Structures Serving the Visibly Homeless: An Emergency Shelter Response in Charleston, South Carolina

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STRUCTURES SERVING THE VISIBLY HOMELESS
An Emergency Shelter Response in Charleston, South Carolina

This thesis is presented to the graduate School of Clemson University in partial fulfillment of the requirements for the professional degree, Masters of Architecture.

Ellen Cathey Martin
December 2009
ABSTRACT

This thesis is an architectural exploration into how to partially address the housing crisis affecting the visibly homeless population of Charleston, South Carolina. Thousands of men, women, and children in the United States are homeless in Charleston there is a significant and increasing number of visibly homeless. Those who sleep outside shelters are generally known as the “visibly homeless” or street homeless. The visibly homeless is the most underserved group within the entire homeless population and is composed of those who sleep in places not intended for human habitation, such as bus stations, subway trains, automobiles, doorways, and abandoned buildings. These individuals exist at the threshold of meeting their basic physiological needs such as warmth, food, clothing, security and shelter.

Shelter as a necessity rather than as a negotiated commodity is the reality of a homeless person. Shelter that strives to satisfy basic physiological, social, safety, and self-esteem needs and utilizes affordable construction strategies can best support the visibly homeless in Charleston. The issues and complexities of homelessness and
mental health will drive this thesis investigation. An architecture is proposed to meet
the basic needs of Charleston’s most exposed and critical population—the visibly
homeless.

This thesis first identifies homelessness as a housing emergency and examines the
causes and effects of homelessness. This visibly homeless population is very difficult
to obtain an accurate count or profile, but through informal personal interviews with
the test population, greater insight was gained about their living situation and
resultant mental stability. Secondly, this thesis examines the hierarchy of needs,
formulated by Abraham Maslow. This hierarchy identifies the needs that we as a
civilization must satisfy to survive and that require fulfillment to become the
individuals we are all capable of becoming. Research also examined Oscar
Newman’s defensible space principles, which attempt to deter crime through the
physical environment. Crime deterrence is essential when addressing the visibly
homeless—a population who is vulnerable and regularly victimized. Lastly, this
thesis explores the relief efforts offered for those who have suddenly become homeless due to natural causes and compares those to the efforts taken to those who are homeless due to a complex set of circumstances, some innate and some contracted. The design principles and strategies employed in the creation of relief housing for the victims of the Kosovo war were examined and adapted. Housing relief efforts should be responsive to homelessness with the same level of urgency and intensity as those measures taken with victims of natural disasters.

This research led to the formation of design principles that can appropriately accommodate the housing needs of the visibly homeless in Charleston. Structures serving the visibly homeless must respond to personal selection of site whenever applicable and appropriate. The siting of these structures and the dwelling units themselves must provide defensible space through territoriality and surveillance opportunities that support personal space. These structures must also allow for universal and flexible living which support personalization and varying levels of
privacy. Lastly, structures serving the homeless must utilize affordable construction methods, materials, and labor which respond to the limited financial resources available to the homeless and their supportive organizations. These design principles will aid in the creation of an architectural response.

The test site for this thesis has been self-designated by the local homeless population itself, as it is in close proximity to the existing homeless shelter. The residents of the site have chosen to, or have been forced, to live outside the existing shelter, but still require the services provided by the shelter including mental health counseling, food services, and medical attention. This urban campground is designed as a supplement and as an alternative to the traditional shelter model existing in Charleston. The strategy of this thesis is to create shelter that supports well-being and mental health through spaces that accommodate basic needs and create defensible space.
DEDICATION

To my family, for their love, support, and encouragement.

To Timmy, for his unconditional love, patience and support.
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CONTENTS

TITLE PAGE ......................................................................................................................... i

ABSTRACT ........................................................................................................................... ii

DEDICATION ........................................................................................................................... vi

ACKNOWLEDGEMENTS ....................................................................................................... vii

FIGURES ................................................................................................................................. x

INTRODUCTION ..................................................................................................................... 1

MENTAL HEALTH AND THE ENVIRONMENT ................................................................. 3
  The Impact of Setting on Health ...................................................................................... 9
  Overall Quality of the Housing Environment ................................................................. 12
  Basic Needs and Shelter ................................................................................................. 20
  Defensible Space ............................................................................................................. 28

A DYNAMIC POPULATION IN NEED OF SHELTER ......................................................... 35
  Definition of Homelessness .............................................................................................. 35
  A Housing Crisis ............................................................................................................ 37
  Nationally ......................................................................................................................... 45
  Locally ............................................................................................................................... 52

AN EMERGENCY HOUSING RESPONSE ........................................................................... 53
  Design Criteria for Relief Housing ............................................................................... 55
A DYNAMIC ARCHITECTURAL RESPONSE .......................................................... 60

Self-designated Site Selection .......................................................................... 62
Provide Defensible Space .................................................................................. 64
Create a Sense of Territoriality ....................................................................... 66
Reinforce Natural Surveillance Opportunities .................................................. 70
Provide Universal Living Environments ............................................................ 72
Utilize Affordable Construction Methods, Materials, and Labor .................... 75

CONTEXT AND SITE ........................................................................................ 77

Charleston, South Carolina ............................................................................... 77
The Woods ........................................................................................................ 86

PROGRAM ........................................................................................................ 94

Program Summary ............................................................................................ 94
Individual Dwelling Units ............................................................................... 96
Flexible Living Space ..................................................................................... 97
Communal Spaces ............................................................................................ 98

DESIGN PROPOSAL ......................................................................................... 101

CREDITS .......................................................................................................... 121
FIGURES

1. Maslow’s Hierarchy of Needs .................................................................1
2. Degrees of environment ...........................................................................3
3. Degrees of environment ...........................................................................4
4. Maslow’s Hierarchy of Needs .................................................................20
5. Meager conditions ...................................................................................23
6. Social support ..........................................................................................25
7. Empowerment ..........................................................................................26
8. Articulations in the building edge ............................................................26
9. Defensible space .......................................................................................30
10. Homeless family ......................................................................................49
11. Tri County area .......................................................................................53
12. Relief housing .........................................................................................58
13. Relief housing .........................................................................................58
14. Relief housing .........................................................................................59
FIGURES (Continued)

15. Relief housing ........................................................................................................59
16. Areas of homelessness ...........................................................................................62
17. Identification of pathways .....................................................................................63
18. Natural occurrences ...............................................................................................63
19. Proper orientation ..................................................................................................64
20. Proper orientation ..................................................................................................64
21. Proper orientation ..................................................................................................65
22. Vertical elements ...................................................................................................65
23. Strategic openings .................................................................................................66
24. Site intimacy gradient ............................................................................................66
25. Privacy gradient ......................................................................................................67
26. Privacy gradient ......................................................................................................68
27. Dome Village ..........................................................................................................69
28. Surveillance opportunities .....................................................................................70
29. Site photograph ......................................................................................................71
FIGURES (Continued)

45. Crisis Ministries .....................................................................................................81
46. Crisis Ministries locator map .................................................................................81
47. Site plan .................................................................................................................82
48. The Woods site ......................................................................................................86
49. Site photograph ......................................................................................................86
50. Land ownership ....................................................................................................87
51. Site photograph ......................................................................................................89
52. Existing conditions .................................................................................................90
53. Existing surveillance conditions ............................................................................91
54. Site photograph ......................................................................................................92
55. Site analysis ...........................................................................................................92
56. Site photograph ......................................................................................................93
57. Site photograph ......................................................................................................93
58. Individual sleeping bays ........................................................................................96
59. Individual sleeping bays ........................................................................................97
FIGURES (Continued)

75. Final board ...........................................................................................................114
76. Final model ..........................................................................................................115
77. Final model ..........................................................................................................116
78. Final model ..........................................................................................................117
79. Final model ..........................................................................................................118
80. Final model ..........................................................................................................119
81. Final model ..........................................................................................................119
82. Final model ...........................................................................................................
Most of us think of our home as a safe, secure anchor amidst the sea of change and disruptions of everyday life. Sadly, however, for all too many people throughout the world, housing is one more stressor amongst the plethora of daily demands that people must contend. Housing as a necessity rather than as a negotiated commodity is the reality of homeless populations (Evans, 3). For the homeless, the search and acquisition of shelter becomes a daily stressor. Shelter is not a selection of preference, but one of survival. Some homeless are forced to find refuge in spaces that are clearly unsuitable for habitation, such as abandoned buildings, vehicles, or alleyways. The quality of these spaces that commonly house the homeless is minimal. The poor living conditions commonly found in these settings directly effect the overall quality of life and mental stability of the homeless person.

Maslow’s hierarchy of needs is a conceptual model that helps illustrate that homeless persons are not satisfying their lowest level of needs. All humans have to satisfy a
conceptual ladder of physiological and social needs to become the fully functional individual that we are all capable of being. Without satisfying the very basic biological needs, the homeless person has no hope of rising above his or her current housing situation and becoming a valued, more productive citizen of a larger community. The environment directly affects one’s mental health, thus addressing an individual’s hierarchy of needs.

In Charleston, South Carolina, homeless persons are given two choices, either accept shelter space and make arrangements to get there, or go to jail. Individuals experiencing homelessness in any area of high tourism are quickly asked by the city’s police force to leave and get to a shelter, none of which are located in the areas of high tourist traffic and most certainly out of the tourist’s eye. Additionally, the beautification of several downtown parks in Charleston has left homeless people without a place to stay or rest.
MENTAL HEALTH AND THE ENVIRONMENT

Mental health is the balance between all aspects of life—social, physical, spiritual, and emotional. It impacts how we manage our surroundings and make choices in our lives. Reciprocally, our physical surroundings can negatively or positively impact our mental health and how we manage our lives. Clearly, it is an integral part of our overall health.

Mental health is far more than the absence of mental illness and has to do with many aspects of our daily lives including: how we feel about ourselves, how we feel about others, and how we are able to meet the demands of life. Our mental health can be diminished due to situational circumstances such as poverty or homelessness. Issues such as dignity, self-worth, confidence, self-esteem, self-respect, and pride are essential for us to achieve self-actualization and become a self-sustaining person.

Relating environment to mental health is not made easy by a lack of clarity both in the concept of mental health and in the concept of environment. Despite the fact that
people invest more financial, temporal, psychological resources in their homes, than in any other material entity, research on housing and mental health is remarkably undeveloped (Evans, 2).

Mental health can be defined as the extent to which a person’s thoughts and feelings are congruent with coping with their daily life (Davey, 1). Environment can be thought of as a set of rings around any individual which radiates from where they are, to include home environments, places of work and leisure, up to and beyond the whole planet. A useful distinction can be made between micro-environment—the influence of immediate surroundings like building and room design and macro-environment—our place as individuals and groups in the larger patterns and spaces of districts, cities, regions, and continents. For the homeless person, his or her environment is much more limited than that of a domiciled individual. He or she is essentially a detached individual living in someone else’s macro-environment.
Each of us live within both a social environment and a physical environment and the two interrelate, which are both very important when dealing with housing the homeless (Davey, 1). For most of us, the home is where we have contact with the most important members of our social networks (Evans, 3), but for the homeless, there is a void in the social environment.

For the sheltered homeless, their social environment may consist of fellow shelter users and the shelter’s staff. This particular type of social environment is episodic and is present by happenstance, due to the fact that most shelters operate periodically throughout the day. The individuals within the social network have not been chosen by the homeless individual, but more or less are forced upon them. Nevertheless, this social environment is available and strengthened by the existence of a built physical environment of the shelter.
For an unsheltered homeless person, their physical environment becomes the negative spaces, or the voids created by surrounding built environment. These spaces are not intended for domestic habitation and cannot fulfill the qualities of places that are intended for habitation. For an unsheltered homeless person, his or her social environment is limited to disconnected relationships with the rest of society. They may have established a small social network with other homeless people, but with substandard physical environments to support this social environment, these relationships will not prove to be adequate. Strong social networks would not exist if not influenced by a strong physical environment, so by creating appropriate physical environments healthy social environments can be encouraged and supported.

The home is where one spends considerable time. On average, adults spend 14 hours per day in their home. With such a huge portion of a lifetime spent in one’s residence, it is appropriate to ask whether housing quality and typology influences mental health. Furthermore, for most people, the home reflects major financial and
personal investment. Another reason to learn more about housing and psychological well-being is worldwide sociodemographic trends (Evans, 3). Many people live in communities with housing shortages and abundant substandard housing. In the United States, one of the most affluent countries in the world, approximately ten percent of nationwide housing stock is officially designated as substandard by the American census bureau. One in five children in the United States now grows up in poverty. Inadequate housing quality is potentially one of the most salient of the multiple demands accompanying poverty that these children must contend with (Evans, 3). While, quality housing is lacking in the United States, homelessness is the most extreme form of housing need.

The following section focusing on the impact of setting on health and provides a review of research on housing and mental health. Mental health in this instance encompasses negative affect, psychological distress, and psychiatric disorder. Specific outcome measures include: the number of visits to the doctor for
psychological/nervous conditions; self-reported measures of “neurotic symptoms” or “psychological distress” such as headaches, sleeplessness, sweating, stomach or bowel upset, nervousness, depression, feeling overwhelmed, loss of appetite; and use of psychotropic drugs (i.e., tranquilizers, sleeping pills). Not only studies that examine the mental health correlates of housing characteristics, such as floor height, complex size, building footprint, etc. were investigated, but also concepts such as social interaction, isolation or privacy. The rationale is that such concepts may function as intervening variables that in turn can influence mental health. For instance, physical characteristics of the housing environment such as floor height may directly affect the amount of social interaction residents engage in; social interaction might in turn affect mental health (Evans, 4). The results and conclusions of these studies help establish design principles for structures serving the homeless and act as guidelines for design.
The Impact of Setting on Health

Our physical surroundings mediate or effect, inhibit or encourage our social and personal relationships. Several studies have examined the effect of specific architectural characteristics on residents’ social behavior or social interaction. Although none of these studies include mental health as the dependent variable, this group of studies is included because they provide insight regarding potential mediators linking physical housing characteristics to psychological well being. Upon reviewing the studies, it is evident that conditions such as social interaction, social behavior, isolation, and crime could, in turn, influence mental heath (Evans, 8).

Collectively, these studies provide a strong indication that the physical environment matters—that various architectural characteristics do have an influence on social interaction, isolation, and crime. A series of studies have been grouped together because they all examine the effects of corridor design in college dormitories. The results are quite robust, manifesting not only in questionnaires but in actual behaviors outside the dormitory environment at two different study sites. In summary, residents
of long corridors, for example, sat further away and interacted less with a confederate in a waiting room. They also acted less cooperatively in a group gaming situation and appeared to act more helpless in the game-playing strategies. The results of theses studies are particularly strong because the dormitory residents were randomly assigned. Furthermore, over time the effects grew stronger (Evans, 8). Knowing that positive group and social dynamics are essential for establishing strong social environments, an isolating, long corridor configuration may not be the best solution for housing the homeless—a population in need of strong social networks.

Studies have also been conducted with graduate students living in family housing. Interestingly, residents with units near stairwells, entrances, path intersections, or major gathering points, such as mailbox clusters, were most likely to engage in social interaction (Evans, 8). This identifies another trend that can be taken and translated in the design of structures serving the homeless. Maintenance of gathering nodes and placement of dwelling units adjacently promotes social interaction.
The provision of transition spaces from public to private areas would be likely to reduce residents’ feelings of isolation and their fear of public spaces. Also, transitional spaces of privacy allow the resident to choose the amount of privacy that is desired—a way of controlling one’s environment.

Oscar Newman’s studies suggest that building height, complex size, the number of occupants sharing an entrance, and the building footprint can be influential in the incidents of crime. Larger, high-rise buildings with many people sharing entrances and designs that make it difficult to monitor entryways are associated across multiple sites with increased crime (Evans, 8). In structures serving the homeless, it will be important to group small dwelling nodes, rather than group all dwelling units together, to enforce ownership and surveillance.
Overall Quality of the Housing Environment

Various studies have attempted to assess the effect of overall housing quality on mental health or psychological well-being of residents. The findings indicate that the quality of the housing environment is equally as important as the existence of housing. In these studies housing quality has been variously defined, but has generally employed vague, subjective or implicit measures of housing quality. While these weak measures, along with weakness in research design, make it difficult to draw solid conclusions, the research provides some indication that housing quality influences mental health (Evans, 9).

When people choose where to live it becomes difficult to determine whether housing affects mental health, or whether mental health affects housing choices. Individual judgment, financial resources, and available housing options could all be impacted by the level of psychological health of the consumer. It is quite possible that in reality poor housing leads to deteriorated mental health as well as poor mental health leading to poorer quality residential housing. This more dynamic, reciprocal model of
housing and mental health has not been carefully considered or investigated to date (Evans, 9). Similarly, the question can be raised—are people homeless because of diminished mental health or do they have diminished mental health because they are homeless. Despite the cause of homelessness, which can be disputed indefinitely, it is certain that a person’s mental health is compromised if they are experiencing homelessness.

Research has uncovered five types of housing quality factors that appear relevant to disease. Structural quality refers to the physical qualities of home settings. Holes in building materials, substandard construction, breakage, and insufficient utility infrastructure (e.g. heat, water) are typical areas covered. Structural maintenance refers to upkeep and maintenance (e.g. paint, plaster) and cleanliness and other housekeeping issues (e.g. clutter). Hazards refer to structural defects or designs that increase the risk of injury. Falls and ingestion of harmful substances are typical concerns. Hygienic aspects of home refer to issues such as infestation by animal or
insects as well as the storage and disposal of waste materials. Finally ambient conditions of indoor climate are relevant. These include heat, humidity, and air quality (Evans, 14).

**Structural quality and maintenance:** Symbolically, both structural quality and structural maintenance provide feedback to the resident about lack of quality in the environment and often are a major part of the uncontrollable surroundings typically accompanying poverty. Failure to reside in a place congruent with one’s ideas might adversely affect self-esteem. Structural quality can also affect privacy, noise, and general levels of stimulation. Both structural quality and maintenance can impact climatic conditions as well. If windows are broken, if there are holes in exterior walls or even if they are not properly insulated, controlling the indoor climate becomes physically and financially impossible and induces stress. These types of environmental demands or uncontrollable conditions that tax or exceed one’s capacity to respond cause stress. Prolonged stress, particularly if intractable, plays a role in
the etiology of psychological distress (Evans, 14). For the homeless person, these types of conditions are unavoidable and are a constant, daily stressor. The idea is to foresee any stressors that may negatively affect the resident and preemptively design for each. Structures serving the homeless must be structurally sound and maintained.

Hazards and hygiene: Concerns about safety and hygiene (falls, infestation, filth, garbage, waste products), engender considerable anxiety and worry. Housing research on the elderly suggests that physical hazards related to falls in particular (step design, floor materials, lighting) are especially critical. Additional physical elements of high salience to safety and hazards include stairwell design, glass, storage of toxic chemicals, stove and hot water setups, and falls from higher story apartments (Evans, 12). Structures that serve the homeless must be safe, secure, and appropriate for all ages and abilities.
Ambient conditions: Irritability and impatience are common reactions of uncomfortable climate conditions. Both depression and anxiety have been linked to chronic, substandard air quality. Fatigue and anxiety can arise from the constant worrying and vigilance about problems related to heat or other utilities (Evans, 15). Depression, fatigue, and anxiety is sure to be present in the homeless population, given that, the unsheltered homeless are constantly exposed to all climatic conditions without a place for refuge. However, through building design, extreme climate conditions can be regulated.

Development research on the physical environment has produced a series of studies that have shown exposure to high levels of stimulation is associated with delayed cognitive developments in infants and toddlers. Similar trends have been noted as a function of residential crowding. This study also found that having a place to remove oneself from the din of over stimulation, a stimulus shelter, mutes the adverse overload impact. Therefore, further thinking about aspects of housing quality that
could buffer exposure to stimulation might prove fruitful (Evans, 15). Having a place for the homeless to remove themselves from over-stimulation and from over-crowding is important. This notion coincides with the notion of personal and private space that will be discussed shortly.

The degree to which one can be seen by others (visual exposure) as well as how well one can survey the surrounding space (visual access) also might be useful design concepts to consider in terms of housing quality relevant to psychological health (Evans, 16). The arrangement of rooms or units within a multi-dwelling unit can influence or discourage social overload. Students living in long corridor dormitories have more unwanted social interaction and are less friendly with their neighbors than students living in suite configurations. Students residing in singular living quarters along a long corridor encourage isolation and a solitary existence, so when forced to enter the corridor it seems unnatural and uncomfortable. Social withdrawal and a tendency towards helplessness were more characteristic of those living in corridor
configurations. Living arrangements in suite formations create a family unit from the beginning on move-in day and become very comfortable, inclusive, and reliable.

From this research, one can assume that forced interaction among residents does not promote healthy and friendly relationships, therefore decreases the chances of establishing strong social network. The building design and configurations should not force interaction, but give residents the choice and opportunity to interact.

Conclusions: Another way to begin to catalog housing characteristics relevant to psychological health is to consider underlying psychosocial processes that might link housing quality to psychological health. One aspect of psychosocial processes affected by the physical environment is social support. The development and maintenance of social contact with family and friends is directly influenced by the physical environment. Restorative elements of settings can reduce cognitive fatigue as well as assist people to recover from stress. The design and planning of the physical environment can influence crime. Fear of crime as well as actual
occurrences of criminal activity are associated with the physical environment. Finally, control of the physical environmental as well as chronic exposure to unavoidable environmental conditions can each have implications for mental health (Evans, 17).
Basic Needs and Shelter

All humans have basic needs. Warmth, food, clothing, and shelter are the things we, as a civilization need to survive. There is a growing vulnerable population who is striving to satiate the basic physiological needs. Abraham Maslow argued that we all have a hierarchy of needs, and we all wish to reach the highest level of this ladder. However, before we can reach this highest level, the lower levels of needs must be firmly established. Our surroundings and physical environment, or lack thereof, directly affect the possibilities of achieving and attaining self actualized goals.

Abraham Maslow was an American psychologist who worked in the middle part of the 20th century is known for establishing the theory of a hierarchy of needs, writing that human beings are motivated by unsatisfied needs, and that certain lower needs have to be satisfied before higher needs can be satisfied. Maslow studied exemplary people such as Albert Einstein, Jane Adams, Eleanor Roosevelt, and Frederick Douglas rather than mentally ill or neurotic people. This was a radical departure from the two of the chief schools of psychology of his day: Sigmund Freud and B. F.
Skinner. Freud saw little difference between motivations of human and animals. Skinner, on the other hand, studied how pigeons and white rats learn. His motivational models were based on simple rewards such as food, water, and the avoidance of pain. Maslow thought that psychologists should instead study with playfulness and affection of animals. He also believed that Skinner discounted things that make human different from each other. Instead, Skinner relied on statistical description of people. Maslow’s hierarchy of needs was an alternative to the depressing determinism of Freud and Skinner. He felt that people were basically trustworthy, self-protecting, and self-governing. Humans tend toward growth and love. Although there is a continuous cycle of human wars, murder, deceit, etc., he believed that violence is not what human nature is meant to be like. Violence and other defensive mechanisms may occur when human needs are thwarted. In other words, people who are deprived of lower needs such as safety may defend themselves through violent means. He did not believe that humans are violent because they enjoy violence, or that they lie, cheat, and steal because they enjoy doing it.
According to Maslow, there are general types of needs (physiological, safety, love and esteem) that must be satisfied before a person can act unselfishly. He called these needs “deficiency needs.” As long as we are motivated to satisfy these cravings, we are moving towards growth, toward self actualization. Satisfying needs is healthy; blocking gratification makes us sick or evil. Needs are proponent. A proponent need is one that has the greatest influence over our actions. Everyone has a proponent need, but that need will vary among individuals. A teenager may have a need to feel that he or she is accepted by a group. A heroin addict will need to satisfy his or her craving for heroin to function normally in society, and will not worry about acceptance by other people. A homeless person will do whatever necessary to satisfy his or her basic needs of food, water, and shelter.
Biological and Physiological Needs: Biological and physiological needs such as air, food, drink, shelter, warmth, sleep, etc. are the basic human needs required to sustain life itself. When these are not satisfied we may feel sickness, irritation, pain, and discomfort. These physical discomforts motivate us to alleviate them as soon as possible to establish homeostasis. Once they are alleviated, we may think about other things. Until these basic needs are fulfilled to the degree needed for sufficient operation of the body, the majority of a person’s activity will probably be at this level.

For a small, but critical homeless population even basic physiological needs are not being fully met. To fully comprehend the gravity of this situation, it is important to understand the meaning of shelter, a basic physiological need.

shel-ter:
1:  a: something that covers or affords protection  
   b: an establishment that provides food and shelter (as to the homeless)  
   c: an establishment that houses and feeds stray animals  
2:    a position or the state of being covered and protected.  
(Merriam-Webster Dictionary)
It is clear that this definition of shelter only refers to a physical place and a material condition without mention of emotional, spiritual or mental concerns. When referring to Maslow’s basic need of shelter, it is naive to think that a physical entity providing only protection from the elements can satisfy one of our basic physical necessities. The provision and security of shelter is far more complex. The quality of the physical space is equally important as the provision of a place for shelter.

Safety and security needs: Once physiological needs are met, our attention turns to safety and security in order to be free from the threat of physical and emotional harm. Protection, security, order, law, limits, and stability are several concerns associated with the safety needs. Safety needs have to do with establishing stability and consistency in a chaotic world. Such needs might be fulfilled by: living in a safe area, medical insurance, job security, and financial reserves. The perception of an unsafe social and physical setting can greatly decrease feelings of security. These needs are mostly psychological in nature. We need the security of a home and
family. However, if a family is dysfunctional, i.e., an abusive husband, the wife cannot move to the next level because she is constantly concerned for her safety. Love and belongingness have to wait until she is no longer paralyzed by fear. Many in our society cry for law and order because they do not feel safe enough to go for a walk in their neighborhood. Many people, particularly those in inner cities, are unfortunately stuck at this level.

Social and interactive needs: Once we meet the lower level of physiological and safety needs, higher level needs become important, the first of which are social needs. Since people are social beings, we desire to belong and to be accepted by various groups. Humans have a desire to belong to groups: clubs, work groups, religious groups, family, gangs, etc. We need to feel loved by others, to be accepted by others. We need to be needed. Physical environments that support social environments and encourage social interaction and positive group dynamics can help facilitate these social and interactive needs.
Self-esteem needs: Once we feel a sense of belonging, the need to feel important arises. Esteem needs may be classified as internal or external. Internal esteem needs are those related to self-esteem such as self respect and achievement. This self-esteem results from competence or mastery of a task. External esteem needs are those such as social status and recognition. Satisfaction of esteem needs produces feelings of self-confidence, prestige, power, and control. We begin to feel that we are useful and have some positive effect on our environment. Direct participation in the acquisition and construction of one’s own personal living environment and the ability to manipulate that environment according to personal preference is one way of satisfying the self-esteem needs for the homeless.

Self-fulfillment needs: Self-actualization is the peak of Maslow’s hierarchy of needs. It is the quest of reaching our full potential as a person and becoming what we are capable of becoming. Unlike lower level needs, this need is never fully satisfied; as we grow psychologically there are always new opportunities to continue to grow.
Self-actualized people tend to have needs such as: truth, justice, wisdom, and meaning. According to Maslow, only a small percentage of the population reaches the level of self-actualization. (NetMBA) Physical settings that are mentally stimulating and are able to expand a given knowledge base offer opportunities for personal growth and achievement. Allowing the homeless to participate in the construction of their dwelling is one way to teach valuable trades, which could lead to employment opportunities, or if nothing else, peak interests in other trades.

The homeless population is operating at a very low level on the hierarchy of needs. It is impossible for them to become stable and productive citizens without satisfying these needs. First and foremost, safe shelter needs to be provided for this population, as a backdrop for growth and fulfillment: a dwelling that is not a stressor, but one that is a constant and reliable.
Defensible Space

Crime levels are very high when considering the homeless population. Crime and violence occurs within the population and the homeless are frequently victimized by others. Defensible space is a mechanism that deals with physical design strategies that are crime deterring. Originated by Oscar Newman, the theory depends on the perception and reality of a social context that defends itself. The willingness of residents of a place to defend a public space establishes a link between the built environment and criminal behavior. Defensible space describes that the design of the physical environment can either deter or facilitate crime by enhancing or undermining an individual’s ability to monitor and control the built environment. Site organization, layout, and design influence how an individual evaluates his or her environment. The perception of an unsafe social and physical environment can greatly decrease feeling of security. The human need for protection from physical harm is a condition that allows for social interaction without the presence of fear. The perception by residents that a space is defended is characterized by familiarity, visibility, refuge, and possible escape. (Tijero, 325) Key principles of Newman’s
Defensible space theory include territoriality and natural surveillance that support personal space. Defensible measures can be interpreted as reactive and proactive measures that mitigate uncivil behavior. (Tijerino, 323) Proper design and effective use of the built environment establishing territory, surveillance opportunities, and personal space can positively affect the health and security of the occupant.

Identifying places where the homeless typically occupy is important and helpful. In an environment where there are very few places to lie down and sleep, people who sleep in public seem unnatural because it is so rare. Christopher Alexander makes an interesting point. “It is a mark of success in a park, public lobby or a porch, when people can come there and fall asleep.” Commonly, there is a lack of attention paid by architects to the building edge as it relates to the exteriors. Frequently the building edge is thought of as a vertical plane that separates indoors from outdoors, and then design is focused inwardly. “A building is most often thought of as something which turns inward—toward its rooms. People do not often think of a building as something
which must also be oriented toward the outside.” We, as domiciled individuals do not consider a niche or alcove at a building edge as a place to rest or sleep. But, for the homeless population, these very spaces are sought out. If we think of these spaces as cubes, they are defensible on all faces except for one. On five faces of this conceptual cube, there is protection given by the building itself. The homeless person is protected from the elements and from any unknown intrusion. The homeless person only has one outlet that needs to be guarded.

Alexander offers recommendations: put the places for sleeping along building edges; make seats there and perhaps even a bed alcove or two in public might be a nice touch; but above all, it will hinge on the attitudes which people have—do anything you can to create trust, so that people feel no fear in going to sleep in public and so that other people feel no fear of people sleeping in the street. This advice is consistent with defensible space principles, where the ultimate goal is to create a perceived safe environment.
Territoriality: Defensible space depends on occupant involvement to reduce crime and remove the presence of criminals by utilizing principles of territoriality. Territoriality is a concept centered on feelings of ownership and responsibility for the built environment. Territorial strategies promote feelings of ownership within a larger context, which have the potential to reflect a physically clean, safe community with involved and alert residents. By assigning value to a space through personal or community ownership, a clear demarcation of public and private space has the capability of reducing the fear of victimization and prevents crime. Allowing resident control of the built environment presents a social fabric that defends itself by proprietorship, ownership, and community responsibility (Tijerino, 325). People protect territory if they feel it is their own and have a certain respect for the territory of others. The physical environment should be arranged so that perceived zones of territorial influence are established enforcing the concept of ownership and supporting our self-esteem needs.
Privacy, the ability to regulate social interaction, is best supported by settings with a hierarchy of spaces ranging from solitary to public space. Intermediate spaces where qualified users regulate access and use seem especially important for the maintenance of social networks. Having one’s own room as well as larger residential area in general is likely to promote greater ability to regulate social interaction. At a more micro level, room design and furniture placement that promote social interaction rather than discourage it may play an important role in communication and the maintenance of social networks (Evan, 16).

**Natural surveillance:** Defensible space supports the capacity of physical settings to provide natural surveillance opportunities for occupants. Neighborhoods of all types, including where the homeless live, should reflect the message that if is entered; one will be observed and noticed. Visibility and the presence of potential witnesses discourage potential offenders from victimizing persons or destroying property. Surveillance opportunities enable the residents to observe the public areas of one’s
According to defensible space principles, a dwelling environment should be designed to allow residents to supervise and be responsible for the places where they live. In typical housing applications, windows facing public areas allow for the occupant to naturally survey the surrounding areas. By portraying a watchful eye, natural surveillance discourages crime by making criminals feel they are known by others and will be held responsible to account for their actions. This has self-fulfilling attributes in that residents, feeling secure, will make more frequent use of the public areas and so further improve its security by providing the safety that comes with intensive use. (Newman, 78) Site organization and the arrangement of individual living units that provide opportunities for natural surveillance reduce irrational fears and anxieties in inhabitants.
Newman’s theory of defensible space, through methods of natural surveillance and territoriality, emphasizes the use of the physical environment to promote resident control and strengthen community bonds. Whether a neighborhood is defended depends on resident involvement and perception of the built environment. Clearly demarcated public and private spaces, visibility, lighting, removal of visual barriers, and openings with good views are some design elements key to creating defensible spaces.

Flexible living environments that allow for varying levels of privacy are essential in defining personal space. Clearly defined boundaries between public space and private territory are essential for well-being. All elements when combined to make a defensible space have a common goal—an environment in which implied territoriality and sense of community in the inhabitants can be translated into responsibility for ensuring a safe, productive, and well-maintained living space.
In the Stewart B. McKinney Homeless Assistance Act of 1987, the federal government defined “homeless” as someone who lacks a fixed, regular and adequate nighttime residence or an individual whose primary residences is one of the following:

a) an institution that provides a temporary residence for individuals intended to be institutionalized; or

b) a public or private place not designed for, or ordinarily used as, a regular sleeping accommodation for human beings; or

c) a supervised publicly or privately operated shelter designed to provide temporary living accommodations (including welfare hotels, congregate shelters, and transitional housing for the mentally ill); or

d) a temporary, makeshift arrangement in the accommodations of other persons (people who are doubled up with relatives or friends).

Christopher Jencks describes homelessness in physical terms, by classifying individuals and families as homeless if they had no private space of their own to which they had continuous access. He also defines homelessness in more subjective
terms, classifying adults as homeless if they did not have a place of their own, said they wanted one, and said money was the primary obstacle to getting one.

On any given night, the homeless can be divided into two groups: those who sleep in free shelters, the “shelter homeless” and those who sleep in places not intended for human habitation, such as bus stations, subway trains, automobiles, doorways, and abandoned buildings. Those who sleep outside shelters are generally known as the “visible homeless” or street homeless (Jencks, 4). This visibly homeless population is very difficult to accurately count or profile and is the test population for this thesis.
Housing Crisis

Two trends are largely responsible for the rise of homelessness over the past 20-25 years: a growing shortage of affordable housing and a simultaneous increase in poverty (NCH Fact Sheet #1, 2002). These two trends coupled with untreated mental illness is sure to create homeless persons.

Shortage of affordable housing: A lack of affordable housing and the limited scale of housing assistance programs are systemic factors contributing to the current housing crisis and eventual homelessness. The gap between the supply of affordable housing units and the demand has produced a housing crisis for people living within the poverty level. The federal definition of “affordable housing” is paying no more than 30% of a household’s income towards housing costs. However, there are about 5.4 million families who pay more than half of their incomes for rent (NAEH). In 1995, the number of low-income renters exceeded the number of low-cost housing units by 4.4 million—a trend that continues today. Accordingly, fewer people can afford a place to live and homelessness has emerged as a major problem.
Increase in poverty: Homelessness and poverty are inextricably related. Poor people are frequently unable to pay for housing, food, child care, health care, and education. Difficult decisions must be made when constrictive resources cover only some of these necessities (NCH Fact Sheet #1, 2002). Since housing absorbs a high proportion of income, it is the one of the first expenses to be dropped. Being extremely poor, means being an illness, an accident, or a paycheck away from living on the streets.

In 2000, 11.3% of the US population, or 31.1 million people, lived in poverty. While the number of poor people has decreased a bit in the recent years, the number of people living in extreme poverty has increased. In 2000, 39% of all people living in poverty had incomes of less than half the poverty level. That statistic remains unaffected from the 1999 level. Forty percent of persons living in poverty are children; in fact, the 2000 poverty rate of 16.2% for children is significantly higher than the poverty rate for any other age group (US Bureau of the Census, 2001).
Two factors help account for increasing poverty: eroding employment opportunities for large segments of the workforce, and the declining value and availability of public assistance. Work is one of the chief sources of income for people without homes. Increases in work wages and public benefits have not kept pace with increases in living expenses over the last several decades.

Proven by the National Priorities Project in 1998, the future of job growth does not appear promising for many workers: a 1998 study estimated that 46% of the jobs with the most growth between 1994 and 2005 pay less than $16,000 a year; these jobs will not lift families out of poverty. Moreover, 74% of these jobs pay below a livable wage, which is $32,185 for a family of four (NCH Fact Sheet #1). Therefore, it is increasingly difficult for low-income people to afford housing. For many Americans, work provides no escape from poverty. Factors contributing to wage declines include a steep drop in the number and bargaining power of unionized workers; erosion in the value of minimum wage; a decline in manufacturing jobs and the corresponding
expansion of low-paying service-sector employment; globalization; and increased nonstandard work.

Welfare does not provide relief from poverty. The gap between the number of affordable housing units and the number of people needing them has created a housing crisis for poor people. The lack of affordable housing has lead to high rent burdens (rents that absorb a high proportion of income), overcrowding, and substandard housing. The demand for assisted housing clearly exceeds the supply: only about one-third of poor renter households receive a housing subsidy from the federal, state, or local government. To add the complexity of this issue, it is not merely the economics of poverty that has helped to create the phenomenon of homelessness. Poverty erodes a person’s self-esteem and confidence, and creates feeling of despair and alienation,” suggests Dr. Ellen Bassuk, associate professor of psychiatry, Harvard Medical School. “When poverty is coupled with a breakdown of family structure and values, its effects are even more pernicious” (Greer, 1986).
Architecture that addresses issues of mental health and stability are clearly foremost concerns when designing for this vulnerable, disenfranchised population.

**Mental Illness:** Approximately 20-25% of the single adult homeless population suffers from some form of severe and persistent mental illness. However, only 5% of the estimated 4 million people who have a serious mental illness are homeless at any given point in time (NCH Fact Sheet #5). Despite the disproportionate number of mentally ill people among the homeless population, the growth in homelessness is not attributable to the release of seriously mentally ill people from institutions. Most patients were released from mental hospitals in the 1950s and 1960s, yet vast increases in homelessness did not occur until the 1980s, when incomes and housing options for those living on the margins began to diminish rapidly. However, a new wave of deinstitutionalization and the denial of services or premature and unplanned discharge brought about by managed care arrangements may be contributing to the continued presence of seriously mentally ill persons within the homeless population.
Mental disorders prevent people from carrying out essential aspects of daily life, such as self-care, household management and interpersonal relationships. Homeless people with mental disorders remain homeless for longer periods of time and have less contact with family and friends. They encounter more barriers to employment, tend to be in poorer physical health, and have more contact with the legal system than homeless people who do not suffer from a mental disorder. All people with mental disorders, including those who are homeless, require ongoing access to a full range of treatment and rehabilitation services to lessen the impairment and disruption produced by their condition. However, most people with a mental disorder do not need hospitalization, and even fewer require long-term institutional care. According to the Federal Task Force on Homelessness and Severe Mental Illness, only 5-7% of homeless persons with mental illness need to be institutionalized; most can live in the community with the appropriate supportive housing options. Unfortunately, there are not enough community-based treatment services, nor enough appropriate, affordable
housing, to accommodate the number of people disabled by mental disorders in the United States.

Federal demonstration programs have produced a large body of knowledge on the service and treatment needs of homeless individuals with serious mental illnesses. Findings indicate that homeless persons with mental disorders are willing to use services that are easy to enter and that meet their perceived needs. Findings also reveal that persons with mental disorder and persons with addictive disorders share many of the same treatment needs, including carefully designed client engagement and case management, housing options, and long-term follow-up and support services. Studies also emphasize the importance of service integration, outreach and engagement; the use of case management to negotiate care systems; the needs for a range of supportive housing and treatment options that are responsive to consumer preferences; and the importance of meaningful daily activity. When combined with supportive services, meaningful daily activity in the community (including work), and
access to therapy, appropriate housing can provide the framework necessary to end homelessness for many individuals (NCH Fact Sheet #5).
National estimates of homelessness: There are several national estimates of homelessness. Many are dated, or based on dated information. Due to different methods of measuring homelessness, none of these estimates is the definitive representation of “how many people are homeless,” but the best approximation is from the Urban Institute study in 2000 which states that about 3.5 million people are likely to experience homelessness in a given year (NCH Fact Sheet #2). These numbers, based on findings from the Urban Institute and specifically the National Survey of Homeless Assistance Providers, draw their estimates from a study of service providers across the country at two different times, October and February, in 1996.

On a given night in October, 444,000 people experienced homelessness—which translates to 6.3% of the population living in poverty. On a given night in February, 842,000 experienced homelessness—which translates to almost 10% of the population living in poverty. Converting these figures into annual projections, the
numbers that emerge are 2.3 million people (based on the October estimate) and 3.5 million people (based on the February estimate). This translates to approximately 1% of the US population experiencing homelessness each year (NCH Fact Sheet #2). Comparable to these estimates are those of the National Alliance to End Homelessness who claims about 750,000 people experience homelessness nightly in the United States. Nationally, there are about 150,000 chronically homeless people (NAEH).

The Department of housing and urban development defines “chronically homeless” as someone who is an unaccompanied homeless individual with a disabling condition who has either been continuously homeless for a year or more, or has had at least four episodes of homelessness in the past three years. In order to be considered chronically homeless, a person must have been sleeping in a place not meant for human habitation (e.g., living on the streets) and/or in an emergency homeless shelter.
Characteristics of the homeless population: Structures serving the visibly homeless must be universal to accommodate the widely diverse population.

Age: In 2001, the US Conference of Mayors’ survey of homelessness in 27 cities found that children under the age of 18 accounted for 25.3% of the urban homeless population. This same study found that unaccompanied minors comprised 4% of the urban homeless population. However, in other cities and especially in rural areas, the numbers are much higher. According to the Urban Institute, on a national level, approximately 39% of the homeless population are children. A 1987 the Urban Institute study found that 51% of the homeless population was between the ages of 31 and 50 (NCH Fact Sheet #3).

Families: Families with children are among the fastest growing segments of the homeless population, representing 40% of the homeless population. These proportions are likely to be higher in rural areas; research indicates that families,
single mothers, and children make up the largest segment of people who are homeless in rural areas (NCH Fact Sheet #3). Rural areas have fewer shelters and fewer public spaces than urban areas where homeless can find temporary. Typically, education and income levels are lower in rural areas; therefore high poverty levels are to be expected. The majority of the rural homeless is employed but is in lack of permanent housing. Given the low density and sprawl of rural towns, a car may be necessary to maintain for transportation to work, while housing and its relative high cost is forfeited just to be able to maintain a job. For some, their car becomes a place to sleep when housing is absent.

**Victims of domestic violence:** Battered women who live in poverty are often forced to choose to between an abusive relationship and possibly exposing children to violence and homelessness. In a study of 777 homeless parents by the United States Conference of Mayors (the majority of whom were mothers) in ten US cities, 22% said they left their last place of residence due to domestic violence. Studying the
entire country though reveals that the problem is even more significant. Nationally, roughly half of all women and children experiencing homelessness are fleeing domestic violence (NCH Fact Sheet #3).

**Gender:** Most studies show that single homeless adults are more likely to be male than female. In 2001, the US Conference of Mayors’ survey found that single men comprised 40% of the urban homeless population and single women 14% (NCH Fact Sheet #3).

**Ethnicity:** Like the total US population, the ethnic makeup of the homeless populations varies according to geographic location. In its 2001 survey of 27 cities, the US Conference of Mayors found that the urban homeless population was 50% African-American, 35% Caucasian, 12% Hispanic, 2% Native American, and 1% Asian. People experiencing homelessness in rural areas are much more likely to be white, as well as Native Americans and migrant workers.
Addiction disorders: Surveys of homeless populations conducted during the 1980s found consistently high rates of addiction, particularly among single men. However, recent research has called the results of those studies into question (NCH Fact Sheet #6). Briefly stated, the studies that produced high prevalence rates greatly over-represented long-term shelter users and single men, and used lifetime rather than current measures of addiction. While there is no generally accepted “magic number” with respect to the prevalence of addiction disorders among homeless adults, the U.S. Conference of Mayors’ number was 34%, and the frequently cited figure of about 65% is probably at least double the real rate for current addiction disorders among all single adults who are homeless in a year.

Persons with mental illness: As indicated by the US Conference of Mayors, approximately 22% of the single adult homeless population suffers from some form of severe and persistent mental illness. According to the Federal Task Force on Homelessness and Severe Mental Illness, only 5-7% of those suffering from a mental
illness actually require institutionalization; most can live in a community with the appropriate supportive housing options (NCH Fact Sheet #5).

The figures presented make it clear that people who become homeless do not fit one general description or category. However, people experiencing homelessness do have certain shared basic needs as do we all, including affordable housing, adequate incomes, and health care. This vulnerable and sensitive population requires an environment that strives to establish and heighten levels of mental stability and quality of life.
Locally

Each night there are an estimated 2,000 homeless residents in the Charleston, SC metropolitan Tri-county area. Sixty seven percent of those are said to be employed—many in construction and seasonal tourism related businesses. Veterans account for 30% of the homeless population. Forty two percent of the population is comprised of women and children. Twenty-three percent of the tri-county homeless suffer from a physical disability and 42% suffer from a mental illness. Many have a high school level education and the majority are originally from Charleston. This population is widely diverse and therefore has widely diverse needs. A single shelter typology is not suitable for such an assorted population.
The living conditions of the visibly homeless are not unlike those of victims of natural disasters or war, although homelessness is a result of human stimuli and is a man-made condition. Victims of natural disasters or war become suddenly homeless, possibly losing all their earthly possessions. A city’s infrastructure may be damaged; limiting transportation and immobilizing the victims, thus restricting access to needed services. The victims’ mental stability is compromised due to sudden devastation and loss. These conditions are comparable to the visibly homeless population. “When natural disaster or war drives randomly selected people from their homes, many become acutely depressed, and some grow suicidal or have mental breakdowns. When economic misfortune drives people from their homes, they are even more likely to have such reactions, because they are more likely to blame themselves for their fate” (Jencks, 23). The visibly homeless have no homes and few possessions. Without personal transportation modes and limited access to public transportation services, they too are confined and limited to services. Their mental health is also diminished due to constant exposure to the elements, episodic exposure and/or
recipient of violence, crude living conditions, and feelings of failure. The longer the homeless are exposed to these conditions; their mental stability will diminish correspondingly. Similar housing relief efforts for those victims of natural disaster should be taken with the visibly homeless population. These natural disaster relief efforts are responsive to a crisis that has devastating effects on a population and are employed efficiently and economically. The visibly homeless need to be sheltered immediately and affordably, given that few funds are available and allotted to this population. Current design strategies and principles for emergency relief housing can be appropriately applied to housing the visibly homeless.
Design Criteria for Relief Housing

Architecture for Humanity, a non-profit organization, held an open competition to design transitional housing for the returning people of a war-torn Kosovo. The competition’s goal was to foster the development of housing methods that can relieve suffering and speed the transition back to a normal way of life. The issues faced in this competition are not unique to Kosovo. Natural disasters and war all over the world destroy homes and force people to seek shelter while they rebuild. Concepts, techniques and materials that helped the Kosovars can help guide the design principles of the structures serving the visibly homeless. The immediate challenge in Kosovo was to shelter families until they were able make their old homes habitable. The immediate challenge in serving the visibly homeless is to provide shelter that supports physiological and social needs irrespective of its level of permanence. The proposed structures serving the visibly homeless may become permanent housing solutions for some and temporary shelters for others. These structures are not intended to provide luxuries that encourage dependency, rather they are intended to
provide the minimum physical conditions that sustain life and support mental stability. In Kosovo, the following design criteria had to be taken into account:

Shelter that lasts long enough to allow rebuilding of permanent homes: The ability to rebuild permanent houses and towns was determined by the availability of materials and the existence of skills. Temporary housing may be needed for an extended period of time if conditions make finding permanent housing slow and difficult. How temporary housing differs from permanent housing is a critical concept to this thesis. Structures serving the homeless are necessary as long as there is a visible need for shelter. These structures may become home to many and temporary shelter to some; the shelter response needs to exist for an indefinite period of time. If the housing crisis subsides in Charleston, the need is diminished. If the crisis continues and persists, then suitable shelter needs to be available.

13. Kosovo transitional housing competition entry by Cameron Sinclair. Animal feed bags are used as a low cost and durable building material.
Shelter that is inexpensive: Tens of thousands of units were needed quickly and the money available to Kosovo’s reconstruction had to cover an entire array of social needs. The competition for funds was intense. The combination of speedy construction and limited money requires that the temporary housing solution be low cost. The construction of structures serving the visibly homeless will also need to be low cost. Large amounts of funding for this sort of project will be difficult to obtain. Although economical, the materials must be durable and resilient to withstand the physical conditions of the place and require little maintenance.

Shelter that can be built quickly: In Kosovo, shelter needed to be in place quickly. Water supplies were destroyed; sanitary conditions were a problem; the possibilities for injury and sickness were unlimited. Their most vulnerable period was just after return. Temporary shelter needs to be delivered quickly. As with the visible homeless in Charleston, shelter needs to be provided immediately. This population has slipped through the cracks, been exposed and disenfranchised for too long.
and needed quickly, they were to be built by those who will live in them. The local building trades have the skills to build if the technology demands are low. Structures serving the visibly homeless need to be constructed by local volunteers and the occupants themselves under “sweat equity” principles. Selective components of the structures serving the homeless should allow for manipulation by the resident to foster personalization and choice.

Shelter that can be built in many dispersed locations: The returnees were dispersing all over Kosovo. Aid was not focused to a few delivery points. A temporary shelter solution will have to be functional in a broad set of locations. With this shelter response, it should be physically and socially site specific. The principles employed can be universal, but the application, size and quantity and units; site organization should be specific to the identified homeless population and site.
Shelter that keeps people healthy and strong: Ultimately, the temporary shelter had to keep people dry, warm and sanitary. Equally, the shelter provisions in Charleston need to cause no harm and improve the current state of being. Protection from climatic conditions, violence, and abuse has to be accomplished.
Seven design principles for structures serving the visibly homeless are established through the initial investigations in defensible space theories and emergency housing relief efforts. These principles address the required environmental qualities for creating a safe and healthy environment for this disenfranchised population.

- Self-Designation of Site
- Provide Defensible Space
- Create a Sense of Territoriality
- Reinforce Natural Surveillance Opportunities
- Provide Universal Living Environments
- Utilize Affordable Construction Methods, Materials, and Labor

Self-designation of site by the projected homeless population is proposed to ensure that the site is appropriate and suitable for the implementation of the shelter response. The provision of defensible space through territoriality, surveillance opportunities, and personal space will help to create a safe and secure living environment. Personal and communal territory should be defined and established to promote internal...
community bonds and expression of claim. Surveillance opportunities should be maintained and created from within the site to assure observation and scrutiny of activities taking place on the site. Personal dwelling units should be created to provide individual spaces that support independent, private living and ownership. Spaces reserved for universal, make-shift living should be implemented for those who are newly or temporarily homeless. This space should be designed so that it is supportive and adaptive to such living situations. These structures must be affordable with respect to materials, methods, and labor. This population does not have funds readily available to them; therefore, creative and inexpensive construction methods should be executed.
Design Principle 1: Self-designation of Site

The site chosen for housing the homeless should be selected by the homeless population itself whenever possible. Some sites will be more suitable than others; homeless people do not always occupy available or acquirable land, such as abandoned building, area under bridges, malls, public parks, etc. The area in which the homeless willingly occupy is inherently appropriate in that it is more than likely in close proximity to the services required to sustain life itself, i.e. food services, restroom facilities, and social entities. Identifying and procuring the land area in which the homeless feel safe and secure is critical when providing successful and effective shelter response for the visibly homeless. Allowing the occupants to inadvertently choose the location of their own suitable living environment provides the residents a sense of participation in their lives and external respect.

The site organization and arrangement of the shelter response should preserve any natural features and/or physical marks created by those currently occupying the site. It is the intention to preserve and enhance the physical qualities of the site that the

16. Areas of homelessness in Charleston, SC.
occupants originally found attractive and enticing. The shelter’s physical presence should not be intrusive on the site nor disrupt the daily activities and use patterns of the residents, allowing the site itself to continue functioning as a safe and secure haven for the residents.

17. Identification of pathways.

18. Preservation of trees and pathways created by homeless.
Social Defensibility: Defensible space relies on the design of the physical environment to deter crime by enhancing individual abilities to monitor and control the built environment. Site organization, layout, and design influence how an individual evaluates his or her environment. Clearly demarcated public and private spaces, visibility, lighting, removal of visual barriers and openings with good views are some design elements key to create defensible spaces. The perception of an unsafe social and physical environment can greatly decrease feeling of security. The human need for protection from physical harm is a condition that allows for social interaction without the presence of fear. Defensible space principles can be addressed explicitly and deliberately when designing something intimate in scale.

Environmental Defensibility: A living environment should not only defend against physical harm and intrusion, but also defend against climatic conditions such as noise, sound, wind, rain, snow, ground water, sun, etc. When designing for the visibly homeless, it is critical that climatic conditions are considered and calculated for,
given this population is directly affected by these conditions on a daily basis. The presence of shelter with a roof with adequate overhangs and a floor elevated off the ground in wet areas need to be provided to protect residents from precipitation. In the absence of typical building systems like central heat and air, building configuration can begin to make bearable the extreme temperatures of a place. Strategies should be taken to best capture southern summer winds and block and deter cold northern winds. Building orientations that are perpendicular to the prevailing summer winds can best capture the needed summer winds. For the cold months, vertical elements, such as walls, buildings, or dense landscaping can be placed perpendicularly to the winter winds, to block and deter cool winds. These vertical elements can work in concert with roof configurations to encourage and increase cross ventilation and should be considered. First floor level heights need to be considered to eliminate any ground water run-off in dwelling units. Barriers, such as walls, landscaping, and actual buildings, should attempt to protect residents from noise pollution.

21. The exterior gathering space is protected from cold, winter winds.

22. A vertical element placed northerly on the site creates a shade-free zone for comfortable gathering in the winter.
Design Principle 3: Create a Sense of Territoriality

Through methods of territoriality, the use of the physical environment can promote resident control and strengthen community bonds. This notion of territoriality can be thought of on two levels—the community level and the private individual level. It is important that the visibly homeless have a well-defined space that they can be comfortable, safe, and secure. In a world where crime is prevalent and present, it is where there is strength in numbers. A single individual is much more vulnerable than a group of people. It is important that the occupants of this shelter feel a sense of ownership, empowerment, and responsibility. By creating a built environment for this homeless population, their territory has been claimed and this proprietorship will be recognized by outsiders.

Privacy has been defined as “freedom from unwanted intrusion and the freedom to determine the place and time of communication.” The ability to be oneself is very much a function of one’s having a place to be it in, away from intrusion and control of others (Davey, 3). Intimacy gradients in housing are important to mediate and
give choices about levels of social and personal interaction. People need a place not only for being together but also for being on their own (Davey, 4). This is especially critical to establish for the homeless person, given that the spaces they may consider to be their personal space may actually be property of the city or an individual. Gradients of privacy need to be established to strengthen a sense of personal space and community space. If a space is clearly defined as personal or community, crime can be discouraged. Each dwelling unit can be marked with the resident’s name to clearly denote personal space.
A flexible dwelling unit can provide the resident direct participation within his or her environment. He or she can manipulate the environment to the suited level of privacy, allowing control over immediate surroundings. The dwelling unit should be designed for intuition and clarity, so that the flexibility will be recognized and utilized. Exposed hardware, mechanisms, hinges, levers, and clear signage are ways that the dwelling units can be intuitive and easily manipulated.

26. Privacy gradients in sleeping bays
Dome Village is an innovative and novel way of approaching the housing needs of Los Angeles, California. The architectural structure of Dome Village is a powerful visual, forcing the general public and government to confront inhumanity. Dome Village offers a structural alternative for homeless people who are unable or unwilling to live in traditional shelters, i.e. the visible homeless. The domes are used as a stabilizing tool to provide affordable transitional housing, which is non-threatening to the chronic homeless person and to the adjacent neighborhoods. The domes also provide territoriality with individual living units that residents can call their own. The domes are maintained by the residents, offer privacy, and create a sense of ownership. This case study was helpful not only as atypical model for housing the homeless and an original model for housing the visible homeless, but one that effectively creates a strong sense of community and belonging through the services provided. Although, personal and private space is provided at Dome Village that create territoriality for the individual, semi-public and public spaces are not seen for the population as a whole.
Design Principle 4: Reinforce Natural Surveillance Opportunities

Site organization and unit design should provide opportunities for surveillance. It is critical that the homeless population feels safe and secure in the living environment. Natural surveillance opportunities can help facilitate a perceived safe environment. By analyzing the self-determined site, it may become apparent where these surveillance opportunities already exist. The homeless are innately going to occupy spaces where they can survey and observe their surroundings and be aware if any danger may occur. It is critical that these surveillance nodes and their respective views are preserved. No new buildings or physical elements should block or obstruct these views. Gathering nodes are critical to identify and preserve also. These can determine the placement of the dwelling units. By identifying the vulnerable face of the spatial site, the direction of the surveillance can be determined. This face may be an alley, the pedestrian or vehicular entrance to the site, etc. This identification will direct the orientation of the needed view. It is important that these views are maintained from the dwelling unit themselves, so that all times the site can be survey by the residents.
29. Site photograph

30. Site photograph
Design Principle 5: Provide Universal Living Environments

An environment should be created that can serve multiple functions. This universal living space should provide adequate area that can allow for seating, sleeping, dining, socializing, gathering, etc. With fulfillment of the defensible against climatic conditions principle, this space should be accessible at all times. Without knowledge of the exact number of homeless who will be occupying the site and without knowledge of their specific housing needs, universal environments need to be created to allow for as many preferences as possible. The homeless are a very diverse population. Some homeless have been without a home for years and some just for a very short time. Some homeless have accumulated belongings and others have nothing to speak of. Homeless who are suffering from mental illness without proper support and medication may not be able maintain and support a typical living environment. Universal living environments must be created to allow for varying degrees of homelessness and permanence, mental capability, and differing housing preferences. Some may prefer a solitary way of life and keep to themselves in their dwelling unit or some may prefer to exist amongst a larger group. Universal living
environments can offer freedom of choice and allow the occupant to have complete authority of their environment. Permanent mechanisms and infrastructure should be implemented in the design that accept and allow for this sort of living and as a way to fasten and attach things to create makeshift living arrangements.

Dignity Village in Portland, Oregon offers a unique approach to universal living spaces. It is a self-governed tent-village based on the guiding principles of Dome Village. Dignity Village offers a large piece of land to do with which one pleases. The homeless person is responsible for finding a suitable campsite and erecting any sort of dwelling possible and suitable for the length of stay and capability. The village’s objectives are to reduce the number of people in doorways, centralize people for easier communication, referral, and access to services, improve sanitation resources for people without utilities, stabilize people by meeting their basic needs, and make homeless people part of the solutions, rather than part of the problem.
Dignity Village offers universal living space in that it is an open space in which the resident has the freedom to dwell the way he or she chooses.
Design Principle 6: Utilize Affordable Construction Methods, Materials, and Labor

Shelters serving the visibly homeless have to be affordable in every aspect of design and construction. Groups and organizations supporting the homeless do not have access to large sums of money, so an affordable methodology has to be employed. The design and construction of shelter, even in emergencies should be based on local materials, indigenous technologies, or the careful adaptation of imported and non-traditional methods and materials. (Browne, 85) Material selection is an important decision to be made. Found materials should be considered due to low cost and their non-intimidating nature. Innovative, efficient construction methods should also be considered for low cost remedies. Sam Mockbee has mastered the art of utilizing unorthodox and uncommon materials for building in his affordable housing projects in rural areas. Building materials should be found and purchased at any local hardware or home improvement store. A design consideration is that all building components be comprised of stock dimension materials. This elimination of excessive measuring and cutting will cut down on cost, waste, time, and manpower during the construction process. In all cases, efforts should be taken to use suitable

34. Sam Mockbee’s butterfly house utilizing found materials.
found materials for building material, such as scrap lumber, rebar, plywood, sheathing. Using objects found on the site and discarded by the homeless population, such as bottles, aluminum cans, newspapers, magazines, etc. can add personalization and familiarity to the shelter.

The participation of the future residents in the construction process is common occurrence in the construction of natural disaster relief housing and should also be employed in this shelter response. Sweat equity principles similar to those of Habitat for Humanity should be considered, where the future inhabitant’s own time, energy, and manpower is used as funding. Residents will gain a strong sense of accomplishment and pride with the completion of their new residence while addressing self-esteem needs. This will also teach the homeless valuable new skills and may lead to improved employment opportunities. Also, residents will be required to work within a group that can improve their interpersonal skills and begin to fulfill social and interactive needs.
Environmental Context: Charleston’s climate, like the rest of coastal South Carolina, is mild and humid up until the height of summer, when the heat index jumps. In July, the temperature is 89° F on the average. But, it’s not uncommon for summertime temperatures to peak above the 100-degree mark. In January temperatures are moderate, with some days experiencing temperatures below freezing along the coast, but most days range 37-60° F. The humidity, which is considerable in the Lowcountry during any season, makes the hot seem hotter and the cold seem colder. The prevailing summer winds are from the southwest and the prevailing winter winds are from the northwest. Severe thunderstorms and/or tornadoes can occur in the spring. Tropical storms and the occasional hurricane blow through in September and early October. These extreme environmental conditions have to be identified and considered, given that a homeless person is directly affected physically by them on a daily basis.
Social Context: Charleston is a major tourist, port city in the state of South Carolina. It is among the most beautiful, walkable, friendly and cultured of cities, and throughout history, it has stood as the cultural capital of the South. The major business and tourist district of the peninsula is in the southeastern quadrant. The peninsula’s homeless are urged to occupy the area north of the commercial district so as not to disrupt or deter tourists and/or local business attractions, to uphold and maintain the present charm of the city. The beatification efforts of several downtown parks have also forced the visibly homeless population north and left them without a place to stay or rest. The cross-town, a major east-west transportation route, virtually divides the peninsula where sites are commonly referred to as “north or south of the cross-town.” This thoroughfare very distinctly divides the peninsula socially, economically, and culturally. The visibly homeless in Charleston typically occupy the areas north of the cross-town within a larger context of majority African American, low income, and poorly educated and skilled populations. The areas north

<table>
<thead>
<tr>
<th>Month</th>
<th>Average High</th>
<th>Average Low</th>
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<tbody>
<tr>
<td>January</td>
<td>60</td>
<td>38</td>
</tr>
<tr>
<td>February</td>
<td>62</td>
<td>39</td>
</tr>
<tr>
<td>March</td>
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<tr>
<td>April</td>
<td>76</td>
<td>53</td>
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<tr>
<td>May</td>
<td>83</td>
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<td>June</td>
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<tr>
<td>July</td>
<td>89</td>
<td>71</td>
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<tr>
<td>August</td>
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<td>71</td>
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<tr>
<td>September</td>
<td>85</td>
<td>66</td>
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<tr>
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<td>76</td>
<td>57</td>
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<tr>
<td>November</td>
<td>68</td>
<td>48</td>
</tr>
<tr>
<td>December</td>
<td>61</td>
<td>39</td>
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</tbody>
</table>

37. Charleston climate information

38. Charleston, South Carolina
of the cross-town have low levels of owner occupied housing and a high prevalence of government subsidized housing.
39. Over 4.5 persons per square mile
40. Over 75% African American
41. Under $25,000 annual income
42. Under 20% owner occupied housing
43. Minimally skilled
44. Under 12 years of education
An Existing Emergency Shelter: Within this social context lies the largest emergency homeless shelter in the South Carolina. This historic city of 89,000 had no real facilities for homeless people until the unusually cold winter of 1984 which prompted the mayor to call together community leaders, including ministers of local churches, and asked them to study the needs of homeless people on Charleston’s streets. Two answers became immediately obvious: shelter and food. This ecumenical non-profit organization filled the gap, and it quickly evolved into a multiple-service agency providing a holistic “continuum of care,” offering a range of needed services. It operates a “one-stop shopping” program based on the conscious realization that public transportation is limited in Charleston, and it is difficult for poor and homeless people to access decentralized services. With recent cut-backs in public transportation, the homeless are even more confined to this area. Easy and convenient access to medical care, employment opportunities, and other needed services has been significantly limited.
The current home of the shelter is a two story brown brick facility in an inner-city neighborhood, once the home of an auto-parts warehouse which was leased for $1 per year from a grocery store corporation until November 1992 when the property was given to Crisis Ministries. This building houses the Men’s shelter, a dormitory operation providing night shelter, although it also opens during the day in severe weather, to as many as 170 homeless men. An adjacent property houses the Family Shelter and Day Center, offering shelter and case management to as many as 80 single mothers and children.

The Soup Kitchen, originally an independent program sponsored by an Episcopal Church, merged with Crisis Ministries in its main facility in 1987, taking advantage of the professional kitchen facilities there. Serving about 200 people a day—not just shelter residents but anyone who is hungry, the soup kitchen’s entire bill of fare is comprised of perishable foods donated by area restaurants and institutions, collected
and distributed to the soup kitchen and other city food providers by Crisis Ministries’ refrigerated truck.

Other key programs include: social services and case management aimed at breaking the cycle of homelessness; mental health and substance abuse programs staffed by trained counselors; a primary health-care center operating daily, and a weekly medical clinic staffed entirely by volunteer physicians; a monthly legal clinic staffed by volunteer attorneys; and Alcoholics Anonymous and Narcotics Anonymous groups.

In more recent developments, Crisis Ministries has moved into job training. An innovative program offers women residents of the Family Shelter a one-week course in very basic food preparation skills, a quick and simple initiative aimed not at certification, but at offering them an advantage in the competitive food service industries that abound in Charleston’s tourist economy on the lower peninsula. A
more advanced job readiness program was implemented when shelter staff discovered that homeless persons were actually getting jobs, but were not maintaining them. This five-week course, available to men and women covered the basics of job seeking, interviewing and emphasized such basic issues as being punctual, being well dressed and clean, getting along with supervisors and co-workers, and reporting in when work must be missed. This program is no longer in effect due to shortage of staff. With a staff of 33 and an annual budget just over $1 million, Crisis Ministries depends heavily on an estimated 5,000 annual volunteers to maintain operation.

The shelter users are required to vacate the facility after breakfast, allowed to return for lunch, and then can return again for dinner and a night’s rest. There are minimal, temporary restroom facilities available throughout the day at the shelter, though not adequate or suitable for the population. This inconsistent availability of needed services and shelter leaves the homeless exposed and vulnerable for a large part of the day. And, although the Crisis Ministries is the largest emergency shelter in South
Carolina, it is not currently operating at full capacity, there are beds available, yet there is still a homeless population they have not captured. This disparity is created by people being turned away from the shelter for various reasons or by people who are choosing not to take advantage of the services provided.

The Crisis Ministries forces its residents to keep a savings account for any income that might be available to them. The residents are also forced to take breathalyzer tests and comparable drug tests before admittance if there is any suspicion of alcohol or drug use. After speaking with the test population, these are some examples of the restrictions placed on the residents, which takes control out of the hands of the individuals and limits their free will. Residents can be kicked out of the shelter temporarily and even permanently for bad behavior and/or failure to abide by the rules. This disadvantaged visibly homeless population is the focus of this thesis.
The Woods

The homeless population itself essentially chose the test site for this thesis. It is assumed that the visibly homeless as well as domiciled community members due to its close proximity to the Crisis Ministries shelter and its respective services occupy this location. According to the Crisis Ministries’ health care coordinator, this site is referred to as “The Woods.” This woods site was chosen for this thesis in accordance with the identified design principle of self-designation of site. The visibly homeless seek refuge on this site and occupy this site for the majority of the day. It is comprised of 13 individual vacant lots owned in part by the City of Charleston, Department of Transportation, private landowners, and a local church (figure 47). A real estate value assessment of the existing vacant properties establishes a credible and realistic purchasing price for any non-profit group for the implementation of the proposed structures serving the visibly homeless.
Social Context: The site is occupied by a wide range of individuals
ranging in age, gender, ethnicity, and housing situation. At any given time, there are 35-50 people occupying the test site, each with different circumstances. Some are shelter residents who are temporarily occupying the site while the shelter is inaccessible between meals. Some have been permanently kicked out of the shelter and have made this physical environment their homes, some for more than a year. Then, there are some who are not homeless at all, but are living in the surrounding neighborhoods. This is an unsupervised, independent population, which still requires the services provided by Crisis Ministries. This diverse population has established a unique and close social network and support group. There is familiarity and ease among the occupants. Everyone is familiar with everyone occupying the site, and an internal implied leadership has been established. Maternal-like and fraternal-like roles have been formed which creates a large family-like unit.
**Environmental Context:** The test site is adjacent to the shelter facilities and is close walking distance to the needed services. Due to limited public transportation, it is crucial that these occupants remain close to the shelter to ensure the fulfillment of basic needs.

The test site is directly adjacent to SC Interstate 26. A small barricade, chain linked fence, and alley separate the interstate and the occupied site. Noise pollution is obviously a concern when considering the closeness of the constant high speed traffic. The physical site is polluted and littered with useful trash and provides boundless potential for building materials.
The site is well lit in the evening with City of Charleston’s automatic dusk to dawn street lighting. Night lighting is critical and essential for implied safety and security for this vulnerable, exposed population. Very little lighting will need to be added in the proposed structures. Water lines are already piped to site, given that three residential units existed on the site. Installation costs of new lines then can be negated which is consistent with the design principle of maintaining affordable construction costs.

Hence the common name of the site, it is wooded with deciduous trees producing bearable shade in the hot, humid summers and allowing warm sun to penetrate during the winters. The ground is clear of underbrush and has been distinctly worn away in certain areas by foot traffic.

The occupants of the site and their daily use patterns have created physical markers that can be identified. Paths have been naturally created by common travel by the
occupants and given indication of how the site is regularly used. Gathering nodes are also apparent that offer surveillance opportunities from the interior of the site. The site can be zoned spatially into defensible space and vulnerable space. There is one vehicular access into the site and this becomes the vulnerable zone, where unknown strangers could enter the site. The remaining site edge conditions become defensible, whereby one edge is inaccessible by car or stranger due to the interstate boundary. Another edge is defensible due to the built edge condition, the family center and a residence. Anyone entering the site from these two directions would be known and non-threatening. Interior to the site is a fence that provides one more layer of defensibility. This fence provides a back drop for gathering and still maintains the surveillance opportunities to the vulnerable zone of the site.
54. Site photograph

55. Site analysis
56. Site photograph

57. Site photograph
PROJECT PROGRAM

Program Summary

To support the physiological and social needs of the visibly homeless and additionally the surrounding community members occupying The Woods, a flexible living environment and needed permanent services are proposed. Shelter should be accessible, have a water supply and sanitation supply, and access to food and health provisions (Browne, 85). The visibly homeless population can utilize and benefit from individual, flexible dwelling units that offer personal space and independence. Common spaces including restroom facilities, laundry facilities, and social gathering spaces, which support physical and social needs, can serve the broader community as well as those continually occupying the site. These common spaces allow the occupants to maintain and encourage social interaction and support networks. Other needed services such as food services, mental health counseling, and medical care will continue to be provided by Crisis Ministries, as it is an alternative and a supplemental shelter response.
## Program Summary

<table>
<thead>
<tr>
<th>Space/Function</th>
<th>Quantity</th>
<th>NSF/space</th>
<th>Total area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Dwelling Units</td>
<td>14</td>
<td>32-64</td>
<td>448-896</td>
</tr>
<tr>
<td>Flexible Living Space</td>
<td>3</td>
<td>varies</td>
<td>approx. 3808</td>
</tr>
<tr>
<td>Communal Spaces</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Restrooms/ Shower Facilities</td>
<td>2</td>
<td>168</td>
<td>336</td>
</tr>
<tr>
<td>Laundry Facilities</td>
<td>1</td>
<td>226</td>
<td>226</td>
</tr>
<tr>
<td>Fire Pit</td>
<td>1</td>
<td>122</td>
<td>122</td>
</tr>
<tr>
<td>Garden</td>
<td>1</td>
<td>4,487</td>
<td>4,487</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>9,427</strong></td>
</tr>
</tbody>
</table>
Individual Dwelling Units

<table>
<thead>
<tr>
<th>Space/Function</th>
<th>Quantity</th>
<th>NSF/unit (Sq. Ft)</th>
<th>Total area (Sq. Ft.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Dwelling Units</td>
<td>14</td>
<td>32-64</td>
<td>448-896</td>
</tr>
</tbody>
</table>

These are the living units for the long-term residents and are available on a first come, first serve basis. These provide minimal space for multiple functions such as sleeping, seating, dining, and personal storage. These units have the flexibility to double in size upon preference and privacy level. With an increase in size, there is a decrease in privacy. These units should be designed such that cross ventilation can be encouraged or prohibited.
This flexible living space offers an environment for those who are newly homeless, temporarily homeless, or also those who prefer a more “open” living environment. This space is universal, in that, many sorts of living arrangements can be implemented. This open space is designed with permanent fixtures for creating a make-shift living environment, (i.e. attaching ropes, bungee cords, tarps, etc).
Communal Spaces

<table>
<thead>
<tr>
<th>Space/Function</th>
<th>Quantity</th>
<th>NSF/unit (Sq. Ft)</th>
<th>Total area (Sq. Ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Restrooms/Shower Facilities</td>
<td>2</td>
<td>168</td>
<td>336</td>
</tr>
<tr>
<td>Laundry Facilities</td>
<td>1</td>
<td>226</td>
<td>226</td>
</tr>
</tbody>
</table>

These spaces are intended to be used by the occupants of the site, the transitory sheltered homeless, and any community members that might require the services. It is at the nearest proximity to the shelter, so that it is convenient for the sheltered homeless and the shelter staff who might be maintaining the facility. In this community space, a bulletin board can display opportunities that are available in the larger community such as advertisements for employment, notices of medical clinics, locally offered educational course, etc. The laundry facility should have two washers, two dryers, a folding table, and seating. The public restroom facilities should have two toilets, with one being ADA compliant. It should also have one shower with a dressing area. It is also recommended that lockers be provided for towels, personal belongings, cleaning supplies, etc.
<table>
<thead>
<tr>
<th>Space/Function</th>
<th>Quantity</th>
<th>NSF/unit (Sq. Ft)</th>
<th>Total area (Sq.Ft.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire Pit</td>
<td>1</td>
<td>122</td>
<td>122</td>
</tr>
</tbody>
</table>

This space offers the residents a designated area for fires. It is important to clearly identify this area for safety reasons. This space should provide a comfortable and protected zone that is suitable for use during the cold winter months. This area should be located in the public zone of the site so that it is perceived as accessible and available to the extended population. This space should offer a variety of seating options where residents and other community members can gather and socialize which supports and addresses the social needs of the inhabitants.
<table>
<thead>
<tr>
<th>Space/Function</th>
<th>Quantity</th>
<th>NSF/unit</th>
<th>Total area (Sq.Ft.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Garden</td>
<td>1</td>
<td>4,487</td>
<td>4,487</td>
</tr>
</tbody>
</table>

A garden space is provided for the resident, which offers an opportunity to learn new skills. This garden would be maintained by the residents themselves and the products would be consumed by the residents or possibly sold as a method of income. This garden attempts to create a partially self-sustaining environment for the residents.
DESIGN PROPOSAL

The concept of this proposal is an urban campground that where residents gain a sense of community and human connection. The built environment will allow residents to enjoy a much safer environment than the one they are currently occupying. This urban campground will offer things that the traditional Crisis Ministries homeless shelter cannot. This self-governed campground allows residents to have pets, have the option to cohabitate with spouses or intimate partners, and find a sense of place, privacy, and personal space.

This proposed campground would be owned by a non-profit organization, not unlike the Crisis Ministries, although their role would be primarily fiscal. The campground would be maintained, managed, and operated by the homeless themselves, in an effort to encourage and promote a self-governed environment. The homeless will take an active and pivotal role in their own lives, which places control back in their hands.
The existing context informed the overall layout of functions. The public and private zones of the existing site determined the function of the building based on privacy. The public functions consisting of restroom and laundry facilities are designed within the public zone of the site. These public elements align the very public street and are in close proximity to the Crisis Ministries shelter.

The dwelling shelters are located well within the protected zones of the site, which allow the surveillance opportunities to remain. The dwelling pavilions offer varying socialization. The dwelling pavilions are elevated from the ground to allow rainwater to pass underneath without compromising the comfort and quality of the sleeping bays. The proposed unitized concrete floor system offers durability, cleanliness, and the platform for the universal living space. Through conventional construction methods and found materials, a funnel-like shape intersected by a steel rod, creates a drainage outlet as well as a place to secure belongings, tie ropes, fasten tarps, etc.
This mechanism provides the transient or permanent resident a place to create makeshift housing.

62. Universal living environment
63. Flexible living space.
The roof configurations of the dwelling pavilions are such that water can be collected and harvested for irrigation of the garden and potentially serve the water demands of the restroom and laundry facilities. With the heavy rainfall in Charleston and the assumed limited water use of the population, this proposed self-sustained site is quite possible.

The sleeping bays themselves are quite minimal in size and scale. Stock dimensions of building materials were conserved, which creates a 4’ x 8’ space that is just size enough for sleeping and minimal storage. With the hinged doors, this space can be doubled in size, but the level of privacy is diminished given that one face is open to public.

The fire pit area is located northerly on the site. The vertical wall of the fire pit blocks and deters the cold winter winds from the north and cast a shadow to the north.
The gathering space is to the south of the wall where the sun is present and winds are still.

**Conclusion:** This architectural proposal is a straightforward, pragmatic response to the visibly homeless population in Charleston, SC. The homeless lack proper protection from the elements, lack privacy and personal space, and lack a secure environment. This architectural response provides a living arrangement on a site that is already occupied by the homeless, therefore has already proven to be ideal. Through strategic placement on the site, the dwelling pavilions offer natural surveillance opportunities and create a clear demarcation of private and public zones. The private zones are further delineated into open living spaces and individual sleeping bays, which offer personal space and create a sense of territoriality. This proposal identifies the visibly homeless population as one in need of emergency housing relief and utilizes common strategies used in relief housing efforts. The construction methods and materials are conventional, affordable, and readily available.
67. Final board-Site plan
DEFENSIBLE SPACE

1. LIVING PAVILION - 4 SLEEPING BAYS
2. LIVING PAVILION - 6 SLEEPING BAYS
3. FIRE PIT
4. GARDEN
5. FAMILY CENTER
6. MEN'S SHELTER
71. Final board- Walnut Street Elevation
72. Final board-Fire wall illustration
73. Final board-universal living illustration
74. Final board-preservation of existing paths
75. Final board-Gathering node at public functions
76. Final board-Restroom and laundry facilities
77. Final site model
80. Final model of sleeping pavilion

81. Final model of sleeping pavilion
CREDITS

1. google search
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BIBLIOGRAPHY


Ross, Niki. Personal Interview. 9 November 2003.


The United States Conference of Mayors. “Hunger and Homelessness Survey”