attention fatigue according to Kaplan and decrease stress in general according to Ulrich. Considering all these goals as a holistic solution for people experiencing homelessness could offer a space in which people experiencing homelessness can not only live and work but also thrive and heal. Additionally, creating a community within a healing space provides a built-in support system to further the success of a holistic program.

The first step in creating a community for people experiencing homelessness is to consider how we as landscape architects may design with ecological democracy. Randall Hester created a guide in "Design with Ecological Democracy" that best illustrates how we may design communities in which we may not only seek shelter but also develop Maslow's higher tiers. Hester breaks down his definition of ecological democracy by explaining democracy and ecology separately. Democracy is "exercised directly through active involvement in a locality and indirectly through elections, following principles of equality and attending to individual needs and broader community goods" (Hester 2006, 4). Ecology is simply "the science of the relationships between organisms, including our environment and us" (Hester 2006, 4). Hester combines these two definitions to explain how "ecological democracy, then is government by the people emphasizing direct, hands-on involvement" (Hester 2006, 4). Additionally, Hester posits that "to achieve an effective ecological democracy, we must first create places that enable citizens to connect with neighbors in their localities" (Hester 2006, 16). Not only does Hester's proposition support creating spaces in which neighbors may connect and support their communities, but it also fulfills Maslow's third tier needs for belonging. The lens through which this thesis evaluates design effectiveness includes Maslow's hierarchy of needs in combination with Hester's ecological democracy precisely because the theories are congruent for designing equitable and community-based spaces.

The litmus test for effective design will ask if a space fulfills Maslow's needs and whether the space is designed with ecological democracy that encourages community and belonging. Site specific recommendations are made according to Hester's findings of democratic design and precludes what impedes design of those spaces. According to Hester, elements that impede ecological democracy include mobility, affluence, standardization, technology, and

specialization. However, the American virtues which impede democratic design may be remedied by creating "enabling forms, first and foremost…where community members work together democratically to solve complex problems and are informed by ecological thinking, locality, and shifting externalities" (Hester 2006, 18). This thesis integrates Hester's enabling forms and Maslow's human needs in a table that specifies how case studies and design vernacular translate to program items in the design site. See (Figure 1) as an illustration of how the table builds throughout the thesis stepwise from simply defining Maslow's human needs and Hester's ecological democracy principles to finally explaining how program items, design

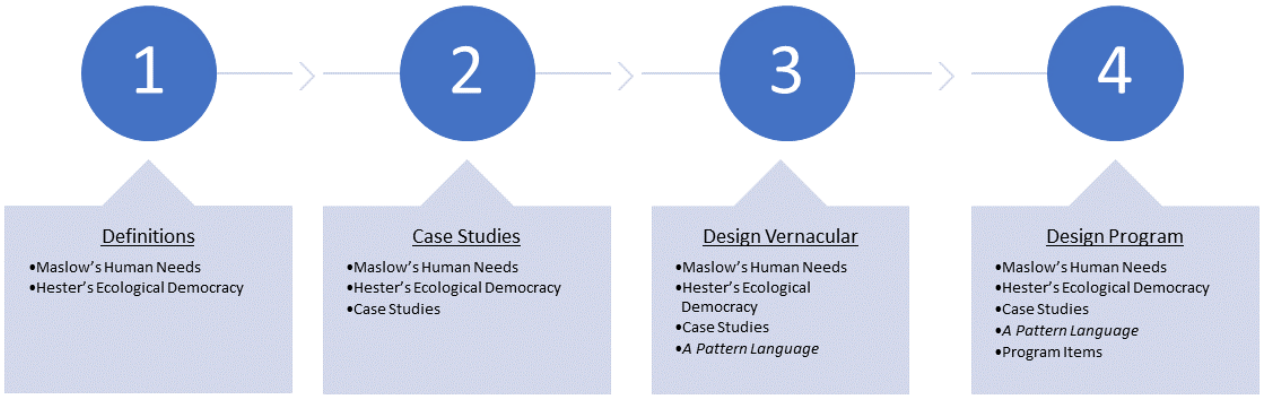


Figure 1, Table Evolution Series, Illustration by Anna Marie Scoccimaro

vernacular, case studies, Maslow's needs, and Hester's principles combine to form the design for the site, Homervillage.

Because substance abuse and mental illness are exacerbated in normalized social situations, such as homelessness, the most sustainable means of eradicating the homelessness

epidemic is to provide housing and guidance for people experiencing homelessness with an emphasis on a holistic environmental approach. While landscape architecture as a field is becoming savvier to the subtle yet powerful effects of nature surrounding low-income housing, it is often overlooked as a solution to heal veterans and civilians experiencing homelessness. Relocating people experiencing homelessness in urban environments to more rural and natural environments would allow residents to fully immerse in a natural environment while fulfilling Maslow's lowest levels of needs so that they may one day fulfill higher needs of love and belonging.

This thesis proposes homelessness solutions using psychological theory and sociological design as it applies to the built environment. The document culminates in specific design recommendations for a site in South Georgia called Homervillage. Homervillage is named for the town in which the site resides, Homerville, Georgia. Homerville is an economically fragile and rural town in need of an augmented workforce for the hospital, Clinch Memorial, and two industrial parks. Chapter one sets the foundation of the work and explains Maslow's Hierarchy of Needs, Hester's Ecological Democracy, homelessness causes and cost. Chapter two reveals homelessness solutions that are congruent with Chapter one's theories, specifically the "housing first" model, and elucidates case studies that exemplify this model in practice. Chapter three explains the design ethos that will be used for the site including nature as a healing tool for homelessness and more specifically examines how Hester's design principles can be used in combination with various elements of nature to fulfill Maslow's third tier of needs. Chapter four provides case studies of stably housed communities from which to glean wellness design principles. Chapter four also introduces Alexander's design principles from *A Pattern Language* to make explicit the program items to be used in Homervillage. Chapter five provides design

recommendations and actualizes the theories used to support this thesis with actionable program items in specific site zones. Chapter six concludes the thesis by summarizing how the site will fulfill Maslow's and Hester's litmus test and explaining how this thesis will inform future design decisions for how this work may be applied in similar projects.

Solutions to homelessness require a holistic approach including changes to policy, public perception, funding, and an analysis of public service usage. However, a narrow scope is prudent for the most concise argument as it pertains to landscape architecture. The drain of homelessness on public services is mentioned in this thesis to acknowledge the relevance of homelessness to the United States taxpayer, cities, and people experiencing homelessness. However, the focus of this thesis is how homelessness can be ameliorated compassionately through the efforts of landscape architects designing the built environment.

While there are many more permanent housing solutions that fall under the "housing first" model, this thesis analyzes tiny houses as a means of ameliorating homelessness. This model was chosen because of the tiny house model's parsimonious use of space, relatively smaller ecological footprint, and the ability to garner funds through the novelty and simplicity of the floorplans. The tiny house "housing first" case studies are presented and assessed in this thesis based on how they meet human needs, how they may enable individuals to fulfill higher order needs, and whether they are congruent with Hester's ecologically democratic design principles. Fundraising for Homervillage, resident applications, village policies and guidelines, and how it will be staffed are decidedly outside of the scope of this thesis. While these aspects of the project are critical for success, those decisions are unfortunately outside of the realm of expertise of landscape architecture, and thus not included in this thesis.

This thesis aims to answer the question: how can landscape architects design ecologically democratic spaces that serve human needs for people experiencing homelessness? This thesis proposes designs focused on these principles for a site in Homerville, Georgia. Clinch Memorial Hospital would like to relocate homeless civilian families and veterans from the Atlanta metropolitan area to Clinch County. Residents would not only work at the hospital but would also live on land owned by the hospital in a village community. Not only would Clinch Memorial's plan to relocate homeless families and veterans to Homerville create a safe and healthy environment for many people experiencing homelessness in an urban environment to thrive and recover, but it would also help revitalize a rural hospital and a town in an economic and populace downturn.

CHAPTER 2

HESTER, MASLOW, AND HOMELESSNESS BACKGROUND

Chapter 2 provides necessary background on Maslow, Hester, and homelessness as it relates to designing ecologically democratic spaces that meet human for people experiencing homelessness. The principles outlined by Hester provide prescriptive goals to achieve an ecological democracy that lend themselves well to tabular organization, which is the culmination of this thesis. Maslow's hierarchy of human needs, and Hale's revision of this hierarchy, also lend themselves well to tabular organization by providing specific benchmarks for meeting human needs. Finally, providing background to homelessness, how it is caused, and the systems that perpetuate it are critical to design spaces that are meant to ameliorate the homeless epidemic.

Hester's Ecological Democracy

Hester's "Design for Ecological Democracy" is predicated on the idea that we as landscape architects and designers can create spaces that bring communities together in an equitable and democratic way. He explains that "to achieve an effective ecological democracy, we must first create places that enable citizens to connect with neighbors in their localities" (Hester 2006, 16). Hester remarks that the United States was founded on communities democratically coming together on the municipal level to make decisions and commune. However, Hester explains how we have strayed from this model with how "the design of the modern city and suburb contributed considerably to the loss of shared experience, local knowledge, and civic mindedness" (Hester 2006, 17). He specifically lists values that impede habitation as mobility, affluence,

standardization, technology, and specialization (Hester 2006, 16). Rather than focusing on how modernity has created these issues and what caused them, he instead explains the solutions in summary as "enabling form is better served by design that encourages us to spend more time in one place, allows us to live fulfilling lives with limited economic means, replaces standard solutions with ones that are uniquely suited to each locale, limits dependence on unneeded technology that separates us from nature and society, and facilitates through daily experience the acquisition of general skills, not just specialized and isolated ones" (Hester 2006, 18). Based on Hester's solutions to modernity's impediments on society, it may be surmised that Hester supports rural communities over urban ones. Rural communities allow for the equal participation for which Hester calls to create ecologically democratic spaces.

Hester explains that enabling forms for ecologically democratic spaces are built on five principles: centeredness, connectedness, fairness, sensible status seeking, and sacredness (Hester 2006, 18). While many of these principles are not only connecting but also overlapping, Hester specifically defines each and their subsequent subpoints.

Centeredness: Hester defines centers as an "aggregate of shared experiences, activities, and interests, and of associated settings…[they] are essential for economic complexity local identity, and rootedness…build socio-spatial capital, enhance deliberative democracy, and incubate ideas regarding locality" (Hester 2006, 21). Hester lists rules for good centers which include concentrations of different uses, easy accessibility, both formal and casual use of space, setting for local knowledge, provides orientation, invites commitment, and consistency in building form (Hester 2006, 24-28). While each of these rules are inextricably connected, Hester remarks that centers are first and foremost sociopetal areas rather than sociofrugal. Sociopetal areas "facilitate social contact, internal identity, and control," while sociofrugal areas are designed to "provide

solitude but can also discourage communication" (Hester 2006, 32-33). It is crucial for centers to be sociopetal because "environmental psychologists have long known that the form of public places increases or diminishes substantive human contact" (Hester 2006, 32). Hester's rules for good centers support his sociopetal theory by explaining the programming by which an enabling form may be realized. Enabling forms create a cohesive community by inviting people from diverse backgrounds, ages, and roles to congregate and commune in an area with multiple and varied uses.

Connectedness: Hester's definition of connectedness is "a particular way of design thinking that maximizes mutual social and ecological benefits by expressing fundamental associations—often unknown or unseen locally—between the parts of an ecosystem, a city, or an individual site" (Hester 2006, 50). As such "determining activities that need to be located near each other is primary in efficient design" (Hester 2006, 51). This definition of connectedness is not simply the union of activity nodes but also speaks to the necessity of efficiency of connection between nodes by organizing program items by activity and proximity.

Fairness: Hester explains that fairness not only exists in form but also in policy and information because "equal access to information is critical for creating legitimate involvement and a well-informed public" (Hester 2006, 77). Fairness is especially important in the design of American cities and towns because "American city form contributes to racial, economic, gender, and age segregation and discrimination" (Hester 2006, 78). Hester lists "three formal considerations [that] are directly related to fairness in city design—accessibility, inclusion, and equal distribution of resources and amenities" (Hester 2006, 78). Hester also remarks at how recreational resources and related "transportation costs [to] remote locations make many facilities like national parks and forests inaccessible" (Hester 2006, 79). Hester clarifies this

inequity by plainly stating that “generally, public resources are dispersed inversely proportionate to need. The wealthy get most public goods and few public liabilities. The powerless get few public goods and most of the public liabilities” (Hester 2006, 82). Homervillage would flip this paradigm of inequity so that the natural resources normally reserved for the wealthy are not just close to residents, but surrounding where they live, work, and play.

Sensible status seeking: Hester explains status seeking as “complicated and often intertwined with a desire for community improvement and deeply rooted concepts of progress” (Hester 2006, 98).

Sacredness: Higher order needs of love, belonging, esteem, and self-actualization cannot happen in a vacuous site in which minimal effort and design is put. Hester explains sacred landscapes as “places that are consecrated by sacrifice and special treatment and endowed by a community with the power of highly revered convictions, values, and virtues” (Hester 2006, 117). It is not the form or the symbols within a place that make it sacred, but rather, the community that thrives within the site that makes meaning and gives importance. While many of the examples Hester gives are more “traditionally sacred places, like churches and other religious sites,” he adds that “today prospect-refuge, biophilia, and ecological spiritualism serve contemporary needs for these expressions, often attempting to reconcile paradox and contradiction and reconnecting with primal forces” (Hester 2006, 117). Not only does nature have a demonstrated healing effect for the trauma residents have experienced in homelessness, but residents can also make meaning and identity within in nature because “landscapes may be rendered sacred as embodiments of personal or cultural identity and history” (Hester 2006, 118).

Maslow's Hierarchy of Needs

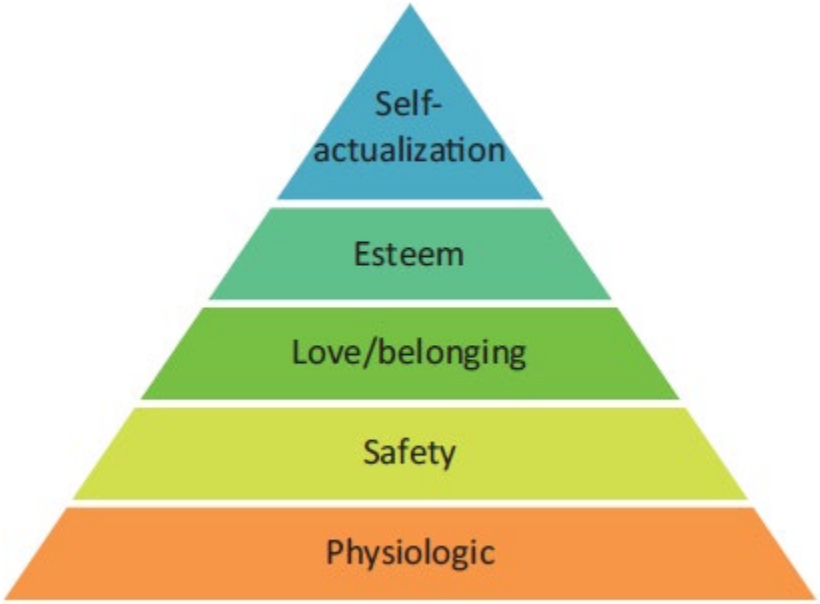


Figure 2, Maslow's Hierarchy of Needs, Hale et al., 2019

While there are a variety of human needs models, the lens of this thesis is limited to Maslow's hierarchy of human of needs (Maslow 1943) (See Figure 2). The premise of Maslow's human needs is that they are organized as a hierarchy in which one cannot ascend to higher function without the fulfillment of the needs below. The most foundational human needs are physiological including shelter, food, and water. Safety is the second human need that connotes not only physical safety but also stability in one's life and secure finances. The third human need human need is a feeling of love and belonging, which can include an organization, social network, or family. Esteem is the penultimate human need that connotes respect and regard for oneself either from within or through status and outside affirmation. Self-actualization is the highest human need in Maslow's model. Self-actualization is defined in multiple different ways by different sources. Maslow defines self-actualization as "experiencing fully, vividly, selflessly, with full

concentration and total absorption…At this moment of experiencing, the person is wholly and fully human" (Maslow 1976, 44).

Maslow's human needs model has been applied in a multitude of settings including refugee and medical resident studies to explain the deleterious effects on health and wellness when human needs are not met. In a study on medical residents conducted by Hale et al, it is remarked that "several studies have articulated the myriad factors contributing to burnout and decreased wellness, which include poor access to food, insufficient sleep, social isolation, negative or stressful work environments, excessive paperwork, work hours, lack of time for self-care, poor relationships with colleagues, loss of control, and poor mentorship" (Hale et al. 2019). The relationship between people experiencing homelessness and medical residents is that both party's human needs both often go unmet for various reasons. While Maslow's hierarchy remained unmitigated for years after its inception, more modern research considers the human needs to be less hierarchical and more inextricable. Hale explains the modernization of Maslow's model as less of a hierarchy "contingent on 'baser' needs" and more of a "conceptualization of the needs to coexist with one another, stating that humans still possess higher order needs even if their rudimentary ones are not met" (Hale et al. 2019). Hale accompanies the following explanation with a graphic pie chart "in a modern revision of Maslow's …each need supports all others and in sum create an integrated wellness framework" (Hale et al. 2019) (See Figure 3).

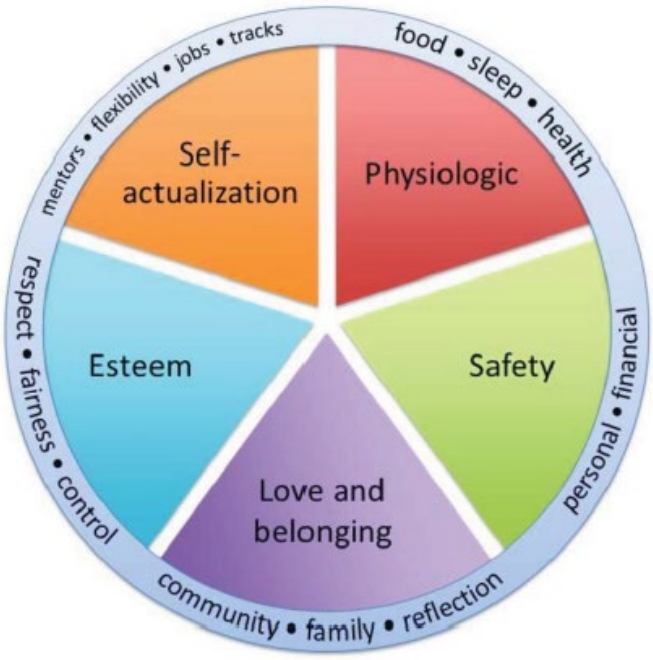


Figure 3, Maslow's Hierarchy of Needs Revised, Hale et al., 2019

While "the most fundamental human needs are physiological, namely, air, water, food, shelter, and rest" is most overtly missing tier of human needs of someone experiencing homelessness, it may be argued that this need is in a tie for last with the second tier of "safety from physical threats to include the contemporary issues of personal and financial security" (Hale et al. 2019). Many people experiencing homelessness can find temporary housing at a friend's house, a homeless shelter, a tent, or even a public covering, however, this physiological satisfaction is not stable or secure. Hale's findings are particularly descriptive in the case of people experiencing homelessness when we consider how these needs are connected. There are several resources that may be used by people experiencing homelessness, however, they are of little benefit when they are temporary solutions because that second tier cannot be met.

A person may have feelings of love and belonging because of their job, church group, or other organization while physiological and safety needs can still go unmet. Maslow specifically

speaks to self-actualization in the Farther Reaches of Human Behavior as "involve[ed] in a cause outside their own skin, in something outside of themselves" (Maslow 1976, 42). By Maslow's definition, however, a parent who must ensure their child is fed, safe, loved, and has self-esteem could not accomplish that task before they acquire those human needs for themselves. However, deferring to Hale et al.'s modernization of Maslow's model explains how a parent can fulfill those higher order needs by going without food or warmth in service of their child.

The combination of Maslow's hierarchy of needs as revised by Hale and Hester's ecological democracy make up the lens of this thesis. The table below (See Table 1) outlines the first of several evolving tables that are proposed as the litmus test for successfully meeting human wellness needs. This table grows stepwise throughout the thesis to analyze case studies and Alexander's design lexicon through the lens of Maslow and Hester's principles.

Table 1, Thesis Lens Combines Maslow and Hester

Maslow's Hierarchy of Needs (Individual Human Needs)	**Hester's Ecological Democracy (Design Considerations for Communities)**	**Result**
Physiological Safety Love and Belonging Esteem Self-Actualization	Centeredness Connectedness Fairness Sensible Status Seeking Sacredness	*Ecologically democratic communities fulfill resident's human needs. Fulfilled human needs allow for self-actualization manifested in contributions to society and community.*

Homelessness Effects and Causes

Housing and Urban Development conducts point in time (PIT) surveys annually of the homeless population. While this data is not necessarily complete given the transient nature of homelessness, the PIT survey "critically informs homeless policy" (Yglesias 2014). According to the 2014 PIT findings, an estimated half a million people are homeless in the United States. Data from that same report revealed that sixty-nine percent of survey participants "were staying in residential programs for homeless people," while the remaining thirty one percent "were found in unsheltered locations" (HUD Exchange 2018). The chronically homeless account for fifteen percent of all homeless people (HUD Exchange 2018). Chronically homeless people, as defined by HUD, are "disabled individuals who have been continuously homeless for more than a year or have experienced at least four episodes of homelessness in the past three years" (Swarns 2008). As of 2012, the US Department of Housing and Urban Development defines homelessness in four ways: current homelessness, imminent homelessness, youth/family home instability cause by hardship, and home instability cause by violence (see Table 2). The categories in which

people are defined impacts how they will receive assistance through the Homeless Emergency Assistance and Rapid Transition to Housing Act (Community Planning Workshop 2015).

People who become and stay homeless rarely find themselves homeless because of one insurmountable issue. The National Coalition for the Homeless highlights the combination of factors that contribute to homelessness including lack of affordable housing, poverty, lack of employment opportunities, domestic violence, mental illness, and addiction. The National Coalition for the Homeless sites how a "lack of affordable housing and the limited scale of

Table 2, Homelessness Categories, Review of Transitional Housing Strategies in Eugene 2015

Category	**Definition**
Current homelessness	People who are living in a place not meant for human habitation, in emergency shelter, in transitional housing, or are exiting an institution where they temporarily resided. The only significant change from existing practice is that people will be considered homeless if they are exiting an institution where they resided for up to 90 days (it was previously 30 days), and were in shelter or a place not meant for human habitation immediately prior to entering that institution.
Imminent Homelessness	People who are losing their primary nighttime residence, which may include a motel or hotel or a doubled up situation, within 14 days and lack resources or support networks to remain in housing. HUD had previously allowed people who were being displaced within 7 days to be considered homeless. The proposed regulation also describes specific documentation requirements for this category.
Youth/family home instability cause by hardship	Families with children or unaccompanied youth who are unstably housed and likely to continue in that state. This is a new category of homelessness, and it applies to families with children or unaccompanied youth who have not had a lease or ownership interest in a housing unit in the last 60 or more days, have had two or more moves in the last 60 days, and who are likely to continue to be unstably housed because of disability or multiple barriers to employment.
Home instability cause by violence	People who are fleeing or attempting to flee domestic violence, have no other residence, and lack the resources or support networks to obtain other permanent housing. This category is similar to the current practice regarding people who are fleeing domestic violence.

housing assistance programs have contributed to the current housing crisis and to homelessness" (NCH). Georgia specifically is the twenty-seventh highest housing wage in the country according to the National Low Income Housing Coalition. The minimum wage in Georgia is $7.25 and the average renter wage is $27.51. A person earning the minimum wage would have to work ninety-one hours a week to afford a "modest one-bedroom rental home at Fair Market Rent" (NLIHC 2015). The National Low Income Housing Coalition sites a one-bedroom fair market rent apartment as $858 per month. While rent will vary based on location within the state, these statistics not only elucidate the necessity of low-income assistance programs, but also how much someone must earn to simply keep a roof over their head without including the cost of food, utilities, and other living expenses that may be a higher priority than a room of one's own.

People often become homeless because of personal budgetary restraints and the high price of housing relative to other human needs such as food or medical care. The National Coalition for the Homeless describe this situation as "difficult choices must be made when limited resources cover only some of these necessities. Often it is housing, which absorbs a high proportion of income that must be dropped" (NCH). A lack of employment opportunities, lack of available livable wages, and a decline in public assistance all contribute to poverty that could ultimately lead to homelessness. As explained by the NCH, "if you are poor, you are essentially an illness, an accident, or a paycheck away from living on the streets" (NCH). A lack of affordable healthcare can often be the catalyst for people experiencing poverty to become homelessness because "a serious illness or disability can start a downward spiral into homelessness, beginning with a lost job, depletion of savings to pay for care, and eventual eviction" (NCH). Women experiencing poverty and domestic abuse often must choose between

an abusive relationship and homelessness, which is a primary cause of homelessness for half of cities in the US according to the US Conference of Mayors in 2005 (Cornett et al. 2005).

While the relationship between addiction, mental illness, and homelessness is complex and negatively colors public perception, there is significant data that demonstrates that people experiencing homelessness are more likely to suffer from addiction and be affected by mental illness because of being homeless. Two of the leading deleterious effects of homelessness are substance abuse and mental illness, or a combination of both, "with rates of drug and alcohol abuse two to eight times higher than in the general population (Robertson et al. 1997). About sixteen percent of the homeless population was found to suffer from severe and chronic mental illness (Cornett et al. 2005) and "sixty-eight percent of U.S. cities report that addiction is their single largest cause of homelessness" (Community Planning Workshop 2015). However, the National Coalition for the Homeless explains that addiction is not the sole cause of homelessness, but rather that poverty in combination with addiction is often the combination that causes homelessness (NCH). Additionally, substance abuse and mental health status is subject to social context. In other words, people who are in a social or living situation, such as homelessness, in which they are surrounded by substance abusers and untreated mental illness are more likely to abuse substances and may be subject to degraded mental health (Rhoades 2011). In contrast, "normative social ties (family, employed and school/work contacts) were associated with a decreased likelihood of crack use" (Rhoades 2011). Men specifically are more likely than women to be homeless (U.S. Conference of Mayors 2007), "to experience longer episodes of homelessness (Caton et al. 2007) and when homeless, more likely to be drug- and alcohol-dependent" (Rhoades 2011). In this case, it appears that social networks are associated with the deleterious effects of homelessness and may contribute to keeping someone on the

streets. Social networks in this context are synonymous with people one sees regularly or social circles. However, Rhoades also reports that "increased social support from those in the [social] network has been associated with decreased drug use in high-risk communities (Williams and Latkin 2007), and the perception of increased social support was associated, via decreased levels of emotional distress, with reduced substance use among sheltered homeless in Skid Row (Stein et al. 2008)." These findings support Maslow's third tier of human needs being met with love and belonging and how they contribute to a happier, more whole person. Additionally, Stein et al.'s findings support Hale et al.'s assertion that human needs are best represented as inextricable factors rather than a hierarchy; the people in these high-risk networks are without stable homes and nutrition but they have a sense of love and belonging that when emotionally supportive can be a positive effect.

Not only are people more likely to abuse drugs and alcohol when they belong to a social network in which that behavior is normalized, but depression rates are particularly high among the homeless population. PTSD, or post-traumatic stress disorder, "has also been associated with substance use, including the self-medication of PTSD symptoms with CNS depressants (such as alcohol, marijuana and opioids))" (Rhoades, 2011). Prescription drug misuse specifically was found most prevalent in homeless men suffering from posttraumatic stress disorder (Fargo 2012). Additionally, veterans, who are overwhelmingly affected by PTSD, are an overrepresented category in the homeless population and are at greater risk for homelessness than the general civilian population (Fargo 2012). Homeless itself is also a traumatic event that could be a risk factor for PTSD (Rhoades 2011). It is estimated that between thirty nine percent and seventy percent of homeless young adults abuse drugs or alcohol (Gomez et al. 2010). Additionally, Gomez et al found that "homeless young people report using drugs and alcohol as a coping

strategy and often have more favorable attitudes toward drug use than their non-homeless peers," which is yet another demonstration of social norms and network's influence on substance abuse (Gomez et al. 2010). However, these statistics should not be viewed as the moral failings of these high-risk populations because substance abuse is often used not only as a psychological coping mechanism but is also a physical coping mechanism as well. Gomez poignantly remarks that "the stress resulting from sleeping outdoors and in public places may be alleviated or eased by using drugs and alcohol to keep warm and suppress hunger (Ayerst, 1999). Some drugs are used to help these young people stay awake for extended periods, especially at night when the chances of victimization increase (Ayerst, 1999; Fest, 2003). Drugs also provide a means of escape from the physical and emotional pain associated with surviving on the street" (Gomez 2010).

Substance abuse and mental illness are exasperated by "homeless [patient's] complex health care needs and difficulty accessing health services" (Moore et al. 2019). Not only are the issues associated with living outdoors incongruent with a healthy lifestyle for the homeless population but "these patients often experience barriers to recover after trauma or illness as they lack access to recommended over-the-counter medications, rest, and improved nutrition" (Moore et al. 2019). As a result of these issues as well as many other contributing factors, people experiencing homelessness often become frequent emergency department users. While there are several tangential issues with frequent emergency department use for illness that could have been resolved with preventable medicine, the scope of this thesis is only concerned with the deleterious effects that are associated with frequent emergency department use. Frequent emergency department users are "particularly vulnerable to poor health outcomes. In part, these patients experience fragmented care…they often have several medical and psychological comorbidities" (Moore et al. 2019).

While many of the aforementioned causes of homelessness could and do affect Georgians, the Atlanta Point in Time survey that was conducted in January of 2020 provides specific demographic data and critically informs the needs of the population Homervillage would ideally serve. Unlike the national HUD definitions, the Atlanta Continuum of Care, who conducted the survey, defines homelessness three ways: sheltered-emergency, sheltered-transitional, and unsheltered. The Atlanta Continuum of Care collects data on one night of the year over several days as stated in Fig. 4.

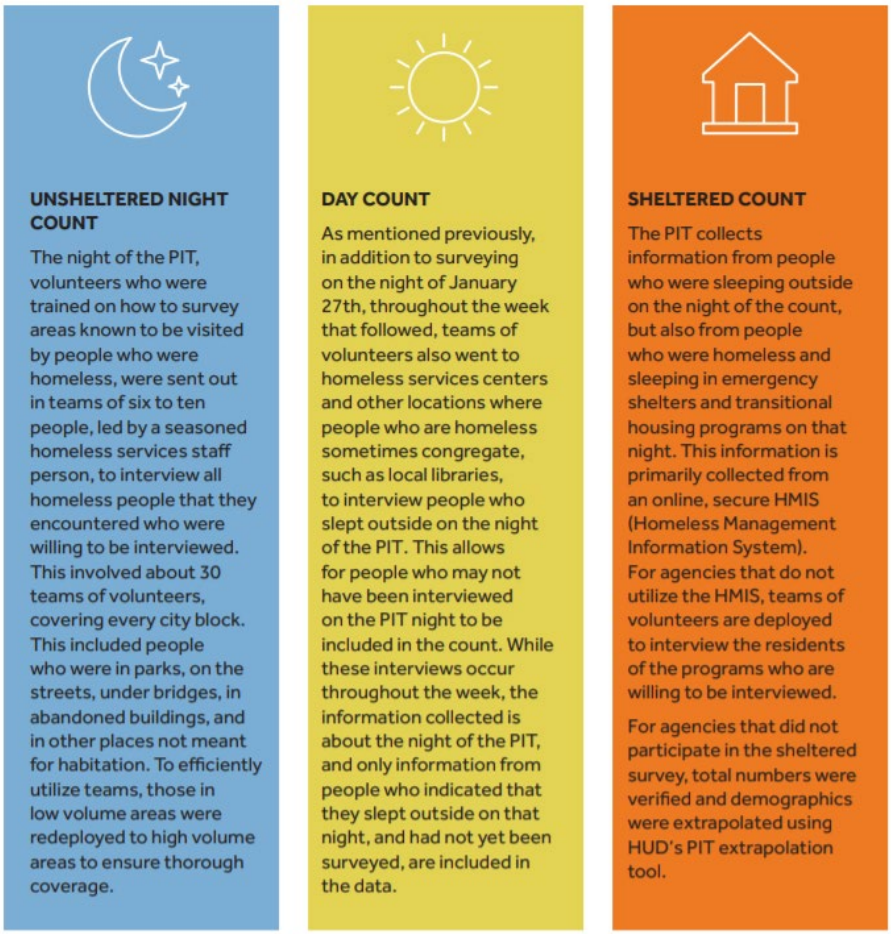


Figure 4, PIT Survey Count Times, The Atlanta Continuum of Care

The survey for 2020 revealed that there were a total of 3240 people experiencing homelessness who were willing to be surveyed on January 27th, 2020 in Atlanta, Georgia. Chronically homeless people make up about seventeen percent of the data set and an

overwhelming seventy three percent identify as men. Eighty eight percent of the PIT participants are African American, and eighty four percent were over the age of twenty-four. Ten percent of participants are veterans and of the veteran population almost ninety percent identify as men and eighty five percent are African American. Almost one third of participants reported a serious mental illness and another third reported substance use disorder. Ninety-eight participants reported that they are survivors of domestic abuse and that domestic abuse contributed to their homelessness. One hundred and eighty-nine reported an HIV/AIDS diagnosis, which is a chronic illness that requires consistent and frequent medical care and prescriptions. It may be surmised that an HIV/AIDS diagnosis and treatment could have contributed to someone's homelessness based on aforementioned deleterious effects of medical costs (Atlanta Continuum of Care 2020).

Public perception of people experiencing homelessness often lacks nuance and sympathy, but the issues associated with homelessness are not as simple as many Americans would like to believe. Homelessness often lends itself to self-perpetuating cycles that are ultimately a demonstration of unmet human needs writ large across our society. The visibility of individual issues that we associate with high-risk populations that are more easily overcome by another individual within a different social context negatively colors public perception of people experiencing homelessness. Substance abuse is a common issue with white collar jobs; depression and mental illness are common amongst university students. However, the context in which these issues occur often are not completely catastrophic to the privileged individual's life and will more than likely not lead to homelessness. It is often the occurrence of several unmet human needs that leads to and perpetuates homelessness.

Hester's Ecological Democracy demonstrates how these social contexts differ and create a chasm in which some individuals have access to more resources and may fulfill their human

needs more easily. Hester's work demonstrates how when resources are easy for a group of people to obtain, it is difficult for that group to empathize with the group for which green spaces and medical facilities are farther away, jobs require more complex transportation plans, and resources are unfairly distributed to suit the wealthy. It follows, then, that public perception of homelessness is limited to the most visible issues, substance abuse and mental illness, which the more privileged group perceives as easily fixed within the self because of their own social context. However, the most visible issues are often not the only issues that are keeping someone homeless. This lack of empathy and understanding of what perpetuates the cycle of homelessness is the main reason why the "housing first" model is not the most common solution for homelessness. The "housing first" model is difficult for people to support because is the belief that human value is earned in the United States and that "hand-outs" are detrimental to our way of life. Americans would rather support homeless shelters and soup kitchens because these solutions do not threaten their way of life and provides enough of a temporary fix for people experiencing homeless that they deem to be enough for them to then pull themselves up "by their bootstraps." However, a temporary fix does not a stable human needs model make. To observe sustainable solutions to homelessness and the associated issues with this population, their human needs must be met. For our society to work at maximum efficiency, everyone must achieve self-actualization (see Fig 5). To achieve Hester's Ecological Democracy, we must design with others in mind to design the most equitable spaces, which is an extension of meeting everyone's human

needs. According to these values, the “housing first” model is the first step in creating our most effective society.

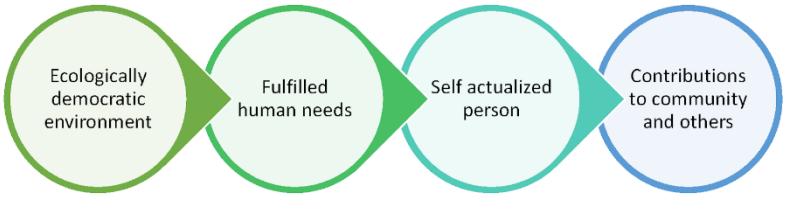


Fig 5, Serving Human Needs Through the Built Environment, Illustration by Anna Marie Scoccimaro

Homerville provides an opportunity as a small town in economic and populace decline not only for growth, but also for ecological democracy. Homerville needs a workforce and has the land to develop Hester’s ideal ecologically democratic space, dubbed Homervillage. This thesis proposes to design Homervillage in such a way to lead Homerville into a more ecologically democratic lifestyle and to fulfill Maslow’s human needs in the process. Not only will Homervillage provide a more equitable space by virtue of following the housing first model, but because the site is centrally located to Homerville’s resources, it will also allow residents a fair chance to use those resources. The site is centrally located in Homerville to be within walking or biking distance of the two industrial parks and Clinch Memorial hospital, which will be the primary means of employment in this program. The site’s centrality and proximity relative to work eliminates the transportation impediment that many Americans face. While Homervillage itself will be a natural resource destination, the site is only part of a larger

community so the specific program items within the site also need to "address these issues with subtle actions. Inaccessibility can be rectified by the location of public facilities, well networked public transportation, and integrated land uses" (Hester 2006, 83). Status seeking within the context of Homervillage is a nuanced topic not only because of the design of Homervillage and the goals of empowerment and esteem that it is intended to generate for residents, but also because of the current socioeconomic conditions of the town in which the site is located.

The inception of this project began with a need for a workforce in a rural town with a population hemorrhage. The demand for jobs in Atlanta is high while the supply of housing affordable housing is low. The opposite is true for Homerville: supply of employable residents is low and supply of developable land for affordable housing is high. With regards to sensible status seeking as outlined by Hester in the case of Clinch County, the deeply rooted concepts of progress and desire for community improvement are not misplaced. The entirety of Clinch County has observed a negative two percent change in population and a negative five percent change in migration between 2010 and 2019 (United States Census Bureau). Homerville needs an augmented workforce to ensure that the doors of the industrial parks and Clinch Memorial stay open. The goal is that Homervillage will allow residents to achieve sensible status seeking, which is intrinsically connected to esteem, and that eventually Homervillage will become an inextricable facet of Homerville as a community.

Thoughtful and intentional design of Homervillage according to Hester's enabling forms for an ecologically democratic site not only allow residents to live somewhere beautiful and social, but also encourage residents to make meaning and identity. While Homerville is located firmly in the Bible Belt, the design of Homervillage nudges residents to make meaning and find sacredness within nature. The purpose of Homervillage is not only to fulfill their physiological

needs of shelter and food but also to create a place in which residents can develop feelings of love and belonging.

CHAPTER 3

HOMELESSNESS SOLUTIONS AND CASE STUDIES

Chapter 3 first illustrates how homelessness is addressed through policy and theory, and then presents case studies as they relate to the design of ecologically democratic spaces that meet human for people experiencing homelessness. While the scope of this thesis focuses on design solutions for people experiencing homelessness, a critical facet of that discourse is how landscape architects are limited in our capacity to ameliorate homelessness through design alone. In the interest of illustrating the necessary holistic approach to sustainably affect change in the homeless epidemic, Chapter 3 begins with an overview of policy constraints and ends with a review of current "housing first" tiny house models as they relate to Maslow and Hester.

The ideal means of ameliorating homelessness would include a long-term solution that ultimately places people in jobs and housing, but short-term solutions may also ease the plight of people experiencing homelessness in less sustainable but more immediate ways. Emergency shelters and soup kitchens are ubiquitous responses to homelessness across the country. While these responses may be helpful for a night, other less conventional short-term solutions have proven more helpful, especially for those experiencing chronic homelessness (Heben 2014). Decriminalization of homelessness, for example, is one step cities can take to make the lives of chronically homeless people easier.

The laws surrounding homelessness do not serve people experiencing homelessness—they largely serve to make it appear that it is not an issue, which further exacerbates the issue of

public perception of homelessness. Laws surrounding homelessness are also a drain on city funds that could otherwise be used to create more sustainable solutions (Yglesias 2014). One of the arguments against decriminalizing essential homeless behaviors is the aesthetic public perception of people sleeping out in the open or in tent encampments. One solution to the unsightliness of open sleeping is to provide people experiencing homelessness with sleeping pods that could protect them against the elements (See Figure 6). Montreal has implemented smaller individual shelters outside of the CARE Montreal shelter. CTV News describes these shelters as "small hangar-shaped containers protruding above a bank of snow" (Shields 2021).

Figure 6, Sleeping Shelter (CARE Montreal), CTV News

These shelters feature small holes for ventilation and foil on the inside for insulation which allows an individual to stay fifteen degrees Celsius warmer and a pair to stay twenty degrees Celsius warmer than outside of the shelter. These shelters are small and only meant for sleeping and staying warm, which is particularly important in cities that experience significant amounts of

snow. They cost $400 Canadian dollars but cost more to ship them from the Czech republics, which is where they were conceived and manufactured. While these shelters are not a permanent solution, they provide more privacy and perceived autonomy than sleeping in the shelter. However, a sleeping quarter does not a home make. These shelters fulfill Maslow's needs of shelter and safety but only for a limited amount of time. (Shields 2021).

A more sustainable means of easing the plight of the chronically homeless is to fully decriminalize homelessness by allowing the formation of tent cities. Andrew Heben explains in Tent City Urbanism that *"*while they are often portrayed as a disorganized state of emergency, I find that the self-organized tent city actually addresses many of the shortfalls of more traditional responses to poverty. For example, they often exemplify self-management, direct democracy, tolerance, mutual aid and resourceful strategies for living with less. Out of necessity, people have had to negotiate the sharing of space and resources, while unintentionally discovering the benefits of living in community" (Heben 2014). This response to homelessness demonstrates a natural evolution of an ecologically democratic community that fulfills human needs. Decriminalized tent cities demonstrate that laws against sleeping in public places and loitering isolate people experiencing homelessness by breaking up groups and preventing community development. When homelessness is decriminalized, self-sustaining and relatively contained communities emerge that can fulfill most if not all human needs. Tents provide shelter and the number of community members can provide feelings of safety. The way the community cares for each other can promote feelings of love and belonging and even self-actualization for helping their fellow man. Some tent city members may also develop esteem from being surrounded by people in similar circumstances.

Figure 7, Tent Encampment, Charlotte Observer

Figure 8, Tent Encampment, Q City Metro

Charlotte, North Carolina unofficially decriminalized a homeless camp recently because the COVID-19 pandemic caused many homeless shelters to close. Shelter closures forced many chronically homeless people to seek shelter in a tent encampment in Uptown Charlotte, much to the chagrin of neighboring property owners (See Figure 7). It was reported in November 2020 that "the city and the county have essentially declared that is an enforcement-free zone, and allowed — and encouraged, really — the homeless people to gather there" (Lindstrom 2021). While many Charlotte citizens praise this action as the decriminalization of homelessness, others criticize it as how the city "failed and refused to provide adequate resources for the area's homeless population," likening the situation to "no better shelter or resources ... than would a refugee camp in a war-torn nation" (Lindstrom 2021) (See Figure 8).

It was estimated that between one hundred and three hundred residents lived in this encampment until a notice was given for residents to clear out of the area within three days in February 2021 (Lindstrom 2021). The area was declared a hazard citing a rodent issue within the encampment (Lindstrom 2021). This is not an unusual complaint of tent encampments; Eugene,

Oregon enacted a citywide prohibition of camping citing a concern for public "health, safety, and welfare" (A Review of Transitional Housing Strategies in Eugene). However, the previously reported lawsuit against the City of Charlotte filed by neighboring property owners could have also pressured the city to disband the encampment (Lindstrom 2021). While this action by the city to decriminalize public encampments was prompted by the COVID-19 pandemic, it elucidated homelessness issues at large across the city. The critique of this encampment as a failure of the city to provide adequate resources was true before the pandemic. It was only after homeless people were forced out of shelters and out into the open that the magnitude of the issue became apparent to the public. Shelter closures also elucidated how homeless people are often forced to hide in plain sight because it is illegal to panhandle and sleep in public places, which are essential behaviors for chronically homeless people.

Despite the human needs that are fulfilled from tent cities, they are not a sustainable option because of the demonstrated backlash of property owners and the public. However, cities across the United States have made strides to create more permanent and aesthetically concerned efforts to house people experiencing homelessness. While some of these solutions can still be isolating, they are more permanent options that are more difficult for the public and NIMBY's alike to oppose.

Housing First Solution

The "housing first" model is defined by the New York Times as an "approach [in which] local officials place chronically homeless people into permanent shelter, apartments, halfway houses or rooms and then focus on treating addiction and mental and health problems" (Swarns 2008). This homelessness solution model brings stability to the chronically homeless population

as demonstrated by the thirty percent drop in homeless people living on the streets and shelters between 2005 and 2007, when this model was incepted and implemented (Swarns 2008). These statistics are supported by the HUD Annual Homeless Assessment Report to Congress. While the data provided by the HUD regarding this model is encouraging, many critics remark that data collection methods are flawed because they do not account for people in more "precarious living situations such as families living in campgrounds or individuals doubled up with friends or relatives" (Swarns 2008). However, the data collection method that supports the "housing first" model is not the only facet of this policy that is critiqued. Malcolm Gladwell explained that both sides of the political aisle find issue with this model because it has "little appeal to the right because they involve special treatment for people who do not deserve it and little appeal to the left because of the emphasis on efficiency over fairness" (Gladwell 2006). Regardless of political affiliations, Gladwell remarks that this approach may seem unfair to the Americans "who work two or three jobs to pay for their own apartment" (Gladwell 2006). This perception is not without merit and demonstrates how "homelessness" is not as neatly defined as the HUD suggests.

A 2017 RAND (Research and Development Corporation) analysis of Housing for Health in LA county demonstrated a twenty percent gain by putting people with complex mental health issues in supportive housing rather than relying on law enforcement and emergency room visits. Additionally, this method proves to be a more sustainable solution rather than acute fix (Yglesias 2014). However, LA county is not the only location in the United States that is experimenting with this homeless solution model. Research demonstrated in central Florida indicated that the state spends thirty-one thousand dollars keeping someone on the streets rather than giving them a home and a caseworker (Yglesias 2014). This price includes the salaries of law-enforcement officers to arrest and transport homeless individuals for largely nonviolent crimes, jail stays,

emergency room visits, and hospitalization for medical and psychiatric issues. In contrast, providing a chronically homeless person with permanent housing and case manager to supervise them would run about ten thousand dollars per person per year. This analysis was conducted by Creative House Solutions who calculated this average based on a sample size of 107 long term residents of Orange, Osceola, or Seminole County using actual hospital and jail records. The total expense did not include the amount of money spent by nonprofits that feed, clothe, and sometimes shelter individuals (Santich 2014).

The drain of homelessness on public services is worth mentioning from a financial standpoint, however, the focus of this thesis is how homelessness can be ameliorated compassionately through the built environment. Rather than further quantify the cost of homelessness and who is most deserving of need-based programs, this thesis instead suggests that we approach housing from a human needs perspective and makes suggestions for how to prevent inequity through ecologically democratic design. While it is relatively cheaper to give someone a house than to keep them on the streets, the "housing first" model is also successful in resolving the issues that caused homelessness in the first place. This is the solution model suggested in this thesis because it is congruent with Maslow's hierarchy of needs. Providing a house to someone experiencing homelessness would fulfill the first and second tier or physiological and safety needs. Creating a community of people within this housing model would provide an opportunity to fulfill the higher needs of belonging, esteem, and self-actualization similar to the natural community emergence found in tent cities. Designing the community with Hester's principles for ecological democracy prevents inequity and encourages a more effective community structure. Additionally, a more effective and equitable community structure further supports an individual's ability to fulfill higher order, less tangible human

needs. “Housing first” is a paradigm shift away from the self-perpetuating cycle in which people experiencing homelessness find themselves, to a self-sustaining system of positive community values with people whose needs are met. The case studies discussed in this thesis are assessed based on how they meet human needs, how they may enable individuals to fulfill higher order needs, and whether they are congruent with Hester’s ecologically democratic design principles.

Tiny House Solution

While there are many more permanent housing solutions that fall under the “housing first” model, this thesis analyzes tiny houses as a means of ameliorating homelessness. This style of housing was adopted as a homelessness solution both because of its affordable nature, low impact on space (See Figure 9), and the opportunity for homeowners to supplement their incomes with the money collected from renters. Tiny houses were previously intended for people who are not necessarily experiencing homelessness who would prefer to occupy less space and live a more minimalist lifestyle. The inception of the tiny house movement was because of the 2008 housing market crash. It has been lauded as a sustainable response to the ever-sprawling floor plans of yesteryear. As Krista Evans from Missouri State University, “There is no formal definition of tiny, but most advocates would assert they are roughly in the 400 ft^2 range, although much larger units have been included in the definition” (Evans 2020). Evans also demonstrates that tiny house communities are both popular and relatively successful in the United States to the point that her team catalogued 115 tiny house villages as of 2019.

Case Studies

The Accessory Dwelling Unit, or ADU, Pilot Program in Boston recently expanded to separate dwelling units called the “Plugin House Initiative” (City of Boston 2021). This next step in the ADU Pilot Program utilizes infill space and otherwise open, unused space, such as backyards, to build affordable tiny houses (City of Boston 2021). These houses are described as “a simple build-it-yourself tiny house” (Howard 2020). The city of Boston installed a plugin house in Government Center plaza as a demonstration of this prototype (Howard, 2020) (See Figure 10).

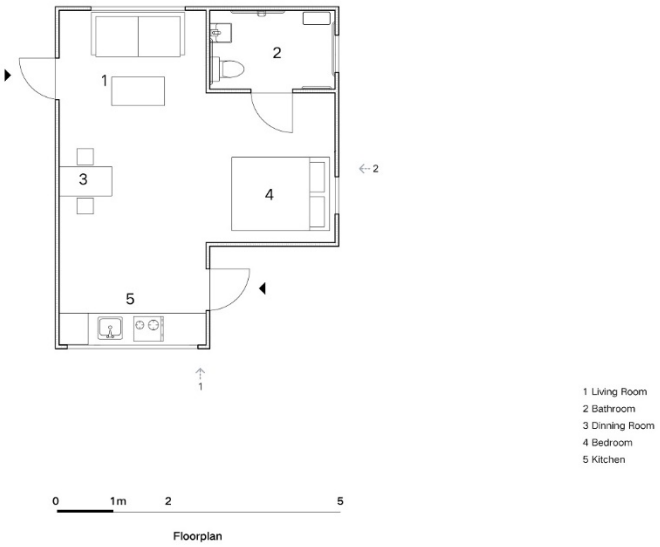


Figure 9, ADU Floor Plan, People's Architecture

Figure 10, Plug-in ADU House in Boston, Boston Magazine

Boston is not the only city that is encouraging accessory dwelling units as an affordable housing option, however. Los Angeles is not only encouraging people to build ADUs but is also loosening zoning laws so that homeowners may receive a ten-year forgivable loan to build a permanent housing solution on their property for someone experiencing homelessness who participates in the city's housing choice voucher program (Howard 2020). This model fulfills several of Maslow's need, but lacks the design process of an ecologically democratic community. Because these accessory dwelling units are built in backyards and infill spaces, these spaces can be considered to not only fulfill physiological needs, but also, because they are in "comfortable" neighborhoods, they provide a feeling of safety and possibly esteem. It may be less likely to provide a feeling of love and belonging because of the socio-economic differences between the resident and their environment. However, Hester would argue that more economically privileged areas often have access to more resources (as a demonstration of fairness) which could further add to the resident's esteem and perhaps allow an openness to love and belonging within their environment.

Figure 11, Los Angeles ADU, Business Insider, Tony Gutierrez/AP

Another model of a tiny house initiative exists in Seattle developed by different financial means and design vision. As of 2018, Seattle built ten tiny house villages on properties owned by churches, nonprofits, and the government (Howard 2020). The houses are eight by twelve feet and are funded by the nonprofit Low Income Housing Institute (See Figure 11). These houses are open to and fit individuals or families of four and some more specifically serve more high-risk homeless groups such as people of color, pregnant women, and families with children. Most importantly, residents are paired with a caseworker who tries to help them secure more permanent housing, IDs, employment, and overcome other impediments that they may be

experiencing because of being homeless. While this endeavor does alleviate some homelessness because it gets people off the streets while they wait for more permanent housing, Howard points out that about “one third of the people living in Seattle tiny house villages were able to find permanent housing. That leaves two thirds who weren’t” (Howard 2020). While Seattle and many more cities across the country invest in affordable housing development, these efforts often are thwarted by luxury development (See figure 12).

Figure 12, Tiny House Community in Seattle, ShetlerForce

While occupying a tiny house fulfills physiological and immediate safety needs, the lack of permanence and community associated with the case studies discussed thus far ignore other human needs that left unfulfilled could lead to another bout of homelessness. A more permanent housing solution that includes thoughtful community design is more congruent with Maslow’s needs and Hester’s ecological democracy.

Figure 13, Sand Point Village, Low Income Housing Institute

Another Seattle Low Income Housing Institute project takes a different perspective on the tiny house community that may fulfill Maslow's human needs through a more ecologically democratic design. The Sand Point Cottage Community is a recently conceived project made up of twenty-two to twenty-five studio and one-bedroom cottages for families and individuals employed at low wages (Low Income Housing Institute 2019). Rather than the conventional tiny house, which often resembles a shed or a small house on wheels, these houses include an outdoor porch area, kitchen, bathroom, sleeping areas, and lofts (See Figure 14).

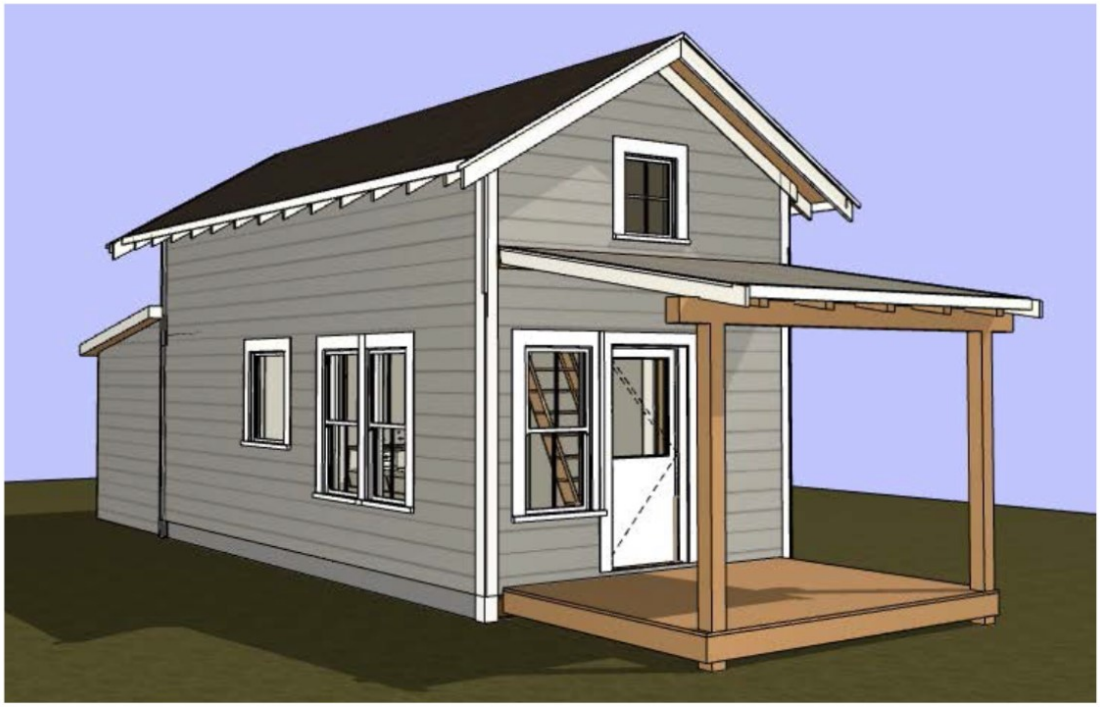


Figure 14. Sand Point Cottage Model, Low Income Housing Institute

The village community includes a "common building, community garden, outdoor recreation space and walking path" (Low Income Housing Institute, 2019) (See Figure 15). The property on which this community will be built is owned by the city and the individual houses will be built by students off-site and assembled on-site by a general contractor. The Sand Point Cottage appears to have the capacity to fulfill many of Maslow's Human Needs. Not only does the house provide physiological needs and feelings of safety, but it also mimics the same feelings of love and belonging simply by nature of being a village with the added value of utilizing nature as a healing tool and means of esteem (See Figure 13). Perceived beauty within one's living space provides positive feelings of esteem, safety, healing. Additionally, the inclusion of common spaces such as the garden and natural connections exemplify Hester's principles of centeredness and connection. The dignified construction of houses with foundations instead of wheels provides esteem to residents while also being a demonstration of sensible status seeking.

While this project provides opportunities for socialization and community through porches, pathways, and common spaces it provides fewer program items that encourage community than other projects.

Figure 15, Sand Point Village Plan, Low Income Housing Institute

The Community First! Village in Austin, Texas is thoughtfully and diversly designed with social programs that supplement Hester's design principles and further enable residents to fulfill their higher human needs. The first phase of the village is comprised of twenty-seven acres that is capable of housing two-hundred people in tiny houses and RV parking spaces (See figures 17 and 18). Not only does the village pass the litmus test for Hester's design principles for centeredness, connectivity, fairness, sensible status seeking, and sacredness through the master

plan design (See Figure 16), but it also fulfills Maslow's needs of love and belonging by engaging in an ecologically democratic design. Additionally, the Community First! Village enables residents to fulfill higher order needs of esteem and self-actualization with their Community Works program. The Community Works program encourages residents to engage in productive and fulfilling work such as culinary endeavors, car care, blacksmithing, art, screen printing, and gardening. Each of the associated buildings is easily accessibly throughout the property. The Community First! Village also includes several social nudges throughout the plan that encourage residents to interact and play. See Figure 19 for an outdoor chess board strategically placed amongst the tiny houses.

Figure 16, Community First! Village Plan, Mobile Loaves & Fishes

Figure 17, Community First! Village House example, Mobile Loaves & Fishes

Figure 18, Community First! Village RV Park, Mobile Loaves & Fishes

Figure 19, Community First! Village Social Areas (Chess Board), Mobile Loaves & Fishes

Veterans Community Project is a veterans specific homelessness project with multiple locations and different cities. Veterans Community Project, or VCP, utilizes tiny houses as their primary means of sheltering people experiencing homelessness. The tiny houses are specifically designed to limit trauma triggers while efficiently and comfortably housing homeless veterans with basic needs (See Figure 21). VCP is one of the only projects that directly addresses the planning and organization of the campuses. Josh Henges explains in his TED talk how the houses are nested for privacy and are organized according to personality types and family needs (See Figure 20). Henges explains that people who are more private and watchful are placed on the outside of the complex, while single mothers are placed more inwardly. Another factor that separates VCP from other homelessness planning projects is the addition of a campus meant for

families. This campus features larger houses to suit more people and would address multiple demographics who are experiencing homelessness together.

Figure 20, Veterans Community Project Campus Rendering (Nested Houses) VCP

While planning methods and campus design are undoubtedly used in homeless projects, VCP is the only one to share their methodology, which is particularly relevant for this thesis. Veterans Community Project is also one of the only projects to openly share a quantifiable metric for permanent housing readiness. Not only has VCP created multiple campuses in different cities to resolve homelessness on a broader scale, but they have also created a non-proprietary model from which other projects may learn. Their transparency and demonstrates each intentional detail so that others may build upon this information in a manner like the peer review process. While the effectiveness and ubiquity of tiny house villages as a housing first solution is widely demonstrated, the design or record of design for these villages is lacking.

Veterans Community Project is one of the few instances in which design process is openly shared. However, the design process with VCP ended with placement of houses on the campus.

Figure 21, Veterans Community Project Floor Plan Example) VCP

Chapter 3 demonstrates that while there are options available to people experiencing homelessness outside of emergency shelters and soup kitchens, not all meet human needs and Hester's ecological democracy principles in equal measures. Depending on the city, these options can range from sleeping pods, to decriminalized tent encampments, to ADU campaigns, to designed tiny house villages. Although decriminalizing common homeless behavior such as public sleeping and panhandling can do much to ease the plight of people experiencing homelessness, the "housing first" model is the most cost effective and sustainable means of ameliorating the homelessness epidemic by meeting their physiological and safety needs. Taking the "housing first" model a step forward into designing communities specifically for people experiencing homelessness fulfills not only physiological and safety needs, but as Table 3 demonstrates can fulfill love/belonging, esteem, and self-actualization if also designed as an ecological democracy.

Table 3 Case Studies that Exemplify Maslow and Hester's Principles

Project	Housing First Solution Type	Maslow's Needs Fulfilled	Hester's Design Principles Fulfilled
City of Boston and Los Angeles Plugin House	Accessory dwelling Units—backyards	• Physiological • Safety • Esteem	• Fairness • Sensible Status Seeking
City of Seattle Tiny House villages	Tiny House	• Physiological • Safety • Love/belonging	• Connectedness • Fairness • Sensible Status Seeking
Sand Point Cottage Community	Tiny House	• Physiological • Safety • Love/belonging • Esteem	• Centeredness • Connectedness • Fairness • Sensible Status Seeking
Community First! Village	Tiny House	• Physiological • Safety • Love/belonging • Esteem • Self-actualization	• Centeredness • Connectedness • Fairness • Sensible Status Seeking • Sacredness
Veterans Community Project	Tiny House	• Physiological • Safety • Love/belonging • Esteem	• Centeredness • Connectedness • Fairness • Sensible Status Seeking

CHAPTER 4

NATURE AS HEALING

Chapter 4 provides an overview of some of the current literature on nature as a means of healing. Nature as a means of healing is a cornerstone for many varieties of rehabilitation but is also considered a net positive attribute for communities. Nature is often used as an aesthetic and healing resource in stably housed communities but is rarely considered in design programs for people experiencing homelessness, as the case studies in Chapter 3 demonstrate. Chapter 4 explores how nature can not only heal the mind and body, but also provide an ecologically democratic environment in which residents may develop feelings of esteem and self-actualization.

The associated traumas with homelessness can have a significant psychological and physiological toll on the human mind and body, respectively. Homelessness is not only a lack of adequate ecological democracy writ large across our society, but also the pinnacle demonstration of unmet human needs according to Maslow's hierarchy. While landscape architects have little authority in the foundational first two tiers of Maslow's hierarchy, we may design ecologically democratic spaces that can have significant influence over Maslow's tiers of belonging, esteem, and self-actualization. As Hester's *Design for Ecological Democracy* elucidates, we are not only capable of designing spaces that connect communities and neighbors, but it is our responsibility as designers to ensure equitable and comforting spaces exist for communities.

When we consider nature as the most powerful tool in our arsenal to create equitable spaces that fulfill human needs, we must examine not only the sociological effect that these spaces may have but also the psychological influence that nature can have on the human mind. We often forget that the human brain is an organ because we cannot separate it from our consciousness. The brain as an organ can and is damaged when the needs of the body and mind are not met. If the foundational tiers of Maslow's hierarchy are not met, the brain will stay in a constant state of panic, otherwise known as fight or flight. The brain in fight or flight is bathed in cortisol, which is a helpful hormone for acute situations of danger, but ultimately harmful and toxic in large and constant amounts.

There is an idea in American society that only those who work a forty hour plus hour work week are allowed respite and healing. The United States created a quantifiable number of forty working hours at which a person deserves to rest and restore their mind and body over a century ago (New Republic 1919). Americans internalized and have remained obstinate in that forty-hour standard for generations, which has not only limited the average working American, but has also inadvertently caused judgement and misplaced value detraction on people experiencing homelessness. However, people experiencing homelessness, although often under more stress for their own survival than the average American employee, are the exact people who need mental and physiological restoration. The following research demonstrates that people who are subjected to directed attention fatigue, lack of sleep, and consistently exposed to the stress hormone, cortisol, are incapable of operating at their full capacity and are at risk of physical illness, mental fog, mental illness, among other issues associated with constant stress.

Cortisol "is a glucocorticoid hormone that is synthesized in the adrenal glands…the main stress hormone, is a marker of the body's adaptation to challenge" (Esposito and Bianchi 2012).

As the body's main stress hormone, it is essential for "an organism's survival as it plays a major role in maintenance of homeostasis; however, when in excess, it can lead to a host of deleterious effects such as increased risk for cardiovascular, metabolic, immune, cognitive, and emotional disorders. Additionally, "dysregulation of cortisol secretion in times of stress can have important implications for one's vulnerability to a host of illnesses" (Esposito and Bianchi 2012).

The discourse on nature's ability to restore mental fatigue, calm a stressed mind and body, and generally alleviate stress long term is extensive. While Kaplan and Ulrich do not necessarily agree on the semantics and means of restoration, they do agree that nature has a healing effect on the human psyche. Kaplan concentrates on the ability of nature to focus attention and recover directed attention fatigue. While Kaplan's research may not have been specifically oriented toward the homeless population, his findings are a specific reflection of people experiencing homelessness. Much like Hester's grievances with modernity, Kaplan also posits that "directed attention is an issue of the modern world and involves properties such as effort, focus, voluntary control, susceptibility to fatigue, and controls distraction through inhibition" (Kaplan 1995). He explains that prolonged mental effort leads to attention fatigue, which inhibits problem solving, deteriorates normal inhibitions and cause us to exhibit inappropriate behavior. Kaplan explains that without "patience and endurance necessary to carry out difficult or unpleasant tasks, behavior becomes more oriented to the short term" (Kaplan 1995).

Human beings cannot be effective and contributing members of society with directed attention fatigue. Kaplan's findings not only apply to society as a whole and the effects that prolonged concentration may have on the average American, but also are a direct reflection of the effects of homelessness. People whose foundational needs of shelter, warmth, water, and

safety are not met are forced to constantly consider how they will fulfill those needs and, therefore, are in a constant state of directed attention. Not only is the body of someone experiencing homelessness likely fatigued from lack of consistent nutrition and a place to sleep comfortably and safely, but the mind is also fatigued. Kaplan even specifically addresses the topic of sleep by explaining that it can help restore directed attention fatigue but is not completely effective. This specific finding is the reason why it is not a well-rounded enough solution to simply house a person experiencing homelessness. While the "housing first" model is the first and most effective step in ameliorating homelessness, the most sustainable solution includes elements of healing and rest for residents as well.

Kaplan specifies how to restore the mind from directed attention fatigue by explaining attention types dichotomously as voluntary and involuntary attention. He explains that directed attention fatigue is a result of overextension of voluntary attention, or any type of laborious concentration. Voluntary attention can extend to any activity that requires a great deal of mental bandwidth. Involuntary attention, in contrast, "requires no effort, is resistant to fatigue, and a central component of a restorative experience…[it] can derive from processes such as reading a book or content such as walking through nature, which provides the added benefit of reflection" (Kaplan 1995). Kaplan explains that while sleep and involuntary attention may contribute to mental restoration, other steps may be taken for a more well-rounded restorative experience.

Kaplan also explains that "being away" is another component of the restorative experience, however, he caveats this component by explaining that the environment must fit specific criteria to be restorative. Urban environments, for instance, may be away from one's normal life and routine, but are not particularly restorative. Kaplan explains that humans have a primitive connection to nature that is often a compatible environment with one's purposes and

inclinations toward a restorative environment. He claims that we reclaim our primitive roles as predator, locomotion, wild domestication, observation of other animals, and survival skills in a more natural environment. Kaplan furthers this point by explaining that our "compatibility with environment is based on cognition, which is too slow to play a role in restoration," which contrasts how others consider perception to be a cognitive process as rapid (Kaplan 1995).

Hartig 1991 provides findings of several studies but also provides a comparison between Kaplan and Ulrich analyses on mental restoration. Specifically, Hartig demonstrates how nature experiences can have short term mood influence and how wilderness backpacking can result in long-term perspective changes and restoration of mental fatigue. Wilderness backpacking in this context implies multi day excursions into the wilderness with only materials available in a backpack. The first study demonstrated how wilderness experiences can restore mental fatigue and increase mood long term for those who are experienced hikers and campers when compared to a control group who took vacation elsewhere. This study precluded the opinions and perceptions of inexperienced hikers after a wilderness experience, which seems to skew results. People with experience in the wilderness already have more of a propensity to be out in nature in an enjoyable way. However, Hartig's second study demonstrates how a walk in the park can positively affect mood as well. The study included university students and experimented with them taking a walk in a park, urban environment, and relaxing in a chair after experiencing cognitive fatigue. The results were self reported and demonstrated that general affect showed improvement with nature walkers relative to the other two groups. Additionally, students who took the nature walk demonstrated a greater mental recovery (Hartig 1991).

Zeng et al. explore not only the effect that a bamboo monoculture can have on psychological self-reports but also explored the physiological effects that this type of forest

therapy can have. Zeng begins the article by explaining how urban environments are psychologically and physiologically degrading. (Zeng et al. 2020). The specific study that Zeng et al conducted used university students as the experimental group. While many studies on the restorative properties of nature are conducted on university students rather than the homeless population, many of the same stress hormones are released in both populations. It is of note that most university students experience acute stress because of short term factors such as tests and papers contrasting the consistent stream of stress associated with survival and unmet human needs that people experiencing homelessness often face. While the two populations are not necessarily mutually exclusive, attending a university is a sign of privilege in many countries, including the United States, that would preclude many people experiencing homelessness. With that said, the stresses of university students and people experiencing homelessness are different, but the stress reaction and mental fatigue is similar psychologically and physiologically with regards to cognitive fatigue.

Zeng's study concentrates on the effects of monoculture forest therapy, specifically in a bamboo forest. The study consists of three-day therapy sessions including fifteen minutes of viewing in the morning the forest and fifteen minutes of walking in the afternoon. The itinerary for the three days was rigorous to ensure the efficacy of the study and its results. Zeng et al found that not only do monoculture forests have a therapeutic effect but that tree density also influences therapeutic intensity. Environmental factors such as absolute illumination, temperature, and noise must be adjusted for maximum human relaxation. Zeng et al found that forest therapy decreased heart rate and blood pressure relative to the group who were only exposed to urban environments. This finding is congruent with Kaplan's assertions of "getting away" especially

applicable to urbanites and reinforces the physiologically benefits of Hartig's findings that short term "wilderness" experiences may be found in parks and monoculture forests.

While there is no lack of scientific evidence that nature is healing, especially in recent years, anecdotal musings about humanity's connection to nature extends back even further in history. Long before any of the scientific experiments afforded by modernity were conducted "a thriving industry of privately funded sanitariums and health resorts, all set deep within natural settings, took flight" (Selhub and Logan 2013, 12). Selhub and Logan explain that "in the 1980s, Harvard biologist Edward O. Wilson proposed that biophilia is an 'innately emotional affiliation of human beings to other living organisms" (Selhub and Logan 2013, 8). Wilson "saw biophilia as a common thread spanning across cultures, a phenomenon that has been confirmed to some degree by various groups of scientists who have determined that the preference for certain aspects of nature is culturally universal—landscapes that provide trees (but not too densely packed), views that afford a vista or some degree of predator surveillance, the presence of fresh water, and a rich variety of plants and animals" (Selhub and Logan 2013, 8). Shinrin-Yoku, known in English as "forest bathing," was one of the first scientifically supported examples of how nature can heal the human body and mind. The practice of forest bathing "lowers levels of the stress hormone cortisol in subjects after forest walks compared to those who took laboratory walks" (Selhub and Logan 2013, 19). Additionally, "the natural chemicals secreted by evergreen trees, collectively known as phytoncide, have also been associated with improvements in the activity of our front-line immune defenders" (Selhub and Logan 2013, 21).

Not only is nature an effective means of preventative medicine, but it has also been demonstrated to heal infirmed bodies. While the science behind yesteryears sanitariums and resorts was not solidified, the same vistas and experiences have been demonstrated to shorten

“hospital stays and [patients reported] few postsurgical complaints. They also used less-potent analgesic medications (aspirin instead of narcotics)” (Selhub and Logan 2013, 23). This effect may be caused by pleasing views that relax the mind and allow the body to allocate more energy toward healing. However, a study in California used an fMRI machine that mapped the brain and demonstrated that “more desirable views (aesthetically pleasing nature views, coastal vistas) were firing up a specific portion of the brain, the anterior portions of the parahippocampal gyrus, rich in opioid receptors" (Selhub and Logan 2013, 28). Essentially, the brain released the same chemicals found in pill form which patients are prescribed for pain—the body was coping with pain with its own chemicals. Not only can the human body heal faster with a simple natural vista, but it also copes with pain more effectively. Hospitals could trade pain pills and resources used to house someone healing from surgery for a window with a view.

While many studies can be written off as anecdotal and placebo, there are many studies that map the brain and test other physiological effects of nature on the body and mind. Even though some may claim a placebo effect with even these studies, the hormones, brain mapping, and blood pressure are real and quantifiable. For instance, Selhub and Logan explain that activity in different parts of the brain, regardless of how that activity came to be, causes us to exhibit different behaviors. They explain that “overactivity of the amygdala has been linked to impulsivity and anxiety. Furthermore, chronic stress and the stress hormone cortisol itself may promote amygdala activity” (Selhub and Logan 2013, 30) whereas “greater activity in the anterior cingulate is associated with emotional stability and a positive mental outlook, while less than normal brain activity there has been linked to attention deficits" (Selhub and Logan 2013, 31). Selhub and Logan also support the effects of natural views in hospital stays by explaining that nature scenes activated areas of the brain governing addiction and reward (Selhub and Logan

2013, 30). Not only can natural views be used to help manage pain, but they can also be used to manage addiction.

One of the leading stigmas and excuses for not addressing the homelessness epidemic is the propensity for people experiencing homelessness to become substance abusers. While addiction may be one of the causes of someone's homelessness, substance cravings can not only be curbed with a natural environment but can also be restorative for the mind and body. Additionally, homelessness is rarely caused by one issue that an individual could not overcome. An undiagnosed or difficult to manage mental illness, learning disability, or cognitive divergence may also have contributed to someone's homelessness. A study at the University of Illinois in 2004 reported that "activities conducted in greenspace are associated with symptom reduction of attention deficit/hyperactivity disorder (ADHD) compared with the same activities conducted in built environments" (Selhub and Logan 2013, 71). While this study was conducted with children specifically, people experiencing homeless and children with disabilities are not mutually exclusive. Additionally, acquiring resources and proper education for a child with disabilities can be mentally taxing and require more mental energy in combination with resources for survival. This study demonstrated that nature can act as "cognitive enhancer" that matches the effectiveness of "two top-selling ADHD medications" (Selhub and Logan 2013, 72). Not only is nature a free medication that can heal the body, manage pain, and enhance the cognitive abilities of children but as Kaplan and many other authors explain, it is a means of restoring the mind. When one is only concentrated on the next steps for survival the brain becomes fatigued from all of the directed attention required to simply sustain life, let alone thrive. Selhub and Logan support this theory by explaining how mental fatigue is a self-perpetuating cycle as "the frustration and strain of mental fatigue primes an individual to react to anything and everything

perceived as negative—and when an individual is mentally fatigued, every environmental stimulus seems magnified in its negativity" (Selhub and Logan 2013, 73). Pulling oneself up by one's bootstraps becomes increasingly difficult as negative experiences, mental fatigue, illness, and other issues that people experiencing homelessness face compound.

Not only does impulsivity increase when one is faced with mental fatigue, but anger also increases with Selhub and Logan remark does not make for positive social interactions. The authors describe this phenomenon as "the tentacles of attention deficit are far-reaching and can ultimately compromise family, work, scholastic, and basically all social relationships. Given the importance of social connectivity in human health and well-being, the implications are enormous. Even the mere perception of social isolation is associated with diminished cognitive functioning" (Selhub and Logan 2013, 73). This proposition supports Maslow's hierarchy of needs and explains how someone experiencing homelessness cannot ascend to the third tier of love and belonging without the foundational tiers that are established with a stable home. Not only would a stable home allow people experiencing homelessness to fulfill the foundational human needs but placing that home in nature rather than an urban setting would decrease anger, impulsivity, stress, addiction, and increasing cognitive performance and focus using nature, many of the issues that keep people homeless may be resolved. Additionally, if people experiencing homelessness are transplanted from an urban environment to a more natural and rural environment, it would fulfill Kaplan's principles of restoring the mind by "getting away." It is often said platitudinously that one cannot heal in the same place that one was hurt, but peer reviewed science also supports this statement.

CHAPTER 5

ALEXANDER'S PRINCIPLES AND STABLY HOUSED COMMUNITY CASE STUDIES

Design like Stably House Communities

There is a design chasm between housing first solution models and planned communities. A lack of design concern for tiny house communities relative to communities designed for the stably housed stems from a societal construct of who is deserving of beauty and the lack of importance placed on nature as a healing tool. To bridge this design chasm, it is critical not only to examine case studies that provide sustainable solutions to homelessness, but also to consider community centric case studies that are developed for the stably housed. Communities built for people experiencing homelessness often exclusively address needs caused by homelessness without regard for the user's evolution into a stably housed lifestyle. Landscape and planning are often the first eliminated elements in a housing first solution development even though they are often the most healing and community-oriented facets. While houses in these developments are often colorful, landscapes in these areas are usually austere and indicate that the priority is to put a roof over the resident's head rather than provide beauty and community. Because beauty in a living space is a privilege reserved for those who can afford it, we must look to case studies of design and planning for the stably housed. Designing a community that addresses human needs that range the gamut of homelessness to stably housed ensures that users will grow with the community and be more adequately prepared for permanent housing.

A Pattern Language

This thesis analyzes various methods of ameliorating homelessness through the lens of Maslow's Hierarchy of Human Needs and Hester's Ecological Democracy. However, Maslow and Hester are rooted in largely theoretical research that depends on loose definitions and ambiguity to explain larger truths. Alexander's *A Pattern Language* not only provides the design lexicon that proves most congruent with Maslow and Hester, but he also explains how theories may be translated into program items. While Hester gives examples of program items and forms, these specific details are included to illustrate larger truths within his categories of an ecologically democratic community. In contrast, *A Pattern Language* explains design on multiple different scales with design directives that correspond at each scale. This thesis will concentrate on Alexander's descriptions of a small and rural scale that is most like the design site in Homerville, Georgia.

Homerville, Georgia suffers from a population hemorrhage that is not uncommon for many small towns across the United States. As Alexander explains "the big city is a magnet. It is terribly hard for small towns to stay alive and healthy in the face of central urban growth" (Alexander 1977, 34). The demand for housing and resources in large cities creates a chasm between living expenses and affordability that many Americans cannot afford. Small towns are a more affordable option so long as they exist. However, small towns are essential not only to alleviate the population struggles of large cities, but also for supporting industries that cannot survive for lack of space in large cities such agriculture and manufacturing. Alexander explains that we can "preserve country towns where they exist; and encourage the growth of new self-contained towns, with populations between 500 and 10,000 entirely surrounded by open countryside and at least 10 miles from neighboring towns" (Alexander 1977, 35). Alexander

goes on to explain, however, that small towns cannot be sustained by the allure of lower cost of living and or availability of industry. Communities must be thoughtfully curated, and we must "make it the region's collective concern to give each town the wherewithal it needs to build a base of local industry, so that these towns are not dormitories for people who work in other places, but real towns—able to sustain the whole of life" (Alexander 1977, 35). Industry and cheaper cost of living are simply a means to an end while stewardship, scale, organization, and community must be established to facilitate and sustain small-town principles and populations. People come for the jobs and stay for the community.

Alexander gives specific program items that facilitate and sustain small-town populations and principles. The first program item is concerned with public and communal space. Alexander explains residents feel responsibility for their community when we "define all farms as parks, where the public has the right to be; and make all regional parks into working farms. Create stewardship among groups of people, families and cooperatives, with each stewardship responsible for one part of the countryside" (Alexander 1977, 39). Cooperation and stewardship are more accessible community goals when communal space is readily available and local. Alexander illustrates multiple theories expressed by Maslow and Hester in this single program item. Stewardship elicits feelings not only of self-actualization by caring for a cause outside of oneself but also esteem for a job well done and possible love and belonging, especially if engaging in a community activity. The place making aspect of stewardship as a program item engages with Hester's principle of sacredness. The ritual of caring for a place that belongs to the community rather than one individual imbues feelings of community identity.

A benefit of living in a small town is that the local scale makes for shorter commutes to work and leisure. Alexander asserts how rural communities can facilitate work life balance by

explaining “there needs to be a redistribution of all workplaces throughout the areas where people live…What are the requirements for a distribution of work that can overcome these problems?

1. Every home is within 20-30 minutes of many hundreds of workplaces.
2. Many workplaces are within walking distance of children and families
3. Workers can go home casually for lunch, run errands, work half-time, and spend half the day at home.
4. Some workplaces are in homes; there are many opportunities for people to work from their homes or to take work home
5. Neighborhoods are protected from the traffic and noise generated by “noxious” workplaces” (Alexander 1977, 60).

Each small town in the United States is unique because the scale of these communities lends itself to a more democratic representation of individuals within the community rather than the muddled average of identities in a larger city. To ensure that democracy is honored, it is critical that each neighborhood is balanced with various age groups and that each age group’s interests and needs are met. Alexander explains how this idea contributes to a balanced community as “old people need old people, but they also need the young, and young people need contact with the old” (Alexander 1977, 216). Alexander’s recommendations on the organizational level specify to “make certain that the full cycle of life is represented and balanced in each community. Set the ideal of a balanced lifecycle as a principal guide for the evolution of communities. This means:

1. That each community include a balance of people at every stage of the life cycle, from infants to the very old; and include the full slate of settings needed for all these stages of life;
2. That the community contain the full slate of settings which best mark the ritual crossing of life from one stage to the next” (Alexander 1977, 145).

Diversifying communities with various age groups and needs forces individuals to consider different points of views and needs. This program item explains not only the importance of meeting human needs on various levels of physiology and safety at different ages but is also yet another example of how the human need of self-actualization may be engaged. An able-bodied

twenty-five-year-old may never consider the specific needs or sage wisdom of an eighty-five-year-old without the interaction that accompanies a diverse community. The working hours of a single mother may not be possible without the child-care of her elderly neighbor. Varying life stages within a community demands a greater analysis of needs but ultimately solves more problems than it causes with returns to the community.

Balanced neighborhoods within Small Town America could not exist without thoughtful community organization and boundaries. Rural community identity emerges not only when age groups are evenly distributed but also in expression of personality and individual identity of community members are balanced as well. The most public expression of personality and fulfillment of one's needs can be seen in how one houses oneself. Alexander's programmatic suggestion for how to meet these needs of self-expression and comfort by suggesting "make a clear distinction between three kinds of homes—those on quiet backwaters, those on busy streets, and those that are more or less in between…give each neighborhood about equal numbers of these three kinds of homes (Alexander 1977, 195). By evenly distributing age groups and personality types, small towns maintain a community identity that is often unevenly distributed and unbalanced on a larger scale in cities. However, these distinct and balanced neighborhoods cannot exist in small towns without distinguishing boundaries that contain the character of place. Alexander explains that "the strength of the boundary is essential to a neighborhood. If the boundary is too weak the neighborhood will not be able to maintain its own identifiable character" (Alexander 1977, 87). He elaborates on this idea with a specific design recommendation to "help people to define the neighborhoods they live in, not more than 300 yards across, with no more than 400 or 500 inhabitants…Keep major roads outside these neighborhoods" (Alexander 1977, 84). While boundaries and the built environment are essential

to protect the land, community, and culture of a small town, overuse of space for traffic and parking cannot occur. Alexander explains that there is an upper limit to parking and that "very simply—when the area devoted to parking is too great, it destroys the land. Very rough empirical observation led us to believe that it is not possible to make an environment fit for human use when more than 9 [percent] of it is given to parking" (Alexander 1977, 121). Boundaries, roads, and parking exemplify Hester's principle of connectedness when used parsimoniously and diligently. Boundaries create a friendly scale that connects neighbors instead of the daunting scale of one continuous town. The inner most space of a community can be filled with connection via pedestrian and bike networks when roads and parking are placed sparingly on the periphery of a community. Peripheral rather than central roads can fulfill Maslow's needs of safety by eliminating the fear of barreling cars down roads. Additionally, the connection that pedestrian and bike paths create can further foster feelings of love and belonging from incidental neighbor interactions.

Stewardship, scale, and organization combine to form communities in which people not only feel they belong but are also safe. Encouraging stewardship for public space fosters a sense of ownership and identity, which is more easily facilitated on a smaller scale when neighborhoods are organized according to an even distribution of age groups and personality types defined with clear boundaries. While these are essential aspects of building a community identity and culture in Small Town America, community members must also feel that they belong and are safe. Alexander's program solution for this concept is that "people will not feel comfortable in their homes unless a group of houses form a cluster, with the public land between them jointly owned by all the householders." (Alexander 1977, 198). Alexander elaborates on this program by suggesting designers "arrange houses to form very rough, but identifiable

clusters of 8 to 12 households around some common land and paths. Arrange the clusters so that anyone can walk through them, without feeling like a trespasser (Alexander 1977, 202). This program item illustrates not only a fulfillment of Maslow's needs of shelter/physiology and safety but also Hester's concept of centeredness. The presence of houses fulfills a need for warmth and shelter, but the organization of houses creates a feeling of safety because small clusters create a recognizable group of residents versus strangers. If everyone recognizes their neighbor, break-ins and other crimes are less likely to occur or be completed. This eye on the commons style of trust may also instill feelings of love and belonging for one's neighbor as well. Hester's centeredness theory is illustrated through Alexander's clustered common space. While it may not be a large communal space, a center that gives people a place to commune is essential for this scale.

While it is important to consider where people live for community organization, residences alone do not a community make. Hubs of activity must be equally distributed and accessible for all members to fully create a community and neighborhood identity. Alexander explains this concept as "each subculture needs a center for its public life: a place where you can go to see people, and to be seen (Alexander 1977, 169). Alexander's programmatic suggestion is to "create nodes of activity throughout the community, spread about 300 yards apart. First identify those existing spots in the community where action seems to concentrate itself. Then modify the layout of the paths in the community to bring as many of them through these spots as possible. This makes each spot function as a node in the path network. Then, at the center of each node, make a small public square, and surround it with a combination of community facilities and shops which are mutually supportive" (Alexander 1977, 167). Hester's idea of centeredness is illustrated through Alexander's node program item, this time on a larger scale

than his clustered houses suggestion. The larger suggestion of centeredness brings the community together more wholistically than common space shared amongst a few neighbors. A public square with associated services is also representative of Hester's principle of fairness and connectedness. Alexander suggests that each node of activity be surrounded with community facilities that are available to everyone. Additionally, Alexander also suggests that these community spots become nodes within the path network, which would further connect the community. These connections of community centers fulfill Maslow's human needs of love/belonging by creating communities where people gather and commune. Additionally, a thoughtfully designed path network with nodes of activity can instill feelings of esteem from pride of place.

Table 4, Alexander's Connection to Maslow and Hester

Program Item	Feelings Elicited	Maslow Connection	Hester Connection
Make farms public and create more park space	• Stewardship	• Self-actualization • Esteem • Love and belonging	• Sacredness
redistribution of all workplaces throughout the areas where people live	• Work life balance	• Love and belonging	• Fairness • Centeredness • Connection
Balanced age groups	• Wisdom from elders and able bodies from youth	• Self-actualization	• Fairness
Boundaries and roads that protect and encourage character of place	• Identity • Sociability through approachable scale	• Safety • Love/belonging	• Connection
House clusters with shared commons	• Eyes on commons • Safety	• physiology • Safety • Love/belonging	• Centeredness
Community hubs along a path network	• Sociability • Community orientation	• Love/belonging • Esteem	• Fairness • Connection

Pocket Neighborhood History

The term "pocket neighborhood" was termed by Ross Chapin when he and a developer collaborated to design a cluster of cottages that formed a community. Chapin remarked that the cottages were "tucked off of a busy street, like a pocket safely tucking away its possessions from the world outside" (Chapin 2011, 7). Chapin defines a pocket neighborhood as a "cohesive cluster of homes gathered around some kind of common ground within a larger surrounding neighborhood" (Chapin 2011, 8). A pocket neighborhood can take many forms including

"garden courts…a coherent city block, a series of suburban houses with joined backyards, a reclaimed alley, "cohousing," or an elder housing cluster woven into a larger neighborhood" (Chapin 2011, 8). The scale is critical to the sense of community because "pocket neighborhoods form at a scale where meaningful "neighborly" relationships are fostered—smaller than what we usually think of as a neighborhood, but larger than a couple of houses" (Chapin 2011, 8). Chapin explains that the exact limits of pocket neighborhoods as "when it comes to pocket neighborhoods, I believe the upper limit is in the range of 12 to 16 households. If a cluster has fewer than 4 households, it loses the sense of being a cluster or a group. It lacks the clear sense of identity, diversity, or activity of a larger group. On the other hand, when the number of households grows beyond a dozen or so, it becomes difficult for people to know their neighbors in any depth, or to live close enough to call on them in an emergency" (Chapin 2011, 9). Most critically for this research is Chapin's assertion that "pocket neighborhoods provide the basis for a sense of belonging and meaning—small-scale communities in a large-scale world" (Chapin 2011, 13). Regardless of the aesthetic details of pocket neighborhoods, the thoughtful and less glamorous facets of pocket neighborhood planning such as scale, common space, and social nudges are what directly impact an individual or family's ability to connect with neighbors and fulfill Maslow's needs of love and belonging. Chapin explains that the focus on individual house design on the level of "room, house, and backyard get a lot of attention, while the next-level scale of the street and block get little use" (Chapin 2011, 15). This scale of design is important to how the user feels in the space because when "this critical level of scale is weak or undefined, the vitality and resilience of a community are diminished" (Chapin 2011, 15). While there are a multitude of pocket neighborhood settings, the case studies presented in this thesis demonstrate how pocket neighborhoods can be used in a rural setting and are analyzed through the lens of

how congruent they are with Maslow's hierarchy of human needs and Hester's ecological democracy.

Design Takeaways: Pocket Neighborhoods

Village Homes

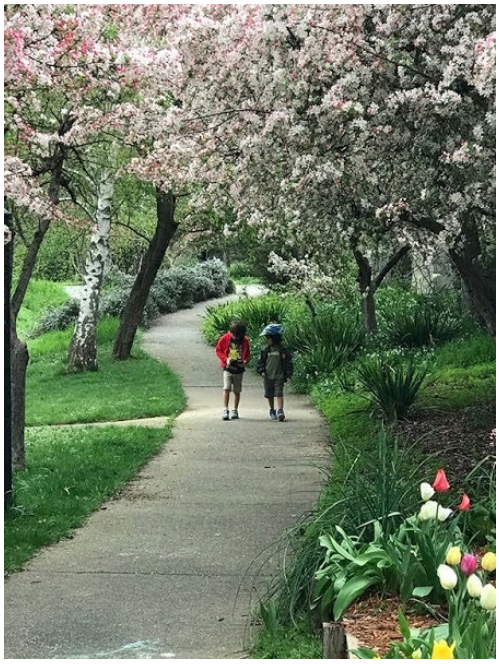


Figure 22, Village Homes Pedestrian Network, Village Homes Website

Village Homes in Davis California is a subdivision that boasts not only a community centric design but also one that is low impact. The community holds two hundred and twenty-five homes on seventy acres of land with a motto to "Live in Peace" (Village Homes Website) (See Figure 22). Village Homes explicit explains their design decisions on their website in a concise list. Street width in Village Homes is limited to twenty-five feet to minimize the amount of sun exposure and retention during hot days and the curves of the roads and cul-de-sacs naturally slows traffic. Pedestrian and bike paths alternate with the streets and connect common areas on the innermost sanctum of the community. The combination of the path network and the inward facing orientation of the houses results in a community focus subdivision with an emphasis on bike and walking traffic rather than the barrier of cars (See Figure 23). Additionally, an edible landscape and large amounts of common space provide a sense of community stewardship through shared resources and space.

Figure 23, Village Homes, Dingemans

The Methodist Camp at Oak Bluffs on Martha's Vineyard

The Methodist Camp is a pocket neighborhood that is used seasonally by Martha's Vineyard residents. It boasts its own kitschy architecture, Camp Gothic, and residents consistently report feelings of love and belonging that meet Maslow's needs not only through the design of the camp, but also through cohousing style activities featured in the summer months. Of the conclusions Chapin draws for the Methodist Camp at Oak Bluffs, the design facet that is most congruent with the lens of this thesis is an analysis of the porch. Chapin breaks down how the

porch can be a social nudge and useable space by explaining the importance of location, scale, placement, and edges. The porch is “a place of transition, so make it part of the primary entrance, connected to the front yard and in full view of the street or public walkway” (Chapin 2011, 24). The porch must also be large enough to suit specific social needs such as five feet for quick small talk and upwards of 6 feet for chairs and rockers. To facilitate lingering social interactions, the lane of passage into the house should not cut down the middle of the porch but instead be placed off to the side to not interrupt traffic flow. Additionally, the porch should be relatively open the public to allow easier interaction but should have short walls to indicate a social boundary.

Radburn, New Jersey

Radburn, New Jersey is an example of how the Garden City considered the automobile and its effect on neighborhoods. The Radburn plan is unique in Chapin’s *Pocket Neighborhoods* because of how it utilizes principles of pocket neighborhoods and social nudges at varying levels to create a sense of community even with an eventual population of 25,000. Chapin attributes the

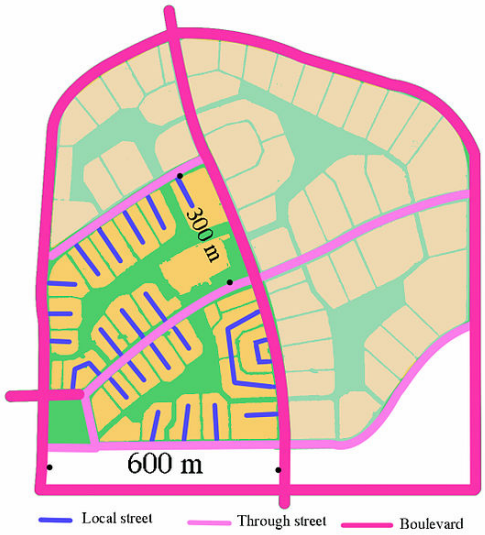


Figure 24, Radburn plan, Wikiwand.com

feelings of community to several scale-oriented factors including the hierarchy of roads, separating pedestrians and cars, and cul-de-sacs.

The Radburn plan (See Figure 24) includes “service lanes that provide direct access to the buildings, collector streets at the perimeter of the superblocks, through-roads linking neighborhoods and districts, and express highways and parkways for connection to outside communities” (Chapin 2011, 42). The separation of cars and pedestrians is not an uncommon pocket neighborhood design feature as can be seen in the Village Homes plan as well. The Radburn cul-de-sac, however, is not the same as the now ubiquitous suburban locked in lollipop design although it was a precursor. Radburn cul-de-sacs “have walkways connecting with other house clusters and the central green” (Chapin 2011, 42).

Third Street Cottages

Third Street Cottages are an example of how housing code was adjusted to accommodate households for one and two people. The code changed to “counter this tendency with an incentive that allows twice the number of homes than normally allowed in residential zones. The catch is that house size is limited to 700 sq. ft. total on the ground level and no more than 975 sq. ft. including a second floor” (Chapin 2011, 61). The critical conclusions for the Third Street Cottages as they pertain to this thesis are the scale, individuality, corralling the car, eyes on the commons, and nested houses. The houses in this project are smaller to fit the scale of double house density and are thus one and a half stories rather than two. Each cottage in this project is unique not only in color but in landscape as well. Chapin remarks that “this individuality fosters a personal bond of caring and identity between each homeowner and his or her home.” Additionally, each owner gets to name their house in a way that reflects their personality or

humor. Parking is intentionally placed away from the living and communal areas of the cottages so that residents can walk through the commons to their front doors and interact with their neighbors in the process. Like many other pocket neighborhoods, Third Street Cottages face the commons not only to encourage social interaction amongst neighbors but also as a security measure. However, to ensure privacy houses are "'nested' together: the 'open' side of one house faces the 'closed' side of the next" (Chapin 2011, 66). This design is also utilized in the Veteran's Community Project as a trauma deterrent so that residents feel safe and can fulfill their second lowest human need on Maslow's hierarchy (Chapin 2011, 66). Unlike other pocket neighborhoods, Third Street Cottage focuses on how to "live large in a small house" by utilizing specific magnifying design elements in a house with limiting square footage. Some of these design elements include ample light and storage, tall ceilings (nine feet or higher), and built-in furniture such as shelves and nooks. These elements would be especially helpful for tiny house homeless solutions because they go beyond the bare minimum of putting a roof over a resident's head. Giving people a dignified place to live can fulfill more than their bare minimum human needs.

Cohousing Background

Cohousing is a Danish solution to frustrations surrounding housing options for the modern lifestyle. The Danes considered the "isolation and impracticalities of single-family houses and apartment units, [and] they have built housing that combines the autonomy of private dwellings with the advantages of community living" (McCamant et al. 1994, 12). McCamant et al. define cohousing as "private residence [that] also shares extensive common facilities with the larger group, such as a kitchen and dining hall, children's playrooms, workshops, guest rooms, and laundry facilities" (McCamant et al. 1994, 12). McCamant et al. discovered in their

comprehensive cohousing analysis that there are six common characteristics of cohousing: participatory process, intentional neighborhood design, extensive common facilities, complete resident management, non-hierarchal structure, separate income sources. Cohousing is different from a commune in that they are not organized around strong ideological belief and are not usually a means of educational or spiritual center. Cohousing also espouses the same values of aforementioned communities with regards to fulfilling the lowest Maslow's lowest needs of love and belonging. McCamant explains that "a home is more than a roof over one's head…it can provide a sense of security and comfort…a woman who worries at work about when she will shop for groceries and get dinner on the table is often unable to concentrate on her job or relax with her children once she is home. This aspect of housing cannot be measured by cost, internal rates of return, or other traditional real estate assessment" (McCamant et al. 1994, 19).

Design Takeaway: Cohousing

Trudesland

The Trudesland Community is a cohousing community that boasts a common house fit for thirty-three families, a community plaza, and a sandbox. Shared resources such as common dinners allow families ample downtime after work and a formal social invitation to interact with neighbors. Two adults and one child oversee organizing, shopping, cooking, and cleaning for dinner each night. The common house not only houses the kitchen but also the two washers and one dryer that act as the laundry facilities for each family. The common house also features a workshop and other means of entertainment for residents to commune. The community has its own after school program for school aged children and the large "pedestrian-oriented site gives them lots of room to run without worrying about cars…children have many people besides their

parents to look after them, to whom they can turn for assistance, or just talk to" (McCamant et al. 1994, 27).

Table 5, Case Studies that Exemplify Alexander, Maslow, and Hester's Principles

Case Studies	Program Items	Alexander Program Item	Maslow Needs Filled	Hester Applications
Village Homes Davis, CA	• Emphasis on bike and pedestrian traffic • Path network • Inward facing house orientation	• *Boundaries and roads that protect and encourage character of place* • *House clusters with shared commons*	• Physiological • Safety • Love/belonging	• Centeredness • Connectedness
Methodist Camp Martha's Vineyard, MA	• Porch • Cohousing activities	• *Community hubs along a path network*	• Physiological • Safety • Love/belonging	• Sacredness • Connectedness • Centeredness
Radburn, NJ	• Road hierarchy • Pedestrian and car separation • Path network • Cul-de-sac	• *Boundaries and roads that protect and encourage character of place* • *House clusters with shared commons*	• Physiological • Safety • Love/belonging	• Connectedness • Fairness
Third Street Cottages Whidbey Island, WA	• Small scale • Individuality • Corralling the car • Eyes on the commons • Nested houses	• *Boundaries and roads that protect and encourage character of place*	• Physiological • Safety • Love/belonging • Esteem	• Connectedness • sensible status seeking
Trudesland Copenhagen, Denmark	• Shared resources • Common house	• *Community hubs along a path network* • *redistribution of workplaces*	• Physiological • Safety • Love/belonging	• Centeredness • Connectedness • Fairness

CHAPTER 6

HOMERVILLE BACKGROUND, INVENTORY, ANALYSIS, AND DESIGN

Homerville Background, Demographics, and Inventory

Homerville is a town in Clinch County, Georgia with a population of 5,221 as of the 2019 census (US Census Bureau). Homerville was founded by Dr. John Homer Mattox in 1853. Mattox donated land for the Atlantic & Gulf Railroad, which is why Homerville was originally named "Station No 11" for the railroad. It became the county seat by 1860. Homerville is home to two industrial parks with more than 250 acres (City of Homerville). There are no city zoning ordinances in Homerville, Georgia to date but the state of Georgia zoned Homerville as agricultural and Clinch County has mixed land use labels throughout the county and within Homerville (City of Homerville). There are 2,194 housing units in the area zoned residential (See Figure 26). According to the United States Department of Agriculture, Clinch County is in

hardiness zone 8b (USDA). Clinch County is relatively flat with a southeast grade decrease from 229’ to 98’in elevation at the southeast corner close to the Florida state line (See Figure 25).

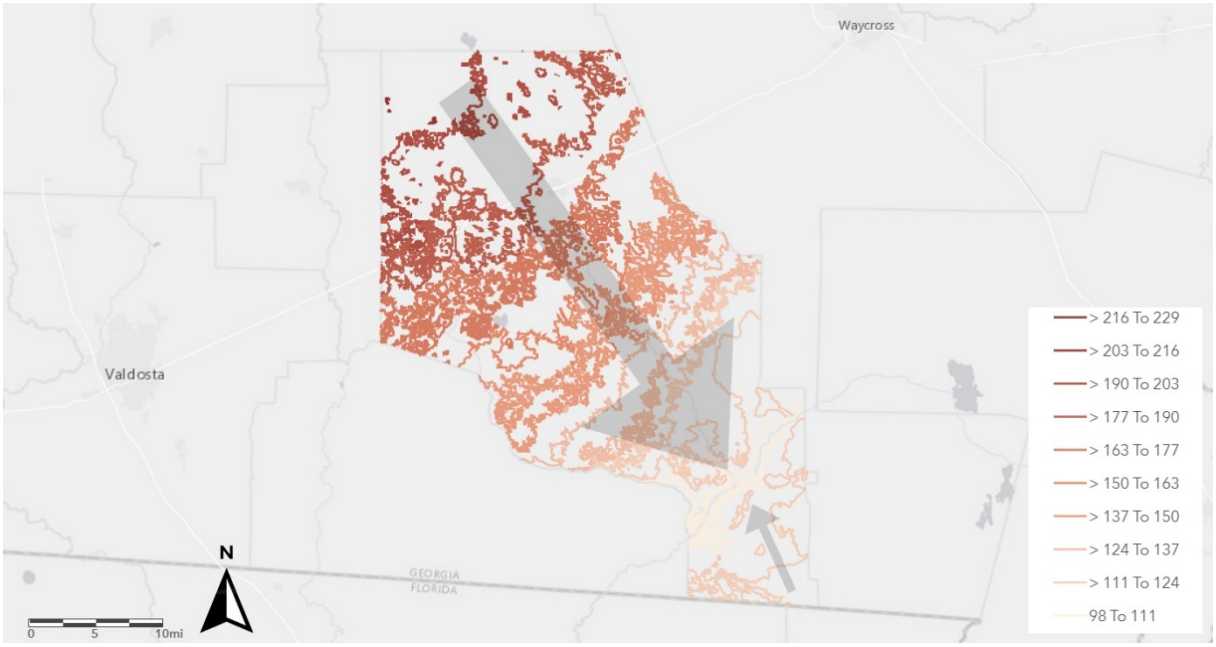


Figure 25, Clinch County Topography and Slope, data from City of Homerville, Illustration by Anna Marie Scoccimaro

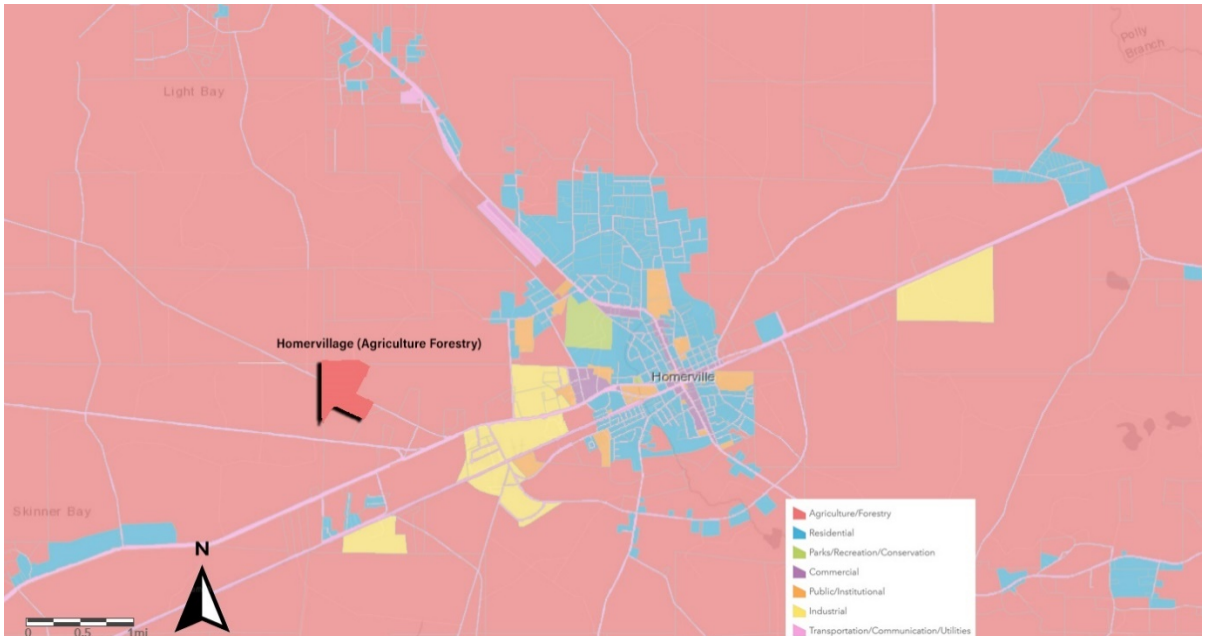


Figure 26, Homerville Land Use According to Clinch County, data from City of Homerville, Illustration by Anna Marie Scoccimaro

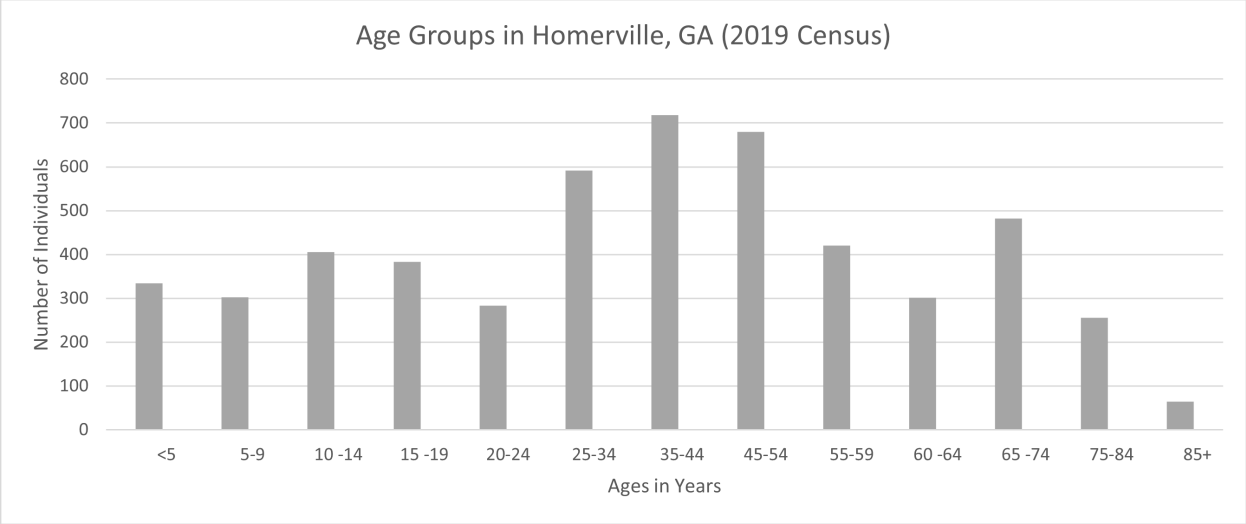


Figure 27, Age Hierarchy of Homerville, data from US Census Bureau, chart by Anna Marie Scoccimaro

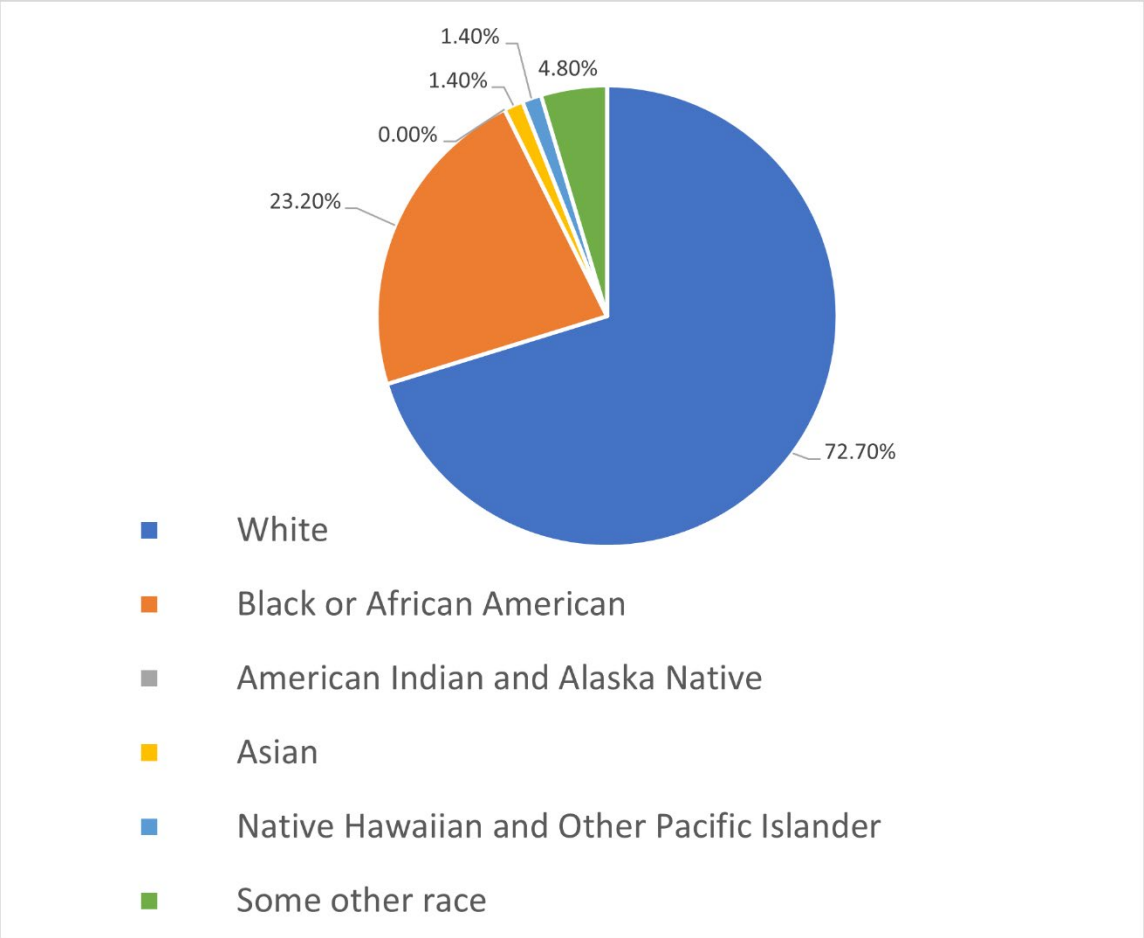


Figure 28, Homerville Race Demographics, data from US Census Bureau, chart by Anna Marie Scoccimaro

An overwhelming majority of the Homerville population is white at 72.7%. The second highest demographic are Black or African American at 23.2%. The three lowest represented demographics are Asian, Native Hawaiian or Other Pacific Islander, and "some other race." As of the 2019 census, no one identified themselves as single race Asian in Homerville (See Figure 28).

The age hierarchy in Homerville is not particularly irregular. Typical workforce aged individuals, ages 20-64, represent 57.3% of people (See Figure 27), yet Homerville experiences a workforce shortage. While most people in Homerville are of working age, the city experienced a 24.9% net decrease in population since 1990 (US Census Bureau). Homerville's population was only expected to decrease by about 8.7% in 2000 by the Georgia Department of Community Affairs. The significant and unexpectedly large decrease in population left a chasm in the workforce from which the city will not recover without an external population surge. However, there is no lack for employment in Homerville. The two primary stakeholders in the Homervillage project are Lee Container, a plastics industrial plant, and Clinch Memorial Hospital. Both stakeholders will operate as the primary means of employment to Homervillage residents. Not only will the proposed population shift from Atlanta and other metropolitan areas to Homerville ameliorate the burden of homelessness on major cities infrastructure, but it will also provide a critical workforce to Small Town America.

Site Inventory

Figure 29, Design Site (95.81 acres), Qpublic)

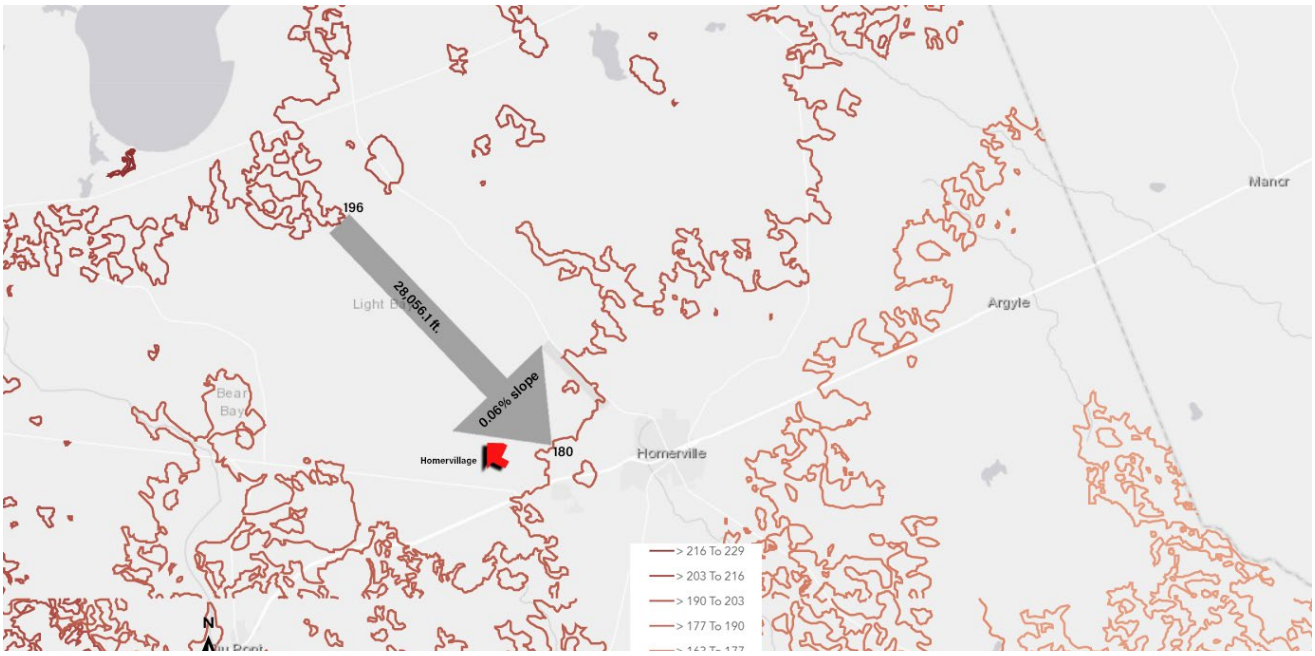


Figure 30, Slope of Area Around Site, data from City of Homerville, Illustration by Anna Marie Scoccimaro

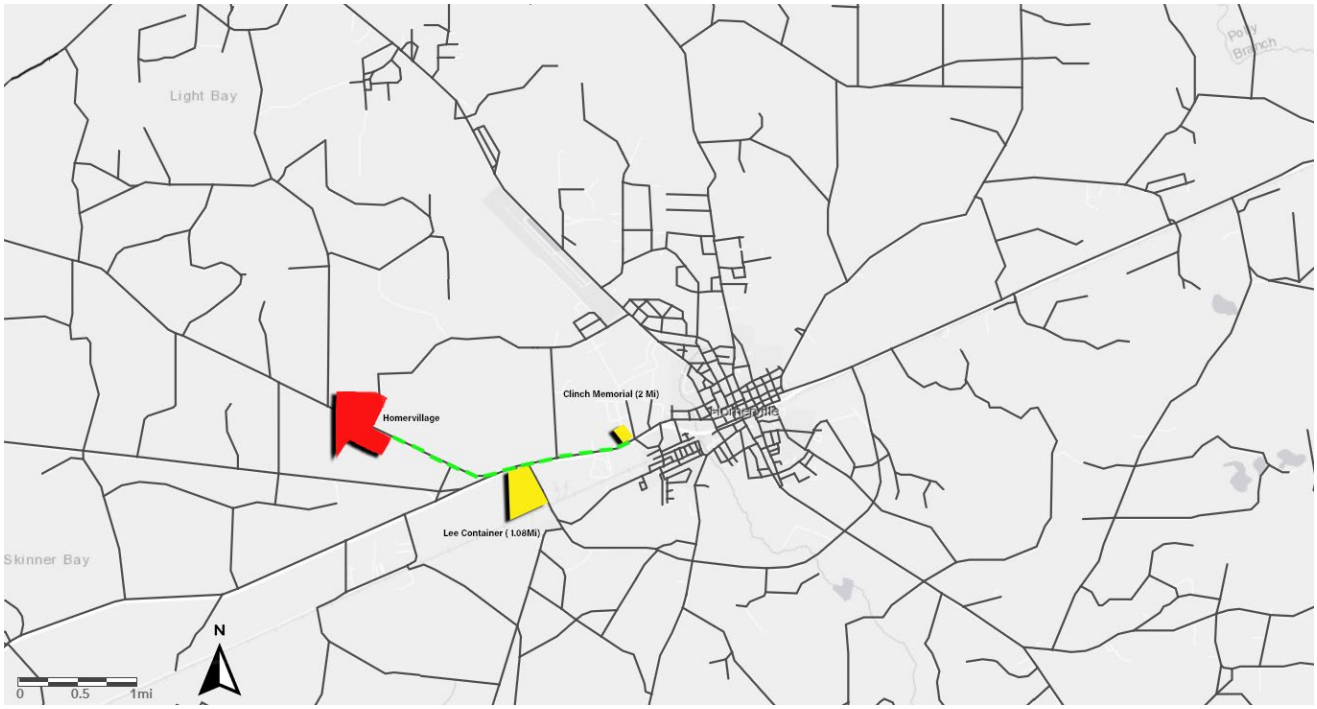


Figure 31, Employer Distance Relative to Homervillage, data from Google Earth, Illustration by Anna Marie Scoccimaro

Homervillage is set on 95.81 acres (See Figure 29) of land zoned "agricultural/forestry" by Clinch County but unzoned by the City of Homerville (See Figure 26). The site is relatively flat with an estimated 0.06% slope decrease toward the same southeast trend as the rest of the county (See Figure 30). The site is conveniently located within about a 2-mile radius of both employers, Lee Container and Clinch Memorial Hospital (See Figure 31). The "agricultural/forestry" site landscape lends itself well to Ulrich and Kaplan's propositions of nature as a healing tool. The site is already wooded and only requires central clearing for the construction of the village infrastructure and farm. Additionally, the proximity of the two places of work is congruent with Alexander's principles for work-life balance by way of closeness between work and home.

Homervillage Design Program

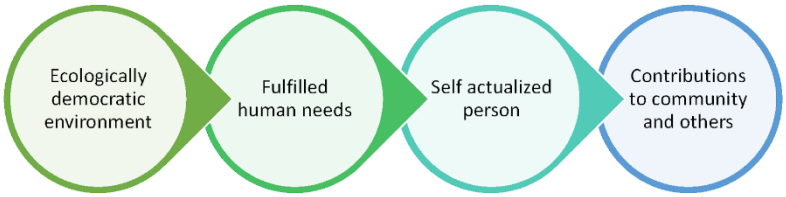
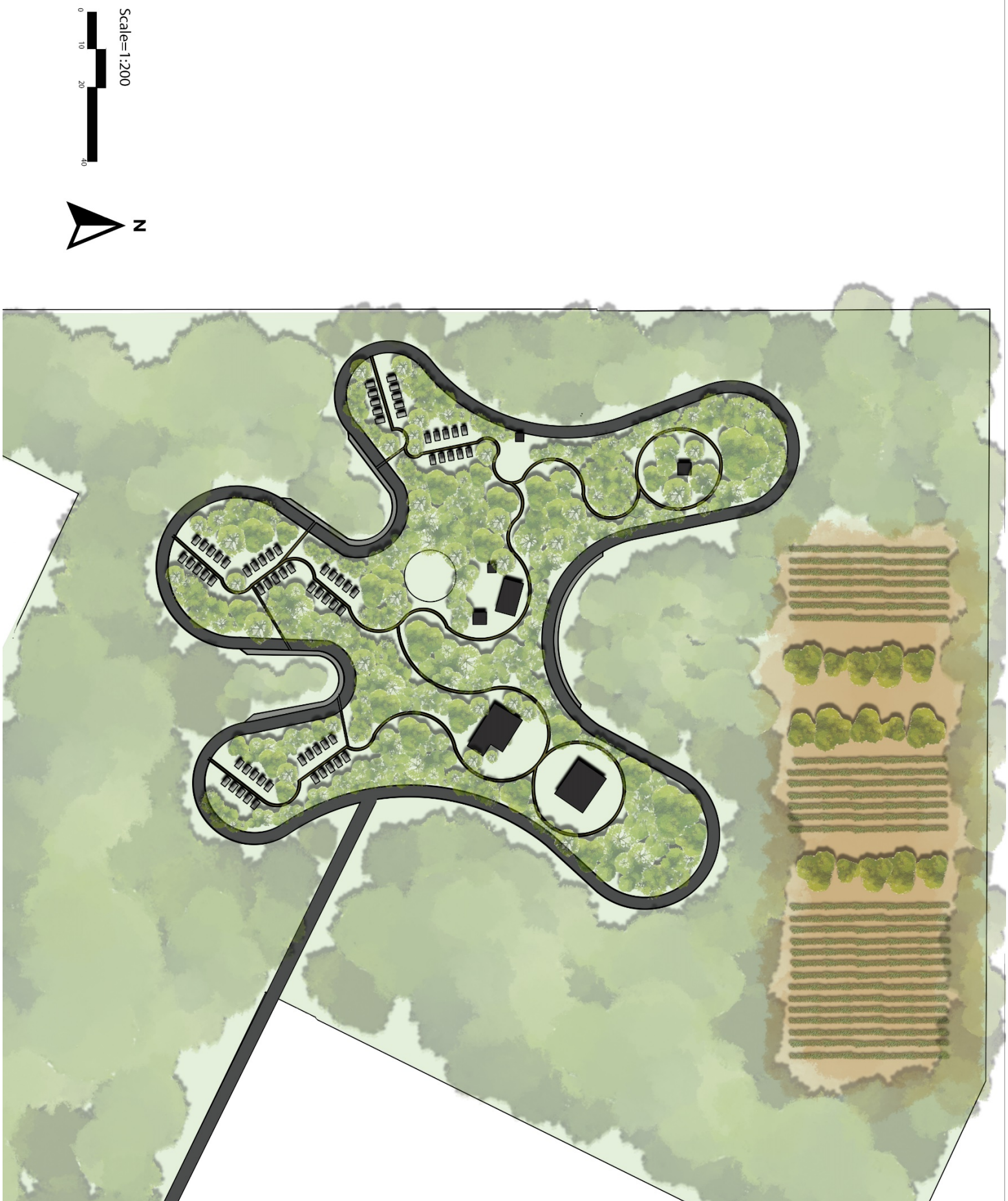


Fig 5, Serving Human Needs Through the Built Environment, Illustration by Anna Marie

The Homervillage plan (See Figure 31 and 32) combines elements of tiny house villages and stably housed case studies that more effectively fulfill Maslow's human needs in an ecologically democratic design. The language that congruently explains the following design elements through this lens of analysis is Alexander's *A Pattern Language*. This plan not only considers the needs of people experiencing homelessness, but also how nature and community design can heal and add to the user's quality of life. The primary stakeholder and CEO of Clinch Memorial Hospital, Angela Ammons, also added input into program items. Angela Ammons' specific program item requests are honored and represented in the plan after multiple conversations about her vision of Homervillage. These program items include (but are not limited to) the community center, administrative building, post office, French market barn, children's center, dog park, and the tool shed. Figure 5 reiterates how the lens of this thesis guides the design principles to produce productive and well people.

Exit to existing road
Sacred Wood
Residential Node
Residential Node
Residential Node
Central Activity Node
Perimenter road allows for ample pedestrian paths inside
Community Centers
Curving roads slow traffic and inset hamlets to organize activities
Entrance from existing road


Scale=1:200
0
10
20
40
N

Farm
Sacred Ruins
Tool Shed
Post Office
Administrative Building
French Market Barn
Street Parking
Children's Center
Community Center
Scale=1:100
0
5
10
20
N


Road
Street Parking
Tiny House Clusters
Bark Park
Pedestrian and bike nature paths
Street Parking
Scale=1:100
N

Table 6, Design Program Supported by Alexander, Case Studies, Maslow, and Hester, Case Studies, Maslow, and Hester

Homervillage Program Item	**Alexander's Program Item**	**Case Study Examples**	**Maslow Connection**	**Hester Connection**
Agricultural space shared by residents and edible landscape throughout plan	Make farms public and create more park space	• Any common space	• Self-actualization • Esteem • Love and belonging	• Sacredness
Workshop and workspaces in village and other means of employment within a mile of village	redistribution of all workplaces throughout the areas where people live	• Community First	• Love and belonging	• Fairness • Centeredness • Connection
Design for residents of varying age groups, personalities, and backgrounds	Balanced age groups	• Veteran's Community Project	• Self-actualization	• Fairness
Roads on periphery of village with pedestrian and bike networks on inside *Varying architecture and characters for different hamlets*	Boundaries and roads that protect and encourage character of place	• Radburn, NJ • Village Homes • Third Street Cottages	• Safety • Love/belonging	• Connection
Cluster and nest houses 8-12 within hamlets	House clusters with shared commons	• Methodist Camp	• physiology • Safety • Love/belonging	• Centeredness

Community centers are found centrally along paths	Community hubs along a path network	• Trudesland • Methodist Camp	• Love/belonging • Esteem	• Fairness • Connection
Sacred Woods for quiet reflection and forest therapy	Not included	• none	• Safety • Love/belonging • Self-actualization	• Sacredness

Agricultural space shared by residents and edible landscape throughout plan:

Homervillage will have a community farm for residents to plant, grow, eat, and/or sell food and edible landscape throughout the site (See Figure 32). The farm is not only a means of creating stewardship and community, as explained by Alexander, but also a healing tool. Growing one's own food creates empowerment from self-sufficiency and promotes a healthy lifestyle both from the food grown and exercise of gardening. The farm also encourages residents to commune through work with their neighbors who also contribute to the farm. Selling food grown on the farm to residents outside of the village in a Farmer's Market fashion could bring residents of Homervillage closer to established residents and create a larger circle of love and belonging within the town of Homerville.

Edible landscapes throughout Homervillage not only provide beauty but also add to residents' bodies of knowledge about edible plants. By surrounding residents with edible landscapes day to day, it will become easier for them to recognize plants outside of their community. Edible landscapes also foster a multifaceted appreciation for nature as beauty and nourishment.

Workshop and workspaces in village and other means of employment within two miles of village:

As Alexander explains, it is critical for a diverse and local means of employment to be readily available to residents to best balance work and life. Homervillage features workshops led by subject matter experts to hone skills and make goods for sale at a French Market within the village (See Figure 34). These workshops and classes may be cooking, welding, wood working, or other forms of artistry. Not only will creating goods for sale encourage creativity in artistic residents but will also create a sense of esteem for a marketable skill. Employment outside of the village is available within a mile. The property chosen for Homervillage is within a mile of Clinch Memorial and Lee Container, who are participating stakeholders in this project and have a demand for employment.

Design for residents of varying age groups, personalities, and backgrounds:

As explained by Alexander, diverse age groups within a community add more value than homogenous communities. Without taking an overly prescriptive approach, Homervillage features diverse age groups, personalities, and backgrounds by accepting residents from the Atlanta homeless population. This is a diverse user group according to the aforementioned data collected by Atlanta Continuum of Care PIT survey. The anticipated user group for Homervillage features elderly people, individuals, families, and veterans (See Figure 35).

Figure 35, Designing for Diversity and Sociability, Illustration by Anna Marie Scoccimaro

Roads on periphery of village with pedestrian and bike networks on inside:

As Village Homes, the Radburn plan, and Third Street Cottages demonstrate, a peripheral road system outside of an inner network of pedestrian and bike paths fosters a sense of safety and community. Additionally, it connects and centers communities, as Hester explains. Pedestrian and bike networks as a primary means of mobility allow not only for more exercise and incidental encounters with nature but also allow for increased sociability with neighbors. Increased sociability is also achieved through street parking with a short walk to each cluster between hamlets. Additionally, the winding, curvilinear form of the road is a natural means of slowing down traffic, which adds to feelings of safety (See Figure 32).

Varying architecture and characters for different hamlets:

To fulfill Maslow's human need of esteem, it is critical that residents feel that their home is an expression of themselves and suits their personality. Residents can change the color of their house and name it like the houses in the Third Street Cottage community. Houses in Homervillage may be tiny at 8x12' but do not lack character and do not feel that they lack for space on the inside. Homervillage houses have large bay windows on the front of the house to create the illusion of more indoor space. The front half of the house extends the total height of the one and a half floors to give an illusion of more space as well (See Figure 37). The thoughtful aesthetics of the house with a proper foundation (relative to some tiny houses on wheels) and porches also add to feelings of dignity and Hester's sensible status seeking (See Figure 36). Houses are nested in a manner like VCP and to create a feeling of safety and privacy, even in a smaller environment (See Figure 38).

Figure 36, Varied Character and Porches, Illustration by Anna Marie Scoccimaro

Figure 37, Tiny House Front Elevation, Illustration by Anna Marie Scoccimaro

Cluster houses 8-12 within hamlets:

Keeping a small scale through boundaries, clusters, and common areas is a program item that emerges in many case studies and theory (See Figure 37). The illusion of a smaller scale within a neighborhood allows residents to know their immediate neighbors more intimately without the daunting scale of an entire neighborhood, or in the case of Homervillage, hamlet. Knowing one's neighbors on a friendlier level fulfills the need for love and belonging. Additionally, an inward facing house orientation facilitates feelings of safety so that eyes are always on the commons. Knowing one's neighbors more intimately allows residents to discern between neighbor and stranger, which elicits feelings of safety. A view of a community centric and beautiful commons facilitates healing in a similar way to hospital patients with a natural view. This program item also fulfills Hester's directive for centeredness and sensible status seeking.

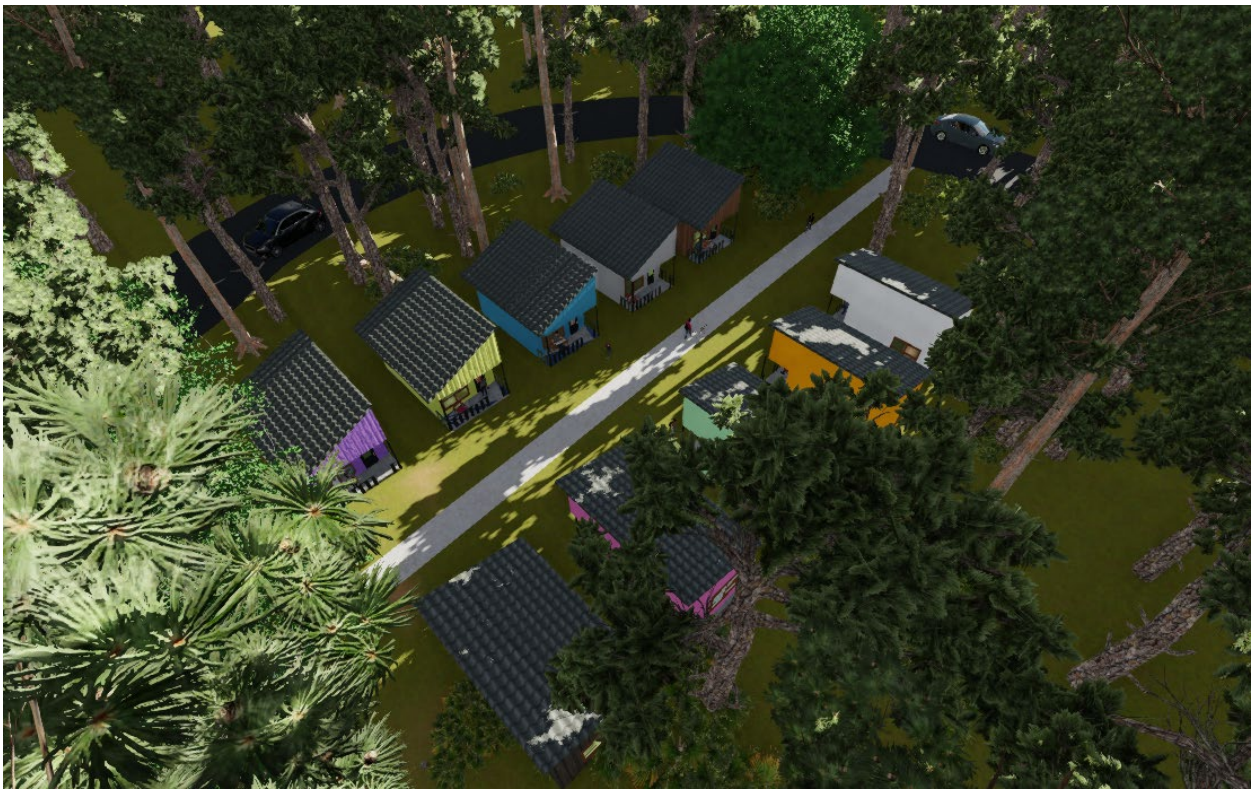


Figure 38, Tiny House Clusters, Illustration by Anna Marie Scoccimaro

Community centers are found centrally along paths:

Homervillage features a community center, a children's center, post office, farmer's market/French market barn, an administrative building, and a utility shed. These program items are within the inner pedestrian path network (See Figure 38) but could easily be reached by car on the peripheral road as well. The community center (See Figure 39) features an industrial kitchen for cohousing dinners, a great hall for dinners and presentations, laundry facilities, computers, and a classroom that can be closed for more intimate classes and lessons. Cohousing dinners follow the Trudesland model with a few adults and children in charge of planning, shopping, cooking, and cleaning up after dinner. Only worrying about cooking occasionally frees up mental bandwidth to enjoy the community and family time after work rather than to worry about chores, which further facilitates feelings of love and belonging. Outside of cohousing

dinners, the community center gathers people as they do laundry, use the computers, and participate in a variety of classes and presentations. A multi-use community building that gathers residents for a variety of reasons creates a high potentional of social interaction to not only fulfill Maslow's need for love and belonging but also Hester's principle of centeredness and connection.

Figure 39, Pedestrian and Bike Nature Network, Illustration by Anna Marie Scoccimaro

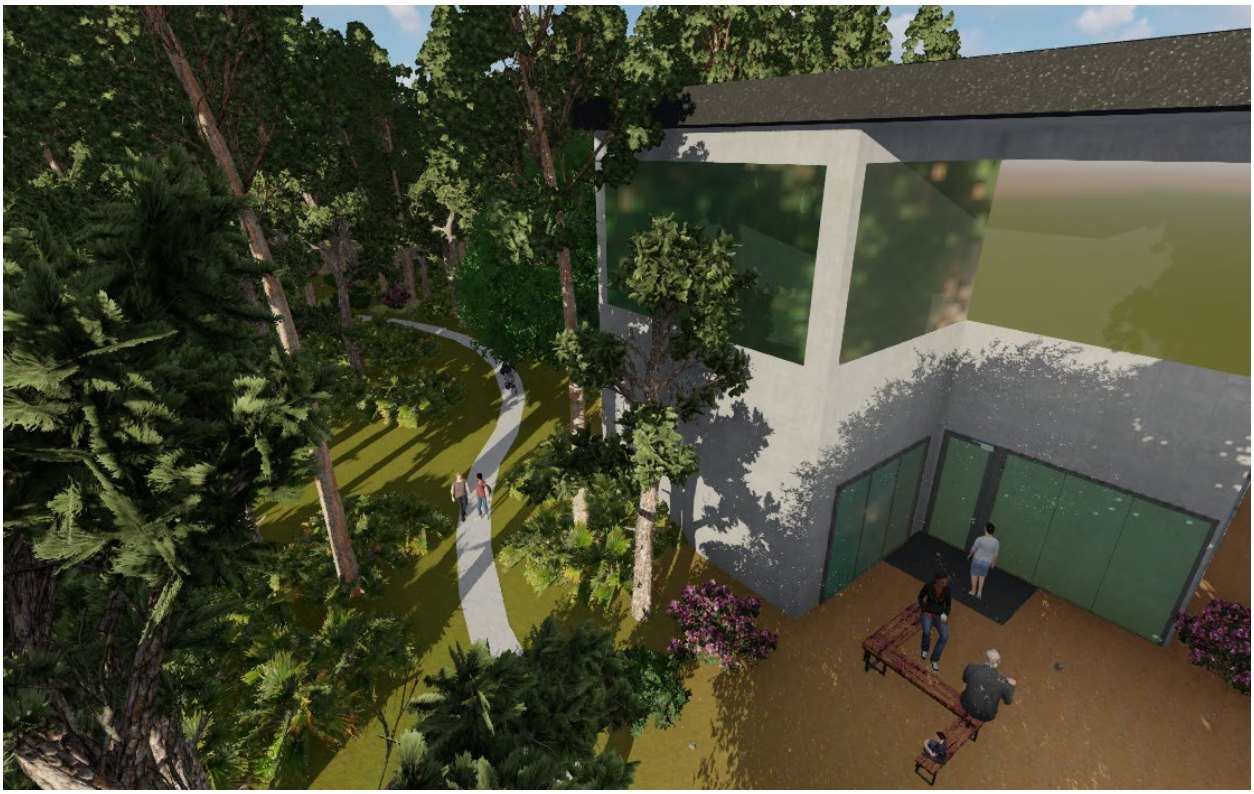


Figure 40, Community Center Along Pedestrian Network, Illustration by Anna Marie Scoccimaro

The children's center is an after-school facility that would give children a place for supervised play and receive tutoring and a quiet place to do their homework. The after-school program would have adult supervision from either other village residents or staff hired from outside of the village so that parents can continue to work. Homerville community members, especially high schoolers, may come to the after-school program and volunteer their time to help with homework and tutor Homervillage children. The children's center features a playground that encourages not only fine motor skills and imagination, but also gets children back in touch with nature (See Figure 33).

The post office and administrative office is yet another opportunity for socialization and node for activity. The administrative office, like the community center, serves multiple different purposes. It is a standalone building with an administrator to handle maintenance requests, answer questions, and generally be the "on-call" staff for the village. The administrative building also has offices for meeting with counselors and social workers, a room for the rotating security guards to sleep, and bathrooms. The standalone post office is located close to the administrative building but is a separate building to prevent too much day-to-day traffic in and out of the administrative building. The proximity of the buildings allows staff and residents to see each other from a distance almost daily, but the separation subtracts the obligation to socialize unless desired (See Figure 34).

The Farmer's Market Barn/French Market is a building that is specifically meant to draw in members of the community outside of Homervillage. Residents of Homervillage can experience love and belonging within the village, but a fuller experience of love and belonging includes acceptance and participation from the larger community of Homerville. The Farmer's Market allows residents to sell goods grown on the farm and the French Market allows residents

to showcase and sell their art or crafts. The barn is open air with an open hall and tables down the middle with separated stalls to showcase specific skills offered by residents such as hair styling and maintenance, metal and wood workings, and paintings. The Barn fulfills Hester's principles of centeredness and connectedness, which may foster feelings of love and belonging (See Figure 34).

The utility shed houses landscaping tools and can be accessed by all adult members of the community so that each may take a turn at maintaining the landscape of Homervillage in the same manner as cohousing dinners in the community center. Stewardship, as explained by Alexander, creates feelings of ownership, and fulfills Maslow's esteem need. Additionally, maintaining the landscape brings residents closer to nature so that they may reap the healing benefits of nature more effectively (See Figure 33).

The Homervillage Bark Park is a centrally located dog park for residents or members of the Homerville community to bring their dogs for socialization and open play space. Dogs must stay on leashes throughout Homervillage except for the fenced Bark Park to ensure the safety of all residents and community members.

Sacred Woods for quiet reflection and forest therapy

While the Homervillage site is heavily wooded throughout, one of the hamlets is specifically designated as a "sacred wood" for quiet reflection and to engage in forest therapy (see Figure 40). This program item is particularly congruent with Hester's principle of sacredness in an ecological democracy. This area is not religiously affiliated but is thickly wooded with an open air chapel and large rocks that encourage exploration, meditation, and reflection. Additionally, the extra time users take to explore the chapel and sit or meditate allows

Ulrich and Kaplan's theories on nature as healing to take root in the mind and body. The quiet, shade, and open air nature of the chapel lend themselves to the positive correlation between human wellness and nature while the culminating peace instills feelings of safety, love/belonging, and self-actualization according to Maslow.

Figure 41, Sacred Wood and Open-Air Chapel, Illustration by Anna Marie Scoccimaro

CHAPTER 7

CONCLUSION

Summary of Findings

This thesis demonstrates how homelessness is the pinnacle of unmet social and emotional wellbeing (SEWB) needs as it relates to the built environment (Sommet 2012). The "Housing First" model most effectively meets Maslow's Needs because the first solution to solve the issues that cause homelessness is to give the afflicted person a home (Ygelsias 2019). One of the major issues when a person is experiencing homelessness is not only the psychological toll that insecure housing and food cause, but also the physiological toll that being without shelter, food, and safety causes on the body and the brain.

While policy dictates how shelter and security may be provided to people experiencing homelessness, landscape architects can design spaces in which one may not only achieve love, belonging, esteem, and self-actualization, but also recover directed attention fatigue according to Kaplan and decrease stress in general according to Ulrich. Considering all these goals as a holistic solution for people experiencing homelessness could offer a space in which people experiencing homelessness can not only live and work but also thrive and heal. Randall Hester created a guide in "Design with Ecological Democracy" that best illustrates how we may design communities in which we may not only seek shelter but also develop Maslow's higher tiers.

The lens through which this thesis evaluates design effectiveness includes Maslow's hierarchy of needs in combination with Hester's ecological democracy precisely because the theories are congruent for designing equitable and community-based spaces. The design

principles that embody enabling forms include centeredness, connectedness, fairness, sensible status seeking, and sacredness. This thesis makes site specific suggestions for how Hester's enabling forms may be realized through the language and design recommendation of Alexander's A Pattern Language.

There is a design chasm between housing first solution models and planned communities. One explanation for a relative lack of design concern for tiny house communities relative to communities designed for the stably housed stems from a societal construct of who is deserving of beauty and the lack of importance of placed on nature as a healing tool. To bridge this design chasm, this thesis examines case studies that inform sustainable solutions to homelessness and community centric case studies that are developed for the stably housed. This thesis analyzes theories by Maslow and Hester, studies by Kaplan, Ulrich, and others, the needs and trauma of people experiencing chronic homelessness, homelessness design and policy solutions, and design case studies of the stably housed. The culmination of this analysis utilizes Alexander's lexicon and principles that make tangible the design elements featured in Homervillage. The design elements of Homervillage are organized in a categorical table to demonstrate why each element is necessary and to demonstrate how they may be applied in other projects (See Table 6). The table not only summarizes and organizes design elements of Homervillage, but also acts as a check list for replicable design elements for other communities. While the goals of Homervillage are specific to Homerville, the site, and the Atlanta homeless population, the methods through which the site is designed is meant to ameliorate homelessness through the built environment at large.

Future Work

While there is no lack of data and research on homelessness, public apathy outside of sheltering and feeding people experiencing homelessness perpetuates archaic and outmoded systems of dealing with homelessness instead of creating sustainable systems for more permanent change. It is difficult to garner funds for projects such as Homervillage or any permanent housing hand-out if the public feels that the "basic needs" of people experiencing homelessness are met with shelter and food provided by emergency shelters and soup kitchens. This perception of human needs does not acknowledge less tangible needs, such as love/belonging, esteem, and self-actualization as outlined by Maslow and is a symptom of a larger issue workaholic-ism in American culture. Negative public perception is also perpetuated by the criminalization of behaviors critical for the survival of people experiencing homelessness such as open sleeping, panhandling, and loitering. Because these behaviors are criminalized, people experiencing homelessness are more likely to be perceived as criminals generally by the public. Additionally, the criminalization of these behaviors forces people experiencing homelessness into the shadows and out of sight. It was only during the COVID-19 pandemic when shelters and soup kitchens closed, and the streets opened that the homeless epidemic became immediately apparently to many people. The criminalization and lack of visibility of homelessness forces a negative perception on people experiencing homelessness that could be rectified by decriminalizing homelessness and creating more awareness about the reasons people become homeless, the traumas associated with being homeless, and emphasizing the self-perpetuating cycle of chronic homelessness.

There is a plethora of data and research on nature as a healing tool, but there is a lack of research on using nature to heal the traumas associated with homelessness. This lack of research

is more than likely largely due to public perception of meeting people's "basic needs," and the idea of who is valuable and worthy of more than "basic needs." Ulrich, Kaplan, and others provide sufficient data on how nature may be used to heal the mind. There is also a catalog of tiny home villages that specifically address homelessness as demonstrated by Evans. However, using nature in the design of tiny home homeless villages with the intention to heal trauma is not documented. In fact, trauma recovery in the design of these villages is rarely mentioned in the literature except for the Veterans Community Project. The litmus test used in this thesis of meeting Maslow's Human Needs through designing ecologically democratic communities in a manner similar to stably housed communities defies public perception that beauty is solely relegated to those who can afford it. It is an underrated and underutilized means of healing trauma because it is perceived to be vapid décor for the wealthy. That is not to say that tiny house communities across the country do not prioritize healing. Many of these villages employ counselors and case workers to help people experiencing homelessness find ways to remain permanently housed. However, less conventionally accepted means of healing and aid, such as a thoughtfully designed and lush communities, are not considered as meaningful for the journey to permanent housing self-sufficiency.

One way in which this research may be expanded is to apply Table 6 in this thesis to different regions or to serve specific interest groups. While the plant material used in the Chapter 5 perspectives is specific to the Homerville, GA area, a more in-depth analysis of plant material as it relates to mental wellness could deepen the healing effects that Kaplan and Ulrich demonstrate. Additionally, comparing regional plant material based on qualitative analysis of mental wellness outcomes may also predict where in the United States this litmus test could be applied most successfully. While this thesis focuses on the Atlanta homeless population as the

primary Homervillage user group, applying the principles outlined in Table 6 to a more specific interest group, such as veterans or domestic abuse survivors, could also be an area of future research.

One limitation in the scope of this thesis that warrants further research is how people experiencing homelessness in Atlanta will adapt to life in rural South Georgia. The geography, climate, and resources in Homerville, Georgia differ significantly from Atlanta, Georgia, despite residing in the same state. Additionally, the degree to which people are comfortable in nature differs significantly, especially for people who are accustomed to living in a large city such as Atlanta. These concerns warrant further research and may require adjustments to the level of forestation and distance to amenities associated with larger cities in other projects.

An area of future research and work that is decidedly outside of the scope of this thesis is fundraising for Homervillage, resident applications, village policies and guidelines, and how it will be staffed. While these aspects of the project are critical for success, those decisions are unfortunately outside of the realm of expertise of landscape architecture, and thus not included in this thesis. Angela Ammons and other stakeholders have a clear vision for how they would like to see the village prosper and will ultimately make those decisions well after this portion of the project concludes.

The design of the Homervillage site is explained through theory and a series of condensed tables so that insights garnered by this site may be easily replicated in other areas of the country. Each program item is a reflection not only of Angela Ammons' vision of the site, but how design elements that address trauma associated with homelessness and human needs can be used in combination with an ecologically democratic design to create a healing and dignified

community. Hester explains that we cannot have productive and equitable communities without his principles of centeredness, connection, fairness, sensible status seeking, and sacredness. To design communities for people experiencing homelessness without these principles in mind may demonstrate that we place less value on their lives than people who are stably housed. While Maslow's Human Needs began as a hierarchy, Hale et. al explains a more evolved model that demonstrates that one need is not more important than the other and a previously higher order need may be fulfilled without the fulfillment of a lower order need. Hale's model demonstrates that there are no "basic needs" and we should not be satisfied with simply sheltering and feeding someone experiencing homelessness for the night when we can permanently and sustainably house them through healing and aid for a lifetime.

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