

DESIGNING FOR HUMAN NEEDS:  
A NEW MODEL FOR THE NEIGHBORHOOD OPEN-AIR CENTER

by

SARA FIORE

(Under the Direction of David Spooner)

ABSTRACT

The open-air center is one of the most common forms of development found in the American landscape. These developments, however, typically are designed to accommodate automobiles at the expense of the needs of humans and, in particular, pedestrians. In order to address this issue, this thesis identifies the effect of current open-air center designs on human needs and explains how designers can improve upon the current model. An exploration of general human needs theory and, specifically, literature that defines the relationship between human needs and the built environment help to create of a set of eight “theorems” that address human needs specifically within a neighborhood open-air center. Current case study models are examined with a focus on human needs. These findings are applied to a redesign of the Barnett Shoals corridor in Athens, GA. The goal of the thesis is to generate a new form and function for the neighborhood open-air center to serve as a model for future development.

INDEX WORDS: Human Needs Theory, Maslow, Neighborhood Open-Air Center, Strip Mall, Retrofit, Suburbia

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B.A., Boston College, 2003

A Thesis Submitted to the Graduate Faculty of The University of Georgia in Partial  
Fulfillment of the Requirements for the Degree

MASTER OF LANDSCAPE ARCHITECTURE

ATHENS, GEORGIA

2009

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## DEDICATION

This work is dedicated to my Grandpa Rocco, who passed down his love of nature, art, and creativity to me. If it were not for him, I may have never found Landscape Architecture in the first place.

## ACKNOWLEDGEMENTS

Many thanks to my major professor, David Spooner, as well as the members of my committee: Danny Bivins, Andy Fox, and Lara Mathes. I would also like to thank my fellow classmates who accompanied me on this journey, my parents who supported me on this journey, and Mike, who not only helped edit my thesis, but encouraged me to do my best.

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## CHAPTER 1

### INTRODUCTION

#### **Problem**

According to Dunham-Jones and Williamson, “Much of suburbia is due for a retrofit” (2009b, p. vi). Traditionally associated with families, sprawling suburbs make up about 75% of contemporary development and do not suit the demographic changes in our country (Dunham-Jones, 2009b, p. vi). According to the 2000 U.S. Census, singles and childless households make up a large portion of the suburbs. In addition, The American Association of Retired Persons report that more than half of non-drivers over 65 years of age, stay home because they are limited by transportation, and 71% said they would prefer to live within walking distance of transit (at cited in Dunham-Jones, 2009, p. 19).

Americans now realize how the suburban form is affecting our civic life, public health, and well-being. Sprawling suburbia intensifies our problems of rising oil prices, climate change, and water shortages. The urgency to reduce greenhouse gases, expand public space, provide diverse housing options, and save land at the periphery of cities, have created a movement for change of sprawling development patterns of suburbs into less auto-dependent, human-focused places. Is there a way we can invigorate these places to become landscapes and structures that will create a sense of place, positively engage with the environment, reengage community, and most importantly satisfy human needs?



Figure 1-1: Typical Strip Corridor Filled with Open-Air Centers ([www.rte50.com](http://www.rte50.com))

Neighborhood open-air centers, a.k.a. strip malls, can be found in almost every city and suburb of the United States. “As a product of the streetcar, the automobile, and private speculation in land, they are one of America’s unique as well as deleterious contributions to the urban form” (as cited in K. Lynch, Banerjee, & Southworth, 1990, p. 579). Strip malls are very recognizable and line countless highways and main arteries of our road system. Typically, they are not aesthetically pleasing, do not fit into the context of the surrounding area, and are characterized by noise, confusion, monotony, and inhospitality to pedestrians (Figure 1-1).

A major root of the problems associated with strip malls is that they are designed to be accessed via automobile. As a result, neighborhood open-air centers often lack connectivity with surrounding neighborhoods, as evidenced by the dangerous traffic patterns surrounding the centers and absence of continuous sidewalks. The need for a car creates problems for children, elderly, and the poor. Many people choose to drive even if it is only a short distance from their home, because of the lack of connectivity. This kind of sprawling development adds to the health problems of Americans; sedentary lifestyles

of today have greatly increased the prevalence of obesity and type 2 diabetes (Frumkin, Frank, & Jackson, 2004).

There are many other problems associated with open-air centers. The drive-in culture of the open-air center weakens the sense of community within a neighborhood. As a result, local residents have less of a chance to create connections with their neighbors and increase social capital within the neighborhood. In addition, open-air centers also have negative environmental impacts. The enormous amount of pavement dedicated to the large parking lots necessary to strip malls in the U.S. is extremely detrimental to the quality and quantity of stormwater runoff that they produce. Finally, open-air centers lack a history and a sense of place. They do not stand out as something unique and special. Overall, these issues negatively affect the quality of life of their users and do not satisfy human needs.

### **Purpose**

“The best urban places attract people by the complex and cumulative effect of all their activities and spaces. In other words, the sum is greater than the parts” (Dunham-Jones, 2009a, p. 59). Philosopher Michael Walzer (1995) has called this type of space, an “open minded space,” where a diverse mix of people can coexist, and a diverse mix of functions can happen at the same time. Unfortunately, developments built after 1945, the first-ring suburbs, have been lacking this kind of space. Instead, they are full of “single-minded spaces” that are designed for a single purpose and do not embody any true public areas. These types of spaces cause a sense of urgency, encouraging people to move through the space quickly without stopping (Walzer, 1995). In short, these spaces are not sensitive to human needs.

This thesis attempts to ameliorate such problems in suburbia by identifying the missing human needs components in neighborhood open-air centers and explaining how designers can improve upon the current model. The existing form of an open-air center does not cater to the individual, but may be used as the foundation for a new “human” realm. According to Smiley, “The suburbs will not all become dense in the same way as traditional urban centers, nor will the car spontaneously disappear” (2002, p. 7). At best, the new model will accommodate human needs and the automobile, as well as incorporate new and adaptable uses while maintaining the suburban ease of shopping. “As our culture changes, we need to envision other models for creating public space, forms of urbanism that don’t fully exist yet (Smiley, 2002).

### **Argument and Questions**

The central question of this thesis is:

- How can human needs theory inform the redesign of an open-air neighborhood center?

The necessary sub-questions are:

- What is human needs theory?
- What characteristics within the built environment affect and support human needs?
- How can human needs theory be used to specifically address the problems in neighborhood open-air centers?

### **Methodology**

This thesis examines scholarly work on general human needs theory and, specifically, literature that defines the relationship between human needs and the built environment. This thesis builds on the existing scholarly work to create a set of

“theorems” that address human needs within a neighborhood open-air center. The theorems identify current problems within open-air centers and aim to alleviate the problems via human-centered solutions. They are presented in a loose format to provide room for creativity and individuality. Additionally, four case studies examine applications of the constructed theorems within the built environment and help to inform the redesign of an open-air center in Athens, GA.

## **Process**

Chapter one contains the introduction. Chapter two defines human needs in the context of existing scholarly models of human needs theory, as well as human needs theory in relation to the built environment as defined by designers. Chapter three provides a brief history of sprawl, and a thorough examination of the history, nature, and form of a neighborhood open-air center. Chapter four introduces eight theorems that address the problems discussed in chapter three and provide human needs focused solutions for open-air centers. Chapter five evaluates and discusses four case studies (Mashpee Commons, Cape Cod, MA; Saffron, Sammamish, WA; Uptown District, Hillcrest, CA; Santana Row, San Jose, CA) that have been recognized as “successful” redesigns of neighborhood open-air centers and compares them to the provided theorems. Chapter six includes a redesign of a local open-air center in Athens, GA and chapter seven contains the conclusions of this thesis and suggestions for further study.

## **Definition of “Neighborhood Open-Air Center”**

This thesis focuses on the “neighborhood open-air center.” According to the International Council of Shopping Centers (ICSC), an open-air center is an attached row

of stores or service outlets managed as a unit. It has on-site parking that is located in front of the stores with unenclosed common areas. Open canopies may connect the storefronts, but it does not have enclosed walkways lining the stores. Common variations of the open-air center include linear, L-shaped, U-shaped, Z-shaped, and cluster forms. The linear form (Figure 1-2) is most commonly associated with neighborhood and community centers. Historically the open-air center has been referred to as a strip center, commercial strip, or strip mall (ICSC, 2004).



Figure 1-2: Sketch and Images of a Typical Strip Mall/Open-Air Center (Southworth, 2005).

According to Lynch, Banerjee, and Southworth (1990), commercial strips or open-air centers are linear shopping developments along arterial streets or highways. The activities along them are oftentimes commercial, although sometimes office, residential and light industrial uses can also be found. All of these uses front directly onto the arterial road and the strip is usually one parcel deep on each side of the street. They are unrelated in function or form to their neighboring activities and adjacent land uses – usually residential.

An open-air center designed to provide convenience shopping for the daily needs of consumers living in nearby neighborhoods is specifically called a neighborhood center.

Typically these types of centers have an anchor store that supports the other stores in the center – almost half are anchored by a supermarket, while a third have a drugstore as their anchor. The form of a neighborhood center is usually a straight-line strip with no enclosed walkway or mall area and parking located in the front. The center may have a canopy to protect users from weather or to provide some cohesion to the design. The typical neighborhood open-air center is used for convenience by residents within about a three mile radius and it contains about 30,000-150,000 square feet of retail space located within a three to fifteen acre parcel (Table 1-1) (ICSC, 2004).

This thesis focuses on the open-air neighborhood center as opposed to other shopping center formats, such as regional malls or outlet centers for a variety of reasons. Large shopping centers and malls are their own entities, completely separated from their surrounding area, and thus internally focused and cut off from surrounding development by vast parking lots and rings of cars. They act as meeting places for a community of drivers, but lack any connection to surrounding development. In addition, the shopping mall retail space precludes traditional and essential neighborhood stores which cannot afford high rental rates to be located there (Kevin Lynch, 1981, p. 395-296).

Unlike the classic shopping mall, the open-air center is located closer to residential sites, usually bordering the edge of neighborhoods, thereby providing greater potential for walkable connections. Neighborhood centers also serve people on a daily basis for errands, meaning they are better suited for chance encounters and connections between nearby residents. They are also plentiful, highly visible, and of a smaller size, all of which make them appropriate for a new, more urban model that would better fulfill human needs.

Table 1-1: Shopping Center Definitions for the U.S. (ICSC, 2004)

TYPE OF SHOPPING CENTER	CONCEPT	SQUARE FEET (INCLUDING ANCHORS)	ACREAGE	TYPICAL ANCHOR(S)		ANCHOR RATIO*	PRIMARY TRADE AREA**
				NUMBER	TYPE		
<b>MALLS</b>							
Regional Center	General merchandise; fashion (mall, typically enclosed)	400,000-800,000	40-100	2 or more	Full-line department store; jr. department store; mass merchant; discount department store; fashion apparel	50-70%	5-15 miles
Superregional Center	Similar to regional center but has more variety and assortment	800,000+	60-120	3 or more	Full-line department store; jr. department store; mass merchant; fashion apparel	50-70%	5-25 miles
<b>OPEN-AIR CENTERS</b>							
Neighborhood Center	Convenience	30,000-150,000	3-15	1 or more	Supermarket	30-50%	3 miles
Community Center	General merchandise; convenience	100,000-350,000	10-40	2 or more	Discount department store; supermarket; drug; home improvement; large specialty/discount apparel	40-60%	3-6 miles
Lifestyle Center	Upscale national chain specialty stores; dining and entertainment in outdoor setting.	Typically 150,000-500,000 but can be smaller or larger	10-40	0-2	Not usually anchored in the traditional sense but may include book store; other large-format specialty retailers; multi-plex cinema; small department store.	0-50%	8-12 miles
Power Center	Category-dominant anchors; few small tenants	250,000-600,000	25-80	3 or more	Category killer; home improvement; discount department store; warehouse club; off-price	75-90%	5-10 miles
Theme/Festival Center	Leisure; tourist-oriented; retail and service	80,000-250,000	5-20	N/A	Restaurants; entertainment	N/A	N/A
Outlet Center	Manufacturers' outlet stores	50,000-400,000	10-50	N/A	Manufacturers' outlet stores	N/A	25-75 miles

\*The share of a center's total square footage that is attributable to its anchors; \*\*The area from which 60-80% of the center's sales originate.

## CHAPTER 2

### HUMAN NEEDS

#### Introduction

This chapter examines the concept of human needs and their relationship to the design of the built environment. A literature review of human needs models presented by well-known psychologists (Maslow, Steele, Cantril, and Leighton) defines universal human needs and provides background on the subject. The chapter then proceeds to look at another set of scholars (Deasy, Carr et. al, and Lang) who have translated human needs using “design” language into categories that correspond to the built environment. Later, in chapter four, the two literature reviews are used to create a set of eight theorems specific to neighborhood open-air centers for use as an analysis tool in the redesign of open-air centers.

#### Human Needs Theory

Modernists always used the slogan, “form follows function,” but what functions can the built environment serve? “A powerful way of considering these possibilities is through an understanding of human needs,” instead of focusing solely on the operational functions of a building or landscape (Lang, 2007, p. 213). Contemporary urban design has not strayed far from the concept of functionalism of the Bauhaus, the de Stijl movement in Holland, and the Rationalism of Corbusier which generally meant efficiency in the movement of people, building construction, and planning (Trancik,

1986). Functionalism was seen as hygienic, economic, and convenient while the aesthetic quality of design became secondary (Lang, 2007, p. 213).

Modernism emphasized “too narrow a definition of the human being, too simple a model of people and life, and a strong anti-urban bias, in lieu of a more balanced approach that could create environments both functional and humane at the same time” (Lang, 2007, p. 214). According to Lang, “A functional environment is not simply one that meets people’s needs for ease of movement and access to sunlight, but one that meets the broad ranges of needs of many diverse people and the needs of their supportive machinery” (2007, p. 214). A more balanced model of human needs is difficult to define, necessitating a thorough literature review of notable scholars in the field.

Even though human characteristics seem to be individualistic, there are overarching needs within mankind. A number of scholars have created human needs models that try to define and categorize human needs. American psychologist Abraham Maslow’s model is widely accepted and arguably the most-well known of all human needs theory. In his “theory of human motivations,” Maslow identifies a five-stage hierarchy of basic human needs: physiological needs, safety needs, belongingness and love needs, esteem needs, and self-actualization needs (Figure 2-1). It is a “holistic-dynamic” theory that expands on the work of John Dewey and the Gestalt theory.

Maslow’s model functions on the idea of prepotency: the most prepotent, or urgent need, will monopolize consciousness until it is satisfied, and then the next level of prepotency will take precedence. Basic physiological needs must be met before the higher needs, such as esteem and self-actualization can be met. Even though Maslow presents these needs in a hierarchy, they are very complex and interrelated. Not everyone

will order their hierarchy in this way, and society and culture play a large role in how people interact with their needs (Maslow, 1954).

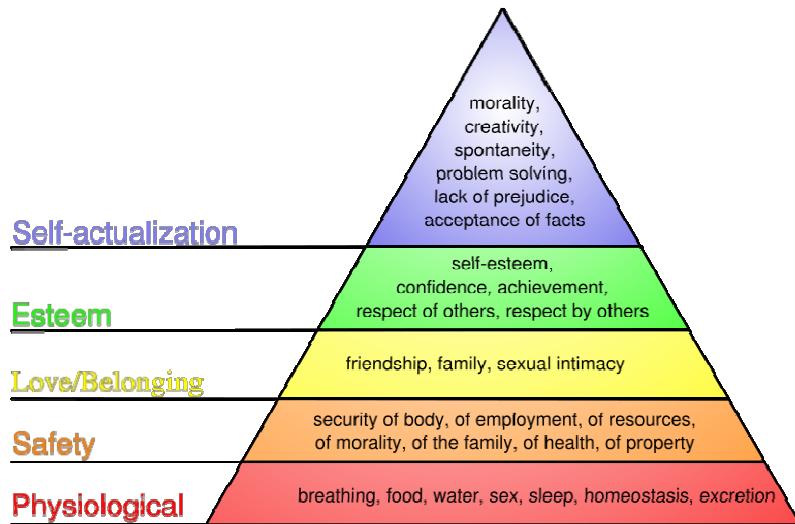


Figure 2-1: Maslow's Hierarchy of Human Needs (WordPress.com, 2009)

Physiological needs are the most necessary and basic of all human needs for survival such as air, water, food, sleep, sex, etc. “A person who is lacking food, safety, love and esteem would most probably hunger for food more strongly than for anything else” (Maslow, 1954, p. 82). Most design issues do not deal directly with these needs, but extensions of the need for survival such as comfort and health. These needs must be met before any other human needs are considered, and homeostasis, or a constant normal state, must be maintained in order to move to the next hierarchy of needs (Lang, 1994).

The next need he addresses is safety. According to Maslow, “The healthy, normal, fortunate adult in our culture is largely satisfied in his safety needs” (Maslow, 1954, p. 87). By looking at the child to determine the most basic safety needs in humans, Maslow determines that humans desire a predictable, organized and orderly world. In the built environment, safety needs are met when there is no threat of physical harm from natural

elements, other humans, and other elements, such as cars, or unsafe construction. The other form of safety is more psychological. Humans want to know where they are, feel safe in the social atmosphere, and feel in control of a situation.

When both physiological and safety needs are met, the next set of needs to be addressed involve affiliation. Belongingness and the need for love are included in the need for affiliation. These needs can be met by being a member of a social group. If people feel a sense of belonging within their community, their need for affiliation will be met. In addition, people can feel affiliated with a place: “The symbolic and aesthetic of the places we inhabit is fundamental to our individual and group identities” (Lang, 1994, p. 159).

Esteem needs emerge once the need for affiliation has been fulfilled. According to Maslow, “All people in our society (with a few pathological exceptions) have a need or desire for a stable, firmly based, usually high evaluation of themselves, for self-respect, or self-esteem, and for the esteem of others” (1954, p. 90). Through achievement, independence, confidence, competence, freedom of self-expression, as well as through reputation or prestige, esteem needs can be met, providing “feelings of self-confidence, worth, strength, capability, and adequacy, of being useful and necessary in the world” (Maslow, 1954, p.90- 91). Esteem needs are manifested in design via symbolic aesthetics, personalization, territorial control, and artistic expression of a particular group (Lang, 1994, p. 160).

The need for self-actualization refers to a “man’s desire for self-fulfillment and can be satisfied by becoming everything that one is capable of becoming” (Maslow,

1954, p. 92). Carl Jung (1968) has called this need “individuation” which is the process striving toward individuality and self-realization.

Maslow’s hierarchy is fundamental in the study of psychology and most designers who are concerned with human needs go back to Maslow’s model. His hierarchy succeeds in defining universal needs for humans.

Greatly inspired by Maslow’s theory of basic human needs, Fred Steele categorizes human needs into six functions the environment serves for people: security and shelter, social contact, symbolic identification, task instrumentality, pleasure, and growth. The framework of his theory outlined in his book, *Physical Settings and Organization Development*, is focused around organizational development for offices and businesses and the goal to “indicate ways which physical environmental changes can be used as a means for starting or supporting social system changes” (Steele, 1973, p. 4). Steele recognizes there is a disparity between human needs and our settings and posits that physical setting and social behavior must complement each other in order for both to be successful. He writes, “The crisis here is the lack of fit between needs and settings, and it is much more subtle than poisoned water or air” (Steele, 1973, p. 4).

Steele’s first environmental function, for shelter and security needs, correspond to Maslow’s first and second categories, and encompasses a person’s “geophysical location” such as temperature, weather, and nearby wildlife, as well as “sociopsychological elements” such as noise, large crowds, and dangerous threats of people (Steele, 1973, p. 26). His second function of the environment, social contact, is similar to Maslow’s idea of affiliation. The arrangement of facilities, the locations of people in relation to one

another and to activities, and the amount of mobility all play a part in the amount of social contact there is in a place (Steele, 1973, p. 33).

Symbolic identification, function three of Steele's environmental categories, is the information the setting conveys about the people or groups that use and are connected to the place. The physical location of a facility and the attributes of the place can tell a lot about the place itself. A place can be considered a "status symbol" for a group or individual or a way to "identify interests, values, personal tastes, interpersonal style, etc." (Steele, 1973, p. 54).

Task instrumentality, function four, focuses on the environment's ability to accomplish tasks being performed in them. It looks at the size, quality, features, sensory conditions, flexibility, and activities happening in a certain location. Function five, pleasure, looks at the extent to which settings provide pleasure to its users. Finally, function six, growth, looks at the ability of the physical setting to promote growth within the people who use the place. Is the setting stimulating? Does it promote visibility of who things work? Is it adaptable? Steele's model works very well for analyzing organizational development.

American sociologist, Hadley Cantril adds to Maslow's and Steele's work by focusing on what motivates humans in different cultures. His most relevant contribution to human needs theory is a "self-anchoring striving scale" that provides a technique for determining what characteristics are unique to an individual, as well as and what that individual has in common with others. First, a person defines his own assumptions, perceptions, goals, and values on scale of 0-10. The top of the ladder is the best life he could live, while the bottom is the worst life he could live, according to his own

definitions. By analyzing correlative relationships between surveys taken from representative samples from the populations of various countries: Brazil, Cuba, the Dominican Republic, Egypt, India, Israel, Nigeria, Panama, the Philippines, Poland, the United States, West Germany, and Yugoslavia, Cantril presents a unified system that finds a common ground of needs for humans in general. His conclusion takes the form a list which represents “a statement of what seems to be the demands human beings everywhere impose on a society or political culture because of their very nature. For human beings have a genetically built-in design that sooner or later must be accommodated” (Cantril, 1966, p. 315). The list is as follows:

1. The satisfaction of survival needs.
2. Man needs a sense of both physical and psychological security to protect gains already made and to assure a beachhead from which further advances may be staged.
3. Man craves sufficient order and certainty in life to enable him to judge with fair accuracy what will or will not occur if he does or does not act in certain ways.
4. Human beings continuously seek to enlarge the range and to enrich the quality of their satisfactions.
5. Human beings are creatures of hope and are not genetically designed to resign themselves.
6. Human beings have the capacity to make choices and the desire to exercise this capacity.
7. Human beings require freedom to exercise the choices they are capable of making.
8. Human beings want to experience their own identity and integrity, more popularly referred to as the need for personal dignity.
9. People want to experience a sense of their own worthwhileness.
10. Human beings seek some value or system of beliefs to which they can commit themselves.

11. Human beings want a sense of surety and confidence that the society of which they are a part holds out a fair degree of hope that their aspirations will be fulfilled (Cantril, 1966, p. 315-322).

Similarly, in his book, *My Name is Legion*, sociologist and psychologist Alexander Leighton (1959) identifies 10 essential strivings in man: physical security, sexual satisfaction the expression of hostility, the securing of love, the securing of recognition, the expression of spontaneity, orientation in terms of one's place in society, the securing and maintenance of membership in a definite human group, and the sense of belonging to a moral order and being right in what one does. These 10 strivings are based on individual motivations, but come from a review of a wide variety of places. He says, "It has been noted that the objects for which people strive are enormous in number and diversity, and this makes it necessary to consider some way of organizing them into categories in order to achieve conceptual management" (Leighton, 1959, p. 146).

Leighton's work arises out of a desire to find out what characteristics of human beings lead them to anti-social and "malfunctional" behavior and can be used as a way to gauge psychological issues and concerns within an individual. Leighton asserts that if humans do not satisfy these strivings, it will lead to psychiatric disorder. These strivings, however, are not equally significant to all people and their relevance will vary throughout a lifespan.

Table 2-1: Matrix of Human Needs Models

Maslow (1954)	Steele (1973)	Cantril (1966)	Leighton (1959)
<i>Hierarchy of Human Motivations</i>	<i>Functions of Physical Settings</i>	<i>Patterns of Human Concern</i>	<i>Essential Striving Sentiments</i>
Physiological	Security and Shelter	The satisfaction of survival needs.	Physical security
Safety and Security	Social Contact	Man needs a sense of both physical and psychological security to protect gains already made and to assure a beachhead from which further advances may be staged.	Sexual satisfaction
Affiliation	Symbolic Identification	Man craves sufficient order and certainty in life to enable him to judge with fair accuracy what will or will not occur if he does or does not act in certain ways.	The expression of hostility
Esteem	Task Instrumentality	Human beings continuously seek to enlarge the range and to enrich the quality of their satisfactions.	The expression of love
Self-Actualization	Pleasure	Human beings are creatures of hope and are not genetically designed to resign themselves.	The securing of love
	Growth	Human beings have the capacity to make choices and the desire to exercise this capacity.	The securing of recognition
		Human beings require freedom to exercise the choices they are capable of making.	The expression of spontaneity
		Human beings want to experience their own identity and integrity, more popularly referred to as the need for personal dignity.	Orientation in terms of one's place in society and the places of others
		People want to experience a sense of their own worthwhileness.	The securing and maintaining of membership in a definite human group
		Human beings seek some value or system of beliefs to which they can commit themselves.	A sense of belonging to a moral order and being right in what one does, being in and of a system of values
		Human beings want a sense of surety and confidence that the society of which they are a part holds out a fair degree of hope that their aspirations will be fulfilled.	

Maslow, Steele, Cantril, and Leighton all provide excellent models of human needs (Table 2-1). These models are all based in the field of psychology and their findings seem to be abstractly related to design in the built environment. Malsow's human needs are presented in a hierarchy that begin at physiological needs and end with self-actualization. Steele's human needs focus around physical settings and are based on Maslow's hierarchy. Cantril presents a pattern of human concerns and explores human behavior around the world to gather his universal needs. Finally, Leighton presents his human needs as essential strivings that make up the mental health and well-being of humans. The following set of authors, Deasy, Carr et. al, and Lang, take these human needs one step further and specifically address them within the built environment.

## **Human Needs in the Built Environment**

The previous models approach human needs from the perspective of psychologists, whose results tend to take on an abstract form. Architect C.M. Deasy describes the potential importance of making such abstractions tangible in the built environment:

...there are many economic, technical and aesthetic considerations that shape the buildings we know; they in turn shape the behavior patterns of people who use them. To reverse this relationship, to start from an understanding of human motivation and let this concern shape the form, will require a profound alteration in the basic approach to design (1974, p. 40).

A thorough understanding of human needs and how they vary according to environment is, therefore, critically important to designing suitable spaces for people. Several scholars including Deasy, Carr, and Lang have taken on this challenge and attempted to create models that integrate human needs theory into design of the built environment.

Expressed in the terminology of the design field, and based on Maslow's hierarchy of human needs, Architect C.M. Deasy derives a list of motivating factors in human nature that are remnant to the built environment, particularly in buildings, and can be manipulated by designers. His list is as follows:

1. Friendship Formation
2. Group membership
3. Personal space
4. Personal status
5. Territoriality
6. Communications
7. Cue searching
8. Personal safety

First on Deasy's list, friendship formation can be influenced by a designer through the configuration of buildings and their grounds. The location of stairs, parking, activities, and pathways can determine the amount of chance encounters between the building's

users (Deasy, 1974, p. 19). Group membership will take place if there are locations for groups to gather. A designer can create gathering spots or seating areas to help these memberships form. Personal space and, similarly, territoriality, can be created by the designer if they are conscious of buffers and spatial relationships in their designs. Personal status can be portrayed by the image a place communicates to a viewer. Communications and cue searching involve information, signage and wayfinding. Finally, personal safety can be achieved through the elimination of hazards, and being conscious of pedestrian safety. Deasy feels that designers aware of these factors can improve human environments. He states:

If the design professions seriously accept a commitment to make life better for their human clients, they cannot avoid the responsibility of creating situations where these clients perform at their best because of their environment rather than in spite of it (Deasy, 1974, p. 11).

Another classification system, created by Carr et. al, (1993) recognizes the importance of addressing human needs in public spaces: “Places that do not meet people’s needs or that serve no important functions for people will be underused and unsuccessful” (Carr et al., 1993, p. 92). He separates the human needs that must be addressed in public spaces into five categories:

1. Comfort
2. Relaxation
3. Passive engagement with the environment
4. Active engagement with the environment
5. Discovery

Carr et al. defines what human needs are in public places. The basic need of comfort refers to the need for food, drink, shelter, protection from the sun, and “sittable space” that is comfortable, properly oriented and suitable for people-watching (Whyte,

1980). Comfort dictates the amount of time people will want to remain in a place; the more comfortable, the longer people will linger. Social and physiological comfort provides a sense of security. Another issue related to comfort is the need for upkeep and maintenance as well as the need for toilets (Carr et al., 1993).

“Relaxation is distinguished from comfort by the level of release it describes” (Carr et al., 1993, p. 98). A relaxing place will provide a contrast to adjacent uses and separation from vehicular traffic. In addition, natural elements such as water and trees can help promote relaxation.

Passive engagement describes a passive encounter with the environment such as people-watching. “What attracts people most, it would appear, is other people” (Whyte, 1980, p. 80). Other people attractors that passively engage people are cafés, special events, street performers, “stage” areas, physical features such as public art, an interesting building, or just good views.

Active engagement with the environment includes such occurrences such as an encounter with a piece of artwork that will culminate in “triangulation,” where that feature “provides a linkage between people and prompts strangers to talk to each other” (Whyte, 1980, p. 94). Other examples of active engagement include socializing and meeting with friends and neighbors and participating in what Jane Jacobs calls the “life of the street:” play areas, seating for face-to face interaction, recreation opportunities, and activities for exercise, experience adventure and challenge. According to Carr et al. “people need to be able to test themselves, intellectually and physically, or they lose interest” (1993, p. 1240).

Finally, discovery is the desire for stimulation and exploration. Places that include discovery enable “opportunities for new experiences, new vistas that excite, educate, and delight.” Educational exhibits, outdoor learning centers, new landscapes and interesting wildlife can provide new experiences. Overlooks and unique land features can provide new views that will inspire and encourage investigation of the environment.

Jon Lang (1994) also explores the relationship between human needs and design, creating a complex web diagram that illustrates connections between human needs and design concerns. The diagram (Figure 2-2) can be used to help guide design of the built environment.

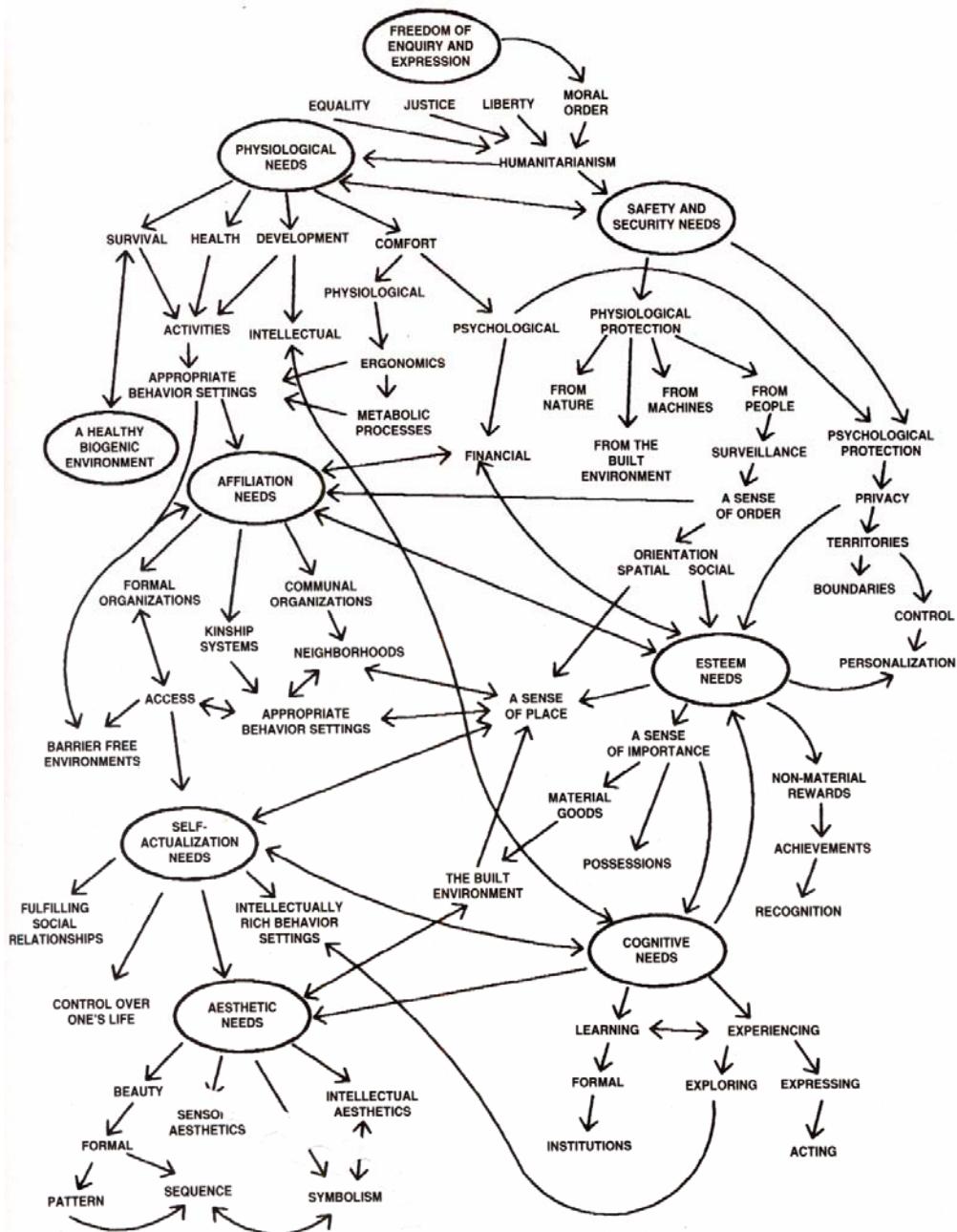


Figure 2-2: Lang's Hierarchy of Human Needs and Design Concerns  
(Lang, 1994, p. 157)

Each circle in Lang's web corresponds to one of Maslow's categories of human needs.

Lang then expands on each human need and gives examples that support each category.

Lang's diagram makes apparent the amount of overlap and interconnectedness between the human needs categories and it has proved to be a useful tool for human needs theory.

Deasy, Carr et. al, and Lang all provide helpful models that further explore the fundamental human needs by relating them to the built environment. They each define over-arching needs that can be applied to humankind in general and give explanations as to how the needs can be addressed within the built environment.

## **Conclusion**

Chapter two gives insight into basic human needs as each scholar studied in this section categorizes seemingly individualistic human needs into universal requirements. Maslow, Steele, Cantril, and Leighton all provide models of human needs based in psychology. They are all adequate models and each have something to offer, but this thesis will focus on Maslow's hierarchy of human needs for reason that, and as shown by my research, most subsequent scholars have used his model as the foundation of their own work. Maslow's hierarchy is the clearest and most simplified version of all the researched models, and will best suit this thesis's purpose.

Deasy, Carr et. al, and Lang, take these human needs one step further and specifically address them within the built environment. This thesis will build off of the work of these three authors and relate human needs to the specific problems of the neighborhood open-air center. The following chapter will focus on the history of the open-air center with the aim of defining its problems associated with human needs.

## CHAPTER 3

### HISTORY

#### **Introduction**

The section of this chapter provides a brief history of suburban sprawl and related history of shopping, as it transformed from pedestrian-friendly, community-oriented Main Street, into its current suburban, auto-dominant model, featuring the open-air center.

#### **History of the Open-Air Center**

The open-air center is a primary shopping component within the “suburban sprawl” that characterizes development in the United States today. Suburban sprawl is defined by the Sierra Club as “irresponsible, often poorly-planned development that destroys green space, increases traffic and air pollution, crowds schools and drives up taxes.” Americans today view strip malls or open-air centers as a fact of life, but how did they come to be?

The first key to understanding the origin of the neighborhood open-air center comes from understanding the process of urbanization and then, sub-urbanization within the United States. The physical form of American shopping is directly related to the location, organization, and density of residential development patterns. Neighborhood open-air centers are the result of an evolutionary process from an agriculturally centered society based around Main Street, to the sprawling suburbs which center around the

automobile and are prevalent today (Andres Duany, Plater-Zyberk, & Speck, 2001; Kunstler, 1996; Langdon, 1994).

The American economy molds the country and its residential forms. First, during the 18<sup>th</sup> century, agriculture was the primary engine of the U.S. economy. As a result, most people lived spread out on farms in rural areas. As the economy shifted from agricultural to industrial manufacturing jobs increased and were based in cities. By 1920, for the first time in American history, more Americans were concentrated in cities versus rural areas (Leinberger, 2008, p. 23). Eventually, the production and operation of cars drove the American economy. People were able to live away from their urban jobs and move into the suburbs. Americans loved the “freedom, flexibility, privacy, comfort, reliability, speed, sexiness, and individuality [the suburbs] offered” (Leinberger, 2008, p. 24). Suburbs, while more dense than rural areas and less dense than cities, allowed people to own individual plots of land with more privacy and access to “nature.”

Throughout each step in the eventual suburbanization process the dominant form of American shopping changed. Main Street was once the heart of most American towns; by the middle of the eighteenth century they were common and useful for trade and daily shopping. These corridors usually had shops on both sides of the road or were arranged around a central, public square. People tied their horses on hitches while they went into the store and were able to conveniently shop. As the railroad grew, so did the number of Main Streets in the U.S. Three- and four-story brick commercial buildings surrounding a village green was common (Liebs, 1995, p. 7-10). It was a place for the community to assemble for special events, a place to work, eat, and shop, a place to associate with friends or happen upon a chance encounter. It helped to strengthen and form a cohesive

community atmosphere. Main Street was the central spirit of a city and an essential place that provided necessities as well as comfort for its surrounding community. Similar to Main Street, cities of the past and present, also offer a dense framework of shops and stores in close proximity to where people reside.

Vast increases in the number and availability of automobiles greatly changed the shape of American shopping. The first automobiles were produced in quantity in 1901, but consumers still did most of their shopping along Main Street. It was not until the 1920's, when automobiles greatly increased in number and became faster and larger in size, did shoppers begin to outgrow Main Streets. They became congested with difficult to find parking (Liebs, 1995, p. 9-11). In order to accommodate the auto, curbs were pushed back, streets were widened, and traffic lights were introduced. Retailers moved away from the center and new retail strips began to form in linear concentrations along streetcar/bus lines; this was the first sign of the strip mall/open-air center (Liebs, 1995, p. 9-11).

These first attempts at creating auto-oriented shopping areas were called "Taxpayers" or "Taxpayer Strips" (Figure 3-1). Typically single-story retail buildings, they were built right up to the road and relied on on-street parking or walk-in customers (Liebs, 1995, p. 12-15). These linear commercial developments were clustered at former streetcar stops or along heavily trafficked roads. They included grocery stores, butchers, restaurants, printers, hardware stores, and candy stores. These proved popular to developers because rents were usually lower than downtown, many potential customers still lived nearby, and parking was less congested and closer to the shops (Liebs, 1995, p. 12-15).



Figure 3-1: Taxpayer Strip in Detroit, 1921 (Liebs, 1995, p. 13)

Despite their popularity, taxpayers were initially constructed as a short term solution for developers who owned the property along roads to cover their property taxes with revenue from quickly and cheaply constructed shopping areas. These developers anticipated that eventually residential density in the area would increase and the resulting increase in demand would allow for a larger development to replace it, hence the name Taxpayer (Liebs, 1995, p. 12-15). Even though these taxpayer strips were only supposed to “hold down land until it could be placed in more profitable, intensive use,” they prospered in spite of their initial stopgap nature. They survived because proponents of this idea did not realize how much influence the automobile would have on decentralizing the urban downtown center (Liebs, 1995, p. 14-15).

Catering to the automobile brought about new development requirements that shaped the form of taxpayer strips and brought shopping even further away from the density of Main Street. High demand for parking forced developers to create taxpayer blocks set back a car length from the sidewalk to provide pull in spots on the street. In

addition, large paved lots, curb-cut driveways, filling stations and diners at the rear of a property were conveniences added to development for the sake of motorists. Most importantly, residential densities never increased around the Taxpayer strips and instead, continued to expand at the same low-density patterns as there was never any pressure to further develop the Taxpayers into a denser form (Liebs, 1995, p. 14-15).

In many regards, these Taxpayers, often housing several retail establishments, were the direct precursors to the contemporary strip center. Some credit the Taxpayer Strip as the first strip center, but they were also more of an early form of land-banking than retail strategy ("Flip a Strip," 2009). Another significant development in the same era and precursor to the modern-day open-air center was Country Club Plaza developed J.C. Nichols of Kansas City, MO in 1922 (Figure 3-2). Purpose built for automobiles in the same mold as Taxpayers, Country Club Plaza however, was located six miles east of downtown and was envisioned as the economic attraction to a future residential community.

Nichols' Country Club Plaza derived its form from some of the main characteristics of Main Street. It retained the notion of retail facing the street and hid cars in a large structured parking garage that was screened from view. The Plaza had wide streets so that cars could park diagonally and buildings that were single-story to minimize traffic congestion (PPS). It had businesses and retail mixed together as well as large and small retailers. It was characterized by unified architecture, paved and lighted parking lots, and was managed and operated as a single unit (ICSC, 2000).



Figure 3-2: J.C. Nichol's Country Club Plaza (PPS)



Figure 3-3: J.C. Nichol's Country Club Plaza (PPS)

Nichols' Plaza is still popular today due to its pedestrian character (Figure 3-3) ("Flip a Strip," 2009). In fact, it is named as one of the *60 of the World's Great Places* (PPS) as listed by the Project for Public Spaces. Its popularity is a result of a mix of uses that attract a mix of people. It contains everything from everyday necessities to expensive

shops and it is interactive – you can touch the sculptures and sit with your friends, and enjoy outdoor entrainment such as jazz (Madden, 2007). Nichols also paid attention to aesthetics; the plaza contains fountains (a Kansas City tradition), murals, decorated tiles, and sculpture. There are no blank walls – only paintings or artwork. The buildings are Spanish in style and do not have the bland feeling that can result from a single developer controlling every aspect of a project ("Country Club Plaza," 2007). Though a step toward detached strip malls at the time, the Country Club plaza is more comparable to the kind of mixed-use centers communities are trying to build today because it combines retail, office, theatres, and housing in close proximity.

The modern day open-center derives influences from both the Taxpayer and Country Club Plaza. The difference between the planned nature of Country Club Plaza and a “decorous taxpayer block” was its “integrated structure and the enforced separation from other business development” (Longstreth, 2000, p. 136). “The contemporary strip mall is a hybrid between the vision of J.C. Nichols and the reality of the Taxpayer. Like the Taxpayer, the strip center follows the geography of suburban development, but like the Plaza they have multiple stores and are purpose-built” (“Flip a Strip,” 2009).

The first step toward contemporary open-air centers typical of the form seen today in America was Columbus, Ohio’s Grandview Avenue Shopping Center developed in 1928 by Don Casto (Figure 3-4). It had 30 shops and parking for 400 cars and was the first open-air strip shopping center to integrate parking into its design (ICSC, 2000). Similar to later strips, it was developed near the gates of the city so that the merchants would be able to have the first crack at incoming travelers. As such, they were called “approach strips” – a term applied to “linear urban commercial portals” (Liebs, 1995, p.

27). Responding to the influx of automobiles at that time, the Grandview Avenue Center had plenty of pull-in parking spots directly off the street and in front of the building.



Figure 3-4: Grandview Avenue Shopping Center ([www.ghmchs.org](http://www.ghmchs.org))

The Grandview Avenue Center model took on greater importance as several key pieces of legislation over the next twenty years combined to increase the rate of low-density suburbanization and therefore continue to make that model attractive to developers. Kenneth Jackson's book, *Crabgrass Frontier* (1985), states that the federal role in land use and policy was "enormous" and led to the gradual shift to the auto-centric American Dream. Housing, zoning, and transportation subsidies and infrastructure investments led to the failure of downtowns and the growth of suburbia. These events are what led to decentralization of activities such as work, shopping, home, school, and entertainment.

Specifically, the 1934 National Housing Act, essentially a housing loan insurance program by the Federal Housing Administration (FHA) and the 1944 GI Bill of Rights that provided loan guaranty for homes by the Veterans Administration (VA) for soldiers returning after World War II, encouraged single-family housing in the car-accessible

suburbs. Importantly, these plans did not allow for rehabilitation of existing urban homes or high-density attached housing, instead only low-density, suburban housing was federally insured and subsidized (Leinberger, 2008, p. 26). During World War II, there was a brief stoppage of auto production, but it was not long after the war before development started again. Postwar suburbs popped up where farms, fields, and open lands used to be. Subsequently, housing production exploded to meet the needs of the large number of soldiers returning from war.

Zoning codes also contributed to creating the suburban auto-oriented way of life. These codes were first implemented in 1916 in New York City as a response to health concerns resulting from the industrial economy's dirty and noisy factories and their proximity to other aspects of society. Light and air became the main concern of architects, planners and designers; buildings were built to stand alone, and high density places were seen as dark and dirty. Therefore, zoning became more regimented and created a strict separation of uses.

Federal investments in automobile infrastructure further cemented the direction of residential and shopping development in America. The Federal-Aid Highway Act of 1956, also known as the National Interstate and Defense Highways Act, initiated the construction of a comprehensive 46,837-mile system of roads that was finally finished in 1991. Built for many reasons such as defense, transport of goods and creation of jobs, the new highway system also contributed to the spreading out of development we see today (Leinberger, 2008, p. 27). With the highway system and the creation of suburban living, came the proliferation of the open-air center. It was meant to cater to drivers on the road.



Figure 3-5: Typical Neighborhood Open-Air Center  
[www.escalatormaintenancesociety.com](http://www.escalatormaintenancesociety.com))

The new extensive road system and the increase of suburbanization created numerous opportunities for approach strip developments in the mold of Grandview Avenue Center. The old Main Street ideas of pedestrian-oriented development became obsolete in the face of new auto-oriented development. These new shopping developments were characterized by large setbacks from the street as well as ever larger parking lots (Figure 3-5). The amount of parking dedicated to open-air centers grew so much over time that today it often encompasses around 80% of a strip mall total area (Dunham-Jones, 2009b, p. 63). This rededication of space to the automobile has come at the expense of human-scaled, pedestrian connections to adjacent communities.



Figure 3-6: Visual Clutter (<http://pricetags.wordpress.com/2007/08/10/strip-search/>)

The simple and cohesive aesthetic of Main Street was further compromised as the tenants of open-air centers shifted toward new types of restaurants and stores that created unsightly visual clutter (Figure 3-6). These types of establishments were geared toward attracting drivers passing by at high speeds. In 1962 well known franchises such as Wal-Mart, Kmart, and Target all started and established a national presence. There was also an increase of fast-food restaurants, and discount department stores during the 1970's recession. Shopping centers, including open-air centers, exploded in number and became commonplace in the American landscape; in 1964 there were 7,600 shopping centers, in the United States, by 1972, the number had doubled to 13,174 (ICSC, 2000). In addition, convenience stores flourished on the strip and grew from 25,000 to 45,00 between 1975 and 1985 (Dunham-Jones, 2009a; Jones, 1990).

The success of the suburban open-air center led to the economic demise of many downtown Main Streets. The average American downtown lost one quarter of its retail sales between 1972 and 1982 (Dunham-Jones, 2009a, p. 65). Simultaneously, major investors in real estate, such as Connecticut General, Equitable, Prudential, and Teachers

Insurance and Annuity realized they could incur greater revenues by holding equity rather than loans in real estate for the same risk (Dunham-Jones, 2009b, p. 65). They greatly influenced the mix of tenants toward national retail chains with top credit ratings. This strengthened the idea of mass consumerism and in the process lost the idea of a unique place (Dunham-Jones, 2009a, p. 65). Throughout the 1980's there was rapid spread of big-box discount stores and warehouse-style stores devoted to one type of product occurred. They were configured into "power centers" which are open-air strip shopping centers with acres of parking. This often displaced older shopping centers as well as local businesses (Dunham-Jones, 2009a, p. 65).

Eventually, a standard template was created for open-air center to appease real estate investors after the 1990's real estate downturn. The prior 1980's boom had been financed by savings and loans (S&L's) when institutions were making risky real estate ventures with minimal fiscal oversight. This eventually led to bankruptcy due to bad real estate loans that were taken over by the federal government. The Federal Reserve stopped funding real estate development between 1990 and 1992, therefore limiting construction in the country. It was not until real estate investment trusts (REITs) formed in 1993 that heavy development returned, but in a regulated manner. Wall Street did not want to trade "unique things" and therefore development was "commoditized" or made identical. Nineteen standard real estate product types, including the neighborhood retail center, were created. This is the main reason most new suburban development is similar, lacks character and is interchangeable (Leinberger, 2008).

Today, the open-air center remains one of the most consistent forms of the urban and suburban landscape. "They are ubiquitous and familiar to the point of invisibility;

they are the wallflowers of thousands of streetscapes that millions of people travel daily. I cannot grab a cup of coffee, buy a loaf of decent bread or have a good ethnic meal without going to a strip mall," says Susan Krane, director of the Scottsdale Museum of Contemporary Art, and the Flip a Strip Design Competition (2009). Although it is a flexible form that can be adapted to any site larger than an acre and is used as a profitable investment vehicle, current open-air centers are too similar and do not add to the vibrancy and variety of suburban life ("Flip a Strip," 2009).

Even though open-air centers are so prevalent, communities are realizing their negative impacts and trying to tame the spread of strip development. Many have adopted new regulations and policies such as new zoning ordinances, landscaping requirements, parking regulations, a limit on curb-cuts and form-based codes. In addition, many malls and open-air centers are closing. The ICSC forecasts that in 2009, store closings could exceed 3,100 in the first half of the year.

Current trends paving the way for new forms of open-air centers include innovations such as adaptive-reuse of old buildings and "retrofitting" dead or dying malls and centers into new, more flexible places that suit the community in which they are located. According to Ellen Dunham-Jones, "What's needed is for the public and private sector to be opportunistic and develop the 100 acres of prime mall space for mixed community use like schools, libraries and new housing" (as cited in Kavilanz, 2008). Realization for change has even inspired design competitions such as *Flip a Strip: New Ideas for Old Strip Malls*, a design competition sponsored by the Scottsdale Museum of Contemporary Art, where professional architects with five years of experience entered innovative ideas on how to handle the open-air center ([www.flipastrip.org](http://www.flipastrip.org)). Realizing

that something has been lost with the demise of Main Streets and the principles of its form is the first step in creating a new model.

## **Conclusion**

The brief history in this chapter follows the transformation of residential development patterns from rural, to urban, to suburban and, simultaneously, the transformation of shopping patterns away from Main Street and human needs to contemporary neighborhood open-air centers. As the automobile became more popular, the structure of retailing began to cater to the car and not to people. We see that today's open-air centers lack any kind of spirit and vitality that Main Street once had and present a variety of problems to their suburban communities. Comprehending the inherent problems with current open-air centers will aid in their rehabilitation into a new and improved form that considers both the auto and more importantly the human. The following chapter presents eight theorems that target the problems of open-air centers and aim to find solutions to these problems that will enhance the fulfillment of human needs. The theorems organize these problems into eight categories: Density and Activities, People Attractors, Connectivity and Movement, Public Realm and Street Life, Human Scale, Green Space, Character and Sense of Place, and Legibility. The categories identify what it is about the form of the neighborhood open-air center that is problematic for human needs, describe how humans are affected, and provide a solution to these problems.

## CHAPTER 4

### THEOREMS

#### Introduction

It is necessary for designers to address the deficiencies of open-air centers as the situation is becoming more and more urgent. In 2008, Dr. Arthur C. Nelson of Virginia Tech said, “there could be 10,000 dead or dying retail centers (regional malls, power centers, and neighborhood-serving malls) in the county, making them targets for redevelopment” (Leinberger, 2008, p. 125). There has already been action in redeveloping regional-serving walkable urban places, but according to Leinberger (2008, p.128), “Neighborhood-serving walkable urban places are the next spurt of walkable development...providing the bedroom communities that support the regional-serving places” with necessary pedestrian-oriented infrastructure. He asserts that “fifty, sixty, or even seventy percent of all pent-up demand for walkable urbanism will be satisfied in the suburbs. “The suburban town centers, the Greenfield towns, and the redevelopment of strip centers and malls will probably take the majority of the \$30 trillion of development that Arthur Nelson [in *JAPA*] forecasted will be built through 2025” (Leinberger, 2008, p. 128). The time for redevelopment is now, and we must discover new ways to link people to these centers of suburbia.

Christopher Alexander looked at the idea of city planning as the design of culture and the city as a system of standard situations that could be specified in a physical pattern (Alexander, 1969). In *Ekistics*, (1969) he gives careful consideration of the psychological

concerns of human nature. He says it is imperative to know about the “inner forces which a person is typically exposed to during the course of his life” (Alexander, 1969). Within the article, Alexander gives a “sketchy” set of patterns, a precursor to his famous work *A Pattern Language* (1977), that can be found throughout a city and how they solve the human needs presented by other scholars such as Leighton (1959) and Maslow (1954). Alexander believes that the environment can influence behavior and physiological needs.

This thesis agrees with Alexander’s aforementioned statement and uses a similar formula, to create a set of “theorems” that build on his pattern language by addressing the issue of human needs within suburban open-air centers. The human needs incorporated in the following set of theorems are derived from Maslow’s hierarchy of human needs because it is the most well-known of the human needs models and used as the classic foundation for newer models of human needs theory. To reiterate, Maslow’s hierarchy includes: physiological needs, safety and security needs, affiliation needs, esteem needs, and self-actualization needs. The following theorems address all those needs except for self-actualization, because it is implied that if the environment meets all of the other human need categories, self-actualization is more apt to occur. The theorems also build off of the work of the abovementioned scholars: Carr et al., Deasy, Lang.

The thesis uses the term “theorem” instead of “guideline” because in this thesis, the theorems function similarly to a mathematical statement which can be proved logically. In mathematics, a theorem has two parts: a hypothesis, which states the given facts, and a conclusion which states the property to be proved. In this thesis, the first half of the theorems contains the reality and facts of open-air centers, while the second half provides a solution to be proved.

Specifically, the format for the theorems include five parts: first (1.), in bold font, is the name of the theorem. Second, in italicized text, is a brief one or two sentence summary of the essence of the problem of the open-air center. Third, important definitions are defined. Fourth, the theorem thoroughly defines the problem by providing essential background and contributing context of the problem, and evidence of its validity. Fifth, is a brief summary of the suggested solutions. Sixth, it contains a list of the human needs and corresponding suggestions, both qualitative and quantitative, as to how to solve the specific problem. Following is the list of eight neighborhood open-air center theorems: Activities and Density, People Attractors, Connections and Movement, Green Space, Character and Sense of Place, Public Realm and Street Life, Human Scale, and Legibility. These categories emerged as a way to provide structure to the thesis and help the reader sift through the information provided for each case study and the design application. The categories were created from a combination of historical research, contemporary research, and personal experience.

## **Neighborhood Open-Air Center Theorems**

### **1) Activities and Density**

*A common concern with traditional neighborhood open-air centers is their low-density, sprawling form. They are characterized by large parking lots, single-use, one-story buildings and scattered layouts that all contribute to a lack of social interaction, pedestrian safety, and richness and diversity.*

**Definitions:** Density is a quantification of the concentration of development in a certain area including buildings, streets, walkways, stores, and people. Activity in a neighborhood center is defined by the degree to which land is used for different purposes.

Open-air centers today epitomize the separation of uses and decentralization of activities that are standard in the suburban landscape. The recent book *Retrofitting Suburbia* (2008), describes suburban form as having buildings that are set back in the landscape on large blocks and are usually dedicated to a single, private use of residential, retail, office, or industrial. In an attempt to keep residential areas clean and quiet, zoning changes over the last hundred years have created a distance between work and home which has led to the complete isolation of residential communities from both their shopping needs and workplaces. People moved away from the city to find cheaper land and houses at the edges of a metropolitan area, but soon found that distances between the necessities of suburban life proved to be expensive, with cars and gas needed to function and survive.

Neighborhood centers are typical of this development pattern. They are usually detached from other aspects of daily life, such as residential communities, civic buildings, or office complexes, and do not offer variety or flexibility of choices for users. Due to the influence of Real Estate Investment Trusts (REITs), tax designations for a corporation investing in real estate that reduces or eliminates corporate income taxes and in return 90% of their income is handled by investors, many open-air centers contain a very similar formula for the types of stores located there. Typical retailers in open-air centers generally operate only during regular business hours, leaving the centers unused for a significant portion of each day. Open-air centers are “single-minded” places (Walzer, 1995) without a well-rounded mix of users and diverse activities that create vitality and energy that people crave (J. Jacobs, 1961).

Low-density form also creates difficulty and danger for pedestrians. Buildings are located far apart from each other and rarely have good connections such as sidewalks or other walkways between them. This sprawling form of development leaves little room for pedestrians and, therefore, reduces interactions between people because they are always in cars. Long commutes to and from work have became necessary, expensive, and leave little time outside of work for leisure and socializing (Leinberger, 2008; Putnam, 2000).

### **Human Needs Solution:**

*Increasing the density in an open-air center – intensifying the concentration of development within a given area by incorporating a more diverse mix of uses, expanding the typical time of usage and the amount of people using the center at any given moment -- will increase health, safety, and vibrancy within the open-air center.*

**Physiological** – The densification of an open-air center can decrease unnecessary walking while simultaneously increasing safe, pleasant walking, as well as benefit human health in other ways. The densification of an open-air center can be accomplished by including two-story buildings, parking structures, and minimal surface parking, mimicking the principles that contribute to successful and interesting urban areas. The increase in height and concentration of buildings within an open-air center will bring uses closer together, and, therefore, decrease walking time for pedestrians using the center. Alexander recommends a four-story height limit for humans and that the ground area covered by building should not be greater than fifty percent of the site, although as little as two-story buildings will help to create vitality. The floor area ratio (FAR) should not be greater than 0.5 in a single story building, 1.0 in a two story, 1.5 in a three story and 2.0 in a four story building (Alexander, 1977, p. 474).

Increased density will also benefit the environmental and, therefore, human health within the center. Consolidating development in one area will increase energy efficiency, reduce resource consumption, create less pollution, preserve open space, support public transportation and reduce car travel, encourage social interaction and viability of community services, and enhance the viability of infrastructure such as parking garages (Llewelyn-Davies, 2000, p. 46).

**Safety** – Incorporating a mix of commercial, residential, and office uses that have varying hours of operation will invigorate neighborhood open-air centers, increase the amount of people in the center at all hours of the day, and, therefore, increase the safety of the area. Diverse patterns in opening hours will give the open-air center more of a 24-hour atmosphere. “The simple truth is that combinations of mixture of activities, not separate uses, are the key to successful urban places” (Montgomery, 1998). Having more people in an area at all times helps to create an environment of natural surveillance (Jacobs, 1961, Montgomery, 1998). This can be accomplished by incorporating residential units into the area. When residential units are added, “residents quickly assume ownership of the public realm; watching over streets, parking areas, and public spaces; noting any shortcomings in the appearance and maintenance of shops and infrastructure; and taking part in the life of the town center simply by carrying out their daily routines” says Charles Bohl of the Urban Land Institute. Such responsibility is also assumed by store owners who are also constantly in the area and have an equal stake in the well-being of the neighborhood center. The integration of commercial and residential uses can help to provide the synergy and critical mass for around the clock activity that enables neighborhood business to succeed (Schmitz, Scully, & Urban Land, 2006, p. 36).

**Affiliation** – “People attract more people” (Whyte, 1980), thus there will be a greater possibility of interaction and chance encounters with the inclusion of unique shops, eateries, and entertainment facilities, as well high quality outdoor areas and a diverse housing options. Increasing the density of an open-air center makes it easier for pedestrians within the center by creating shorter walking distances between a mix of uses as well improving the aesthetics of the walking route. In contrast to blank walls, vast open parking lots, and vacant areas, an interesting walk through a continuous and varied street frontage of retail, residential units, and even parkland creates a more accommodating and pleasant atmosphere for pedestrians. This pleasant atmosphere and the increased number of people attracted to it combine to help forge a connection or affiliation to the center itself for its users.

A compact area will “improve the viability of and access to community services” (Carmona, 2003, p. 183). The densification of neighborhood open-air centers allows an opportunity to feature community spaces and civic buildings the presence and use of which inherently build affiliation between users and the center.

**Esteem** – Fulfilling esteem needs in the center is a culmination of satisfying the physiological, safety, and affiliation needs of the potential users of the center. Once these needs have been fulfilled, the open-air center can become a reflection of its users and satisfy the desires of its tenants and consumers through the nature of its flexibility. A mix of uses in close juxtaposition with each other will provide a vibrancy that offers a variety of behavior settings that will allow for user choice which will, in turn, build a personal connection between the user and the center (Jacobs, 1961). Llewelyn-Davies (2000, p. 39) identified the benefits of incorporating mixed-use development as accessibility, social

diversity, efficiency of space, consumer choice, vitality and street life, increased viability of urban facilities and small business. In general, offering a variety of uses that are flexible, such as diverse housing options, and diverse store formats that will attract local stores as well as national chains will help to create the high density mix needed for success in an open-air center. As a result, these additional uses and increased flexibility will create a greater likelihood for activities to suit individual needs and lead to personalization of the center, which enhances esteem.

Most importantly, esteem needs of residents and users can be met by feeling pride in the fact that they are a part of moving the suburban form forward and improving on the ineffectual and commonplace models that currently exist.

## 2) People Attractors

*Currently, there is no reason for people to linger in open-air centers. There are no programmed activities, civic uses, or comfortable places for people to relax that would draw people to spend significant amounts of time in the open-air center.*

**Definitions:** People attractors are defined as “magnet” activities, events, or stores that make open-air centers a destination for people. People attractors are also small amenities for pedestrians and users of the open-air center that persuade them to linger in a space.

As a consequence of its “suburban form,” neighborhood open-air centers do not attract people to stay for extended periods of time. These centers cater to the automobile and are built for users to make a quick stop, instead of being a destination in their own right. Open-air centers generally do not include amenities such as meeting places, gardens, places for people-watching, street vendors, cinemas, theatres, civic buildings, wine bars, cafes, restaurants and other attractions that would attract a diverse crowd of

users and keep them there for an extended period of time. Outdoor performance areas, markets, music venues and other such active events would help to attract people to the open-air center as a destination. The typical stores of an open-air center not only limit the type of clientele that use the center, but also limit the hours the center is used to a general 9 to 5 format, thereby decreasing the amount of people in the center at all hours

Furthermore, open-air centers rarely have amenities that aid in efforts to retain users on the site for significant amounts of time. They lack benches, tables, shade structures, lawn, or other types of seating enclaves. Trees and vegetation that will attract people and provide shade, comfort and increased aesthetics are also missing from contemporary open-air centers. These types of amenities are where people could spend time in between visiting the main attractions within the center.

Modern day open-air centers are void of attractions that will draw people to the center as well as amenities that will entice people to linger in the space, greatly affecting the human needs of its users. Not having certain amenities such as benches for sitting or trees for shade tends to be unattractive and will not ease users' potential discomfort. A lack of a diversity of people at all hours of the day will lessen the sense of safety in the center. In addition, people will not feel affiliation with the space or be stimulated without the presence of other pedestrians (Whyte, 1981; Gehl, 1987).

In order for the open-air center to become a destination where people will want to linger, it is important to pay attention to people attractors. Getting away from the single-use nature of the open-air center and incorporating interesting uses would appeal to a diverse crowd and add vitality to the open-air center. Paying special attention to people

attractors will help to solve specific human needs concerns that plague today's open-air centers.

### **Human Needs Solution:**

*Inclusion of “people attractors” (magnet uses, as well as additional human amenities) will help to entice people to not only to visit the center but to remain there for an extended period of time.*

**Physiological** - The inclusion of certain types of people attractors will accommodate certain physiological human needs that are currently neglected by open-air centers. Once users are initially attracted to the open-air center via magnet uses such as large events, civic uses, festivals, markets, grocery stores, certain types of amenities can help to provide the comfort and interest to keep them there while satisfying physiological needs. Small details can contribute greatly to the best streets: gates, fountains, sculptures, kiosks, paving, lights, signs and canopies can all be important, at times crucially so. Allen Jacobs says, “details are the special seasonings of a great street” (1993). Awnings can also help to create intimate spaces along streets and provide shade and protection from rain. Other pedestrian amenities such as umbrellas, tables, chairs, trees, and green space will also provide comfort and keep people in a center. Comfort of the pedestrian is also reliant on the climate of the center. To maintain a comfortable climate, buildings placed to the north of their accompanying southern-facing outdoor spaces allow for maximum sun exposure and therefore the most pleasant temperature (Alexander, 1977, p. 616).

Benches are particularly important attractors for those that want to rest and relax. Jan Gehl insists: “Only when opportunities for sitting exist can there be stays of any duration” (1987, p. 157). It is important to locate seating parallel to pedestrian flows (Bentley, McGlynn, & Smith, 1985, p. 73). Project for Public Spaces (PPS) recommends

one linear foot of seating per thirty square feet of plaza area (Watson, Plattus, & Shibley, 2003, pp. 6.8-8). In addition, Whyte (1980) recommends the inclusion of primary and secondary seating opportunities, such as steps, walls or planters, along the way.

***Safety*** – People attractors such as magnet uses, will help to fulfill the characteristics of safe streets and places. According to Jane Jacobs (1969, p. 35) a safe street must have a clear definition of public and private spaces, “eyes on the street,” and a continuous flow of users. People attractors will bring more people to the open-air center creating a feeling of comfort and safety for its users. It is important to note that including leisure activities, such as theatres, gyms, cafes, and bookstores, in addition to necessary daily uses will increase the desire of people to come to the center and increase the amount of time they will spend there. These uses not only appeal to a variety of people, but their hours of use extend throughout the day and into the evening as opposed to traditional retail in open-air centers which tend to stick to the 9 to 5 format. This continuous flow of uses will further enhance the feeling of safety Jacobs describes.

***Affiliation*** – People attractors will help people to affiliate and engage with the space and associate with other people there. According to Gehl (1987, p. 13), high quality outdoor areas promote necessary activities as well as a range of optional activities that will occur because the place invites people to “stop, sit, eat, play, and so on.” In addition, Carr et al. (1993), explains that people go to places for a variety of reasons, including passive engagement and active engagement with the environment. Attractors for passive engagement are provided by fountains, views, public art, performances and other activities that help create a connection between the user and the space. Being around other people and the simple activity of people-watching can be an inspiration in itself.

Gehl (1987, p. 23) says, “The opportunity to see and hear other people can also provide ideas and inspiration for action.”

Active engagement, a more direct interaction with the environment, is created via conversation and mingling with others in an area (Carr et al., 1993). An important concept called “triangulation,” coined by Whyte (1980, p. 94), is the “process by which some external stimulus provides a linkage between people and prompts strangers to talk to other strangers as if they knew each other.” This interaction can be created through different elements such as benches, foundations, sculptures, or other conversation-provoking objects. People attract more people (Whyte, 1980, Gehl, 1987), and the inclusion of people attractors will help to create a sense of belonging, social networks, and serve as symbols of affiliation (Lang, 1994).

***Esteem*** – High quality environments will not only attract people, but create a feeling of esteem for its neighborhood users. When users of a place are proud of it and feel a sense of importance when arriving there, they will envision it as a symbol of status and an integral part of their community. “If the ground floors [of buildings] are interesting and varied, the urban environment is inviting and enriching. If the ground floors are closed or lacking in detail, the urban experience is correspondingly flat and impersonal” (J. Gehl, Kaefer, & Reigstad, 2006, p. 34). Being predominately one or two stories high, this concept is even more important for the typical neighborhood open-air center. Texture, such as good materials and fine detail, can also become an attraction to pedestrians. In addition, change in the rhythm of building facades, scale, and architectural details can make walks eye-catching and interesting (J. Gehl et al., 2006, p. 35).

In addition, an open-air center full of people will also create a sense of esteem for its users by enabling them to feel a part of a community. Experiencing other people represents a particularly colorful and attractive opportunity for stimulation” (Gehl, 1987, p.23). People offer a “wealth of sensual variation” that can invigorate the mind.

### **3) Connections and Movement**

*As they exist today, neighborhood open-air centers are not well-connected to their adjacent neighborhoods. They are fragmented places with no cohesive feeling or connective tissue to the community.*

**Definitions:** Connections can also be referred to as permeability, or “the extent to which an environment allows people a choice of access through it, from place to place” (Bentley et al., 1985, p. 10). Movement involves the ease in which pedestrians can travel throughout an open-air center.

As development patterns moved away from Main Street and toward auto-dependent suburbs, the land along arterial roads became desirable. Businesses corresponded to the road system and needed to be located where a great number of potential customers could reach them. Even if zoning allowed them to be within residential suburban areas, open-air centers would not survive because there is not enough connectivity to reach the amount of shoppers needed for a prosperous business. The arterial, through which residents are funneled in large numbers onto main highways and thoroughfares, is, therefore, the only viable place for businesses to thrive in a given area. Because property prices are higher along the arterial, open-air centers tend to favor deep pocket businesses such as fast food restaurants and chains. Walter Kulash, of Glatting Jackson Kercher Anglin, calls an arterial street with 50,000 drivers a day “a gift-

wrapped, gold-plated, irresistible invitation to develop strip commercial” (as cited in Langdon, 1994, p. 36).

The location of the open-air center on the arterial has had severe consequences for the movement to and from the center. Traditional street grids, which offer many connections and many driving choices, have given way in the suburbs to the arterial-based road system. Arterials are often congested, attached to subdivisions of winding roads and cul-de-sacs, and contain a volume of traffic usually greater than in a traditional street pattern. Arterials are dangerous for pedestrians and leave drivers vulnerable with little room to alter their route or bypass an accident (Langdon, 1994, p. 34). Transportation officials have encouraged the use of arterials for long-distance mobility, but are not particularly compatible with neighborhood open-air centers, which require many curb cuts and left turns across traffic, thereby increasing traffic and automobile accidents. In creating numerous curb cuts, open-air centers present problems for businesses and drivers:

Sacrificing the efficiency of vehicle movement to the success of local businesses might represent a rational choice; so might devoting the strip to smooth traffic flow. But by trying to do both, the strip has failed to do either well. The outcome has been cries familiar coast to coast: fix the traffic congestion! Give our city an entry and an identity! Replace obsolescence! Get rid of the ugliness! (Freedman, 2005).

The heavy traffic, fragmentation, lack of street connections, and lack of cohesion with the surrounding area resulting from the placement of countless neighborhood centers on arterial roadways greatly affects the social nature of a community. This type of fragmentation, a product of the clogged roadways resulting from the numerous curb cuts and large parking lots typical of arterials, undermines social ties within a community.

Fragmentation can also relate to the isolating nature of uncrossable arterial roads, which divide communities into insular subdivision pods. This is particularly evidenced by Donald Appleyard's study of San Francisco streets. Appleyard found that on a street with light traffic (around 200 vehicles an hour), people were much more likely to know who lived next door than if they lived on a heavily traveled street (as cited in Langdon, 1994, p. 41). "Few are the neighborhood places where people can go in hopes of striking up a conversation with others who have a little time on their hands" (Langdon, 1994, p. 16). New arterial roads are not acting as a community unifier, but act as dividers of community (Leinberger, 2008, p. 76).

In the suburbs, everything is geared to making drivers comfortable, to the detriment of pedestrian comfort. A suburban commercial parking lot is often two times the size of the actual store building. This makes it difficult to walk from building to building along a roadway of similar commercial buildings. "Placement of the parking matters greatly. Even relatively small gaps between buildings can kill people's willingness to walk farther and cause retail establishments to lose business" (Langdon, 1994, p. 183). In such environments, pedestrian movement is normally only poorly accommodated: crosswalk distances are long and without refuge; tree canopies are sparse or nonexistent; sidewalks are narrow (where they exist at all); and intermittent, bare-bones street furnishings convey the impression that no one would walk, bicycle, or sit at a transit stop there unless they had no other choice. This discouragement of pedestrian activity in our culture has led to health problems such as obesity; activities once done on foot are now done via car. Furthermore, it also excludes non drivers from society. Almost

30% of Americans (about 100 million) do not drive because they are too old, young, or poor (as cited in Leinberger, 2008, p. 69).

### **Human Needs Solution:**

*Strengthening connections through physical changes in both automobile and pedestrian access, as well as integrated modes of transportation, will help to make the open-air center a more human-focused place. Aesthetically pleasing, interesting connections in the context of the surrounding development are an even greater benefit to pedestrians.*

**Physiological** – Improving the connections of an open-air center, both to surrounding residential development as well as between uses within the center, will create more walking opportunities that positively affect the health and comfort of a pedestrian (Frumkin et al., 2004). This can be improved by creating a viable walking route for pedestrians living within a walkable distance of the neighborhood center. “For pedestrians, the connection between ‘places’ is important and successful public spaces are generally integrated within local movement systems” (Carr et al., 1993, p. 169). Sidewalks, bike lanes, and public transportation that is easily accessible to nearby neighborhoods are also necessary for pedestrian connections to be successful.

An increase in transportation options other than the automobile will increase flexibility of movement and help to improve physical health. Research has shown that people living in pedestrian-oriented areas are more likely to walk and be healthier. A 2003 study (Ewing, Schmid, Killingsworth, Ziot, & Raudenbush) demonstrates that an increase in urban sprawl was linked to an increase in weight.

Walking distance is another important component for creating pedestrian connections and movement within a center. According to Gehl, an acceptable walking distance is 1,600' but it needs to be high in quality and interesting (Jan Gehl, 1987, p.

138). Alexander argues similarly that a promenade should be about a ten minute walk or 1,500' in length and 20' wide, though it must have density to support it (Alexander, 1977, p. 173). In addition, scholars, such as Calthorpe (1993) and Duany (2003), recommend a ¼ mile walking radius as an appropriate measurement for the distance people will walk. Connectivity both within a neighborhood center and to its surrounds is essential in order to provide more opportunities to walk and thereby help improve the physical health of nearby residents.

**Safety** –Stronger connections to and from open-air centers increase the safety of pedestrians. According to Appleyard and Lintell's study (1972), areas with high traffic intensity reduce outdoor activities as well as neighborhood connections. Sidewalks, crosswalks, and other traffic-calming devices help to create a safer human environment.

Creating a well-connected grid of streets and paths is an effective means of increasing the safety within a neighborhood open-air center. Within such a grid, traffic can be distributed more evenly instead of being concentrated. Even so, a street hierarchy is important for the safety of both pedestrians and automobiles. There should be different sized streets according to their purpose and place within the context of the neighborhood. Allen Jacobs (1993) recommends using a boulevard to carry both through traffic and local traffic, and is appropriate where there are a great number of pedestrians who need to cross the street. Buildings should face the street and have pedestrian access from sidewalks. Jacobs' design has 2 parts: a through going realm and a pedestrian realm. The distribution of right-of-way between the pedestrian realm and the through-going realm is at least equal to create a strong pedestrian realm. A hypothetical boulevard width could be 100' (4 central lanes each 10.5' wide; access ways 16' wide, allowing for one passing

and one parking lane; two medians 5' wide; and sidewalks 8' wide.) His boulevard design can create a significant element within a city, and can also create a better atmosphere for pedestrians and residents in the area (A. B. Jacobs, 1993, p. 212). As one research study shows, residents on heavy-trafficked boulevards rated their living conditions very high as compared to medium streets where residents rated their living conditions as much lower, even though the boulevard's traffic volume was much larger (Bosselmann, 2008, p. 170). Other secondary roads should also be considered, such as the use of small alleys behind shops and townhouses that act as a "behind the scenes" area for deliveries, parking, or other "unsightly" but necessary activity.

**Affiliation** – Importantly, if the open-air center fits into the context of the adjacent neighborhoods and contains streets with less traffic, its users will feel a stronger sense of affiliation and identification with the locale. The Appleyard and Lintell street study (1972) also showed that neighborhood's have a stronger identity when it is protected from heavy traffic. "Not only do residents view the streets with heavy traffic as less personal, but they feel the same about the houses along the street." A neighborhood with light traffic, around 2,000 vehicles per day, with two-way traffic going 15-20 mph feels most comfortable to residents. This is not only applicable to nearby neighborhoods, but also to residences within potentially re-developed neighborhood centers as well as pedestrians using the center.

The more movement that takes place in and around a neighborhood open-air center, more physical and relationship connections will occur between people. Well-connected places are more likely to encourage movement, which can be defined as the permeability of streets and sidewalks. The permeability of a place can be enhanced

through the use of a grid format. According to Hillier (1996, p. 59), the “urban grid” represents a “mechanism for generating contact” that creates potential for optional activities in addition to the basic activity of travelling to and from the original intended destination. Hillier says that if a place is not well-integrated with other functions and attractions it will be underused. He argues:

It is this positive feedback loop built on a foundation of the relation between the grid structure and movement which gives rise to the urban buzz, which we prefer to be romantic or mystical about – but which arises from the coincidence in certain locations of large numbers of different activities involving people going about their business in different ways (as cited in Carmona, 2003, p. 172).

The aesthetic appeal of the walking experience within a neighborhood open-air center is vitally important to encourage walkers. The sequential experience (Cullen, 1961), or how users’ views of the center change as they move through its space, is an important part of the aesthetic nature of a walking environment. The “existing view,” or what the user sees at a certain time, and the “emerging view” – what reveals itself to the user over the course of a walk, play an important role in the sequence of experience (Cullen, 1961, p. 9). A place that provides a “sequence of revelations will be more exciting than one that does not” (Cullen, 1961, p. 17) will engage users in a constant set of interactions with the space and thereby foster a sense of affiliation with the space itself.

***Esteem*** – A pattern of streets provides an opportunity for users to take choose their own route which can make walking a personalized experience. An intricate but easy to understand grid network of streets will offer a variety of options for its users and create important connections within a center (Jacobs, 1961). When pedestrians take ownership

of their routes and feel in control by easily navigating and making conscious choices, their esteem needs are fulfilled.

Small blocks and connecting roads will offer greater choice as well as easy pedestrian movement. Jane Jacobs argued that blocks must be short so that streets and opportunities to turn corners were frequent (J. Jacobs, 1961, pp. 162-163). For example, Oak Park in Chicago has blocks between 500 and 600 feet long and half as wide – on average people walk a half mile (2,640 feet) in 10 minutes, it takes two min. to walk a block there (Langdon, 1994, p. 51). The book *Carfree Cities* defines the block as being, “roughly rectangular and measures about 260 by 190 feet - measured to the centerlines of the encompassing streets, which are 16.5 feet wide (“Carfree Cities,” 2009). Another scholar, Bentley, says 260’-295’ blocks are good for most purposes (Bentley et al., 1985, p. 17). Small blocks and road connections will not only fulfill affiliation needs, but also help in satisfying physiological needs through comfort and ease of walking routes, safety needs because there will be less traffic congestion, and affiliation needs because people will be able to make physical connections with one another.

#### **4) Public Realm and Street Life**

*Neighborhood open-air centers are usually the prime place for the local community of an area to go to run their errands and make frequent trips. Often, open-air centers do not provide a vibrant public realm and there is a lack of street life.*

**Definitions:** According to Carr et. al., the public realm is “the common ground where people carry out the functional and ritual activities that bind a community, whether in the normal routines of daily life or in periodic festivities” (1992, p., 3). Street life is an integral part of a successful public realm, and is composed of a strong street edge defined by commercial buildings with narrow and varied facades and minimal setbacks. Cafes

with tables and chairs and many places to shop and eat will encourage a healthy street life.

As the dominant “public” space in the suburbs, the open-air neighborhood center is designed for passing through and not as a destination that encourages social interactions and chance encounters. They are the most likely places in suburbia for this kind of interaction, but instead of a rich public realm that encourages neighbors to meet and interact, inhabitants of the suburbs encounter development that suppresses such interaction. Although suburbia does have social activity, it has often been organized around the home, workplace, or school, where hierarchical roles are reinforced and becomes somewhat exclusive (Dunham-Jones, 2009a). Public areas as well as busy and pedestrian-oriented streets are some of the best places for social interaction to occur, but as they currently exist, neighborhood open-air centers do not provide such a place for a vibrant public realm or active street life.

Open-air centers are deficient as everyday places for human interaction. Without an informal public realm, life can become isolating and stressful, expensive, and filled with home-to-work shuttling. “What suburbia cries for are the means for people to gather easily, inexpensively, regularly, and pleasurable - a ‘place on the corner,’ real life alternatives to television, easy escapes from the cabin fever of marriage and family life that do not necessitate getting into an automobile” (Oldenburg, 1989). Taking ownership of such a ‘place on the corner’ is a prime component of fulfilling one’s esteem needs, therefore such needs can go unfulfilled in the suburbs.

Sociologist, Robert Putnam, has documented the decline of social associations - the human need for affiliation - in the suburban United States. His book, *Bowling Alone*

(2000), shows the decline in membership in PTA's, bowling leagues, churches and political organizations. This decline in social behavior lessens the potential for people to build social capital, which results from connections within and between social networks as well as connections among individuals. Social capital is the value placed on social relationships that can increase productivity, both individual and collective (Putnam, 2000). Putnam does not blame any one factor, but argues that the separation of uses, the increase of commute time, and the loss of identification of service retail with a specific neighborhood have all contributed to the decline of communal associations (Putnam, 2000). Furthermore, Stephan J. Goetz and Anil Rupasingha have documented similar declines in civic participation and social capital due to the proliferation of Wal-Mart stores (Dunham-Jones, 2009a, p. 60).

As they currently exist, open-air centers lack a successful social domain that could potentially be found in public areas or on streets. This negatively affects communities because there is less of a chance for social interaction and street life. According to social scientist Amitai Etzioni, "A basic observation of sociology and psychology is that the individual and the community 'make' one another, and that individuals are not able to function effectively without deep links to others, to community" (as cited in Langdon, 1994, p. 21). People want to be where other people are, and a lack of interesting, well-designed and comfortable public space will lessen the fulfillment of this desire. There is no active street life to promote walking, no social capital building environments, no reason to come together, and no place to assemble.

### **Human Needs Solution:**

*Activating the street edge, adding “third places,” and incorporating public space into an open-air center will help to strengthen the community life of a neighborhood and invigorate street life within the area.*

***Physiological*** – Interesting street frontage will help to create street life.

Connected buildings with a small setback create an active street frontage. “Isolated buildings are symptoms of a disconnected sick society” (Alexander et al., 1977, p. 532). Camillo Sitte (1945) in describing the ancient traditions of Rome, where it was normal for buildings to be connected, says that when buildings are left alone, “any life-like organic integration with the site is ruled out” (Sitte & Stewart, 1945, pp. 25-31). A strong street edge of connected buildings that provide many places to shop and dine, accompanied with sidewalk cafes, table and chairs, will create an active street life within an open-air center. Streets lined by relatively narrow and varied facades will create interest and provide visual ways to measure and define space. Minimal building setbacks of 15’-20’ will bring buildings closer to the street and the pedestrians. “This defined and close edge enlivens commercial areas by encouraging window shopping and streetside activity” (Calthorpe, 1993). It is more stimulating to walk along a street of storefronts than blank walls or an open parking lot (Schmitz et al., 2006, p. 31). The number of doors, windows, and entrances that are visible from a public space help to create good street life (Carmona, 2003, p. 173). Street life promotes walking and contributes to pedestrian health.

In addition, a stronger public realm and an active street life in a neighborhood center increase the chance for users to accumulate social capital and increase health.

According to Frumkin, Frank and Jackson (2004, p. 166) “People with strong social networks live longer.”

**Safety** – According to Oscar Newman (1973), street activities and opportunities for looking out at public spaces reduces crime and vandalism in an area. The theory argues that an area is safer when people feel a sense of ownership and responsibility for that piece of a community. Newman asserts that “the criminal is isolated because his turf is removed” when each space in an area is owned and cared for by a responsible party. If an intruder can sense a watchful community, he feels less secure committing his crime. Natural surveillance and the feeling of responsibility created when the area is connected to particular residence and shop owners are factors helping improve safety concerns (J. Jacobs, 1961; Newman, 1973).

Pedestrian density will also help to create a vibrant public realm and street life and, therefore, increase the safety in an open-air center. If the pedestrian density within a space is less than one person for every 150 to 300 square feet of paved surface, then it will seem dead and uninviting (Alexander, 1977, p. 170) causing the user to feel unsafe.

**Affiliation** – Invigorating public life within an open-air center will give people a reason to come together. “The possibility of meeting neighbors and co-workers often in connection with daily comings and goings implies a valuable opportunity to establish and later maintain acquaintances in a relaxed and undemanding way” (Jan Gehl, 1987, p. 21). Bosselmann calls this excitement vitality within the city and says, “the presence of other people and a sense of enjoyment among those who participate in public life; not only those people who have to be there but also those who feel invited to linger and stay for a while” will add to feelings of affiliation within a place (Bosselmann, 2008, p. 143).

Creating “third places” within a neighborhood open-air center aids in the creation of a lively public realm. Sociologist Ray Oldenburg (1989) defines a “third place” as a neighborhood hang-out where local people gather to socialize. In contrast to first places (home) and second places (work), “third places” are where people can relax and escape the stress of the day. Cafes, coffeehouses, main streets, barbershops, general stores and diners are all examples of a third place. They are the heart of a community’s social energy and the basis of democratic principles. Third places provide a sense of social equality as well as psychological support and social capital to community members (Oldenburg, 1989).

Other public places such as streets, plazas, parks and civic spaces will help to support public life. Buildings and vegetation help to frame and define a public space. A square of 45’ x 60’ is a good dimension for public life to function (Alexander et al., 1977). Similarly, Lynch’s size for an intimate plaza ranges from 40’ to 80’ wide (Watson et al., 2003, p. 6.84). Gehl reports a maximum distance of 230’ – 303’ for being able to see events. There is a strong need in these types of spaces for the fronts and backs of buildings to have two faces – one that fronts onto a public space and a back where most private activities can go on (Bentley et al., 1985, p. 14). These types of squares and buildings give people a reason to come to the center and, in turn, create a greater chance for affiliation needs to be met.

***Esteem*** – Having a successful central public realm with an active street life will enhance a community. If the open-air center’s street life and public realm is vibrant and invigorating, it will help to satisfy esteem needs by giving its users and adjacent neighborhoods something to be proud of and call their own.

These public areas also allow for open exhibits of social interaction. “Public displays of behavior can enrich the lives of others” (Lang, 1994, p. 284). Users interact with their peers, feel included in a community, and feel a sense of belonging that boosts esteem. Having a public realm also satisfies some people’s desire to “see and be seen.”

## 5) Human Scale

*As they currently exist, open-air centers are not scaled for human beings, but instead are designed around the scale of the automobile. They function to get cars in and out as fast as possible, hence parking is their most dominant feature.*

**Definitions:** Human scale “is the combination of the ratio of building height to street width, relative distance, permeability and the sense of grandeur or intimacy of space” (Montgomery, 1998, p. 9). This mix of ratios, in conjunction with human sized features, such as street trees, tables and chairs, sidewalks, etc., make people feel comfortable and safe in a space.

Because open air centers were made to cater to the automobile, it is no surprise they are not built to human scale. Low-slung, single-story buildings are typical of open-air centers in conjunction with large swathes of parking and driveways. These characteristics are at an auto scale not a human scale. This form is not intimate in nature and is not conducive to street life or any type of outdoor activity.

Open-air centers are not built for pedestrians who have trouble getting to and from the center or traversing within the center itself. Typical open-air centers are too far from residential neighborhoods, or any other land use pattern, for a pedestrian to walk. They are located on large superblocks without a grid or network of streets and sidewalks for pedestrians.

Furthermore, neighborhood centers are deficient in regard to pedestrian features that provide a feeling of safety, security and comfort; they lack necessary sidewalks and connections to make humans feel comfortable and at ease. Other human-scaled features such as benches, well-placed street trees, awnings, and connected sidewalks that all create an appropriate and comforting sense of scale to the user are lacking. Instead, signage and parking lots filled with large cars are the dominant features. Because current open-air centers do not contain these features, centers are even more removed from the proportions of humans, which make users feel secondary to the car.

### **Human Needs Solution:**

*Finding the correct density and building height to street width ratio will create human scaled spaces in neighborhood open-air centers. Reducing the amount of parking or moving it to less prominent positions, bringing store fronts closer to the street, and the inclusion of human-scaled features such as sidewalks, trees, awnings, and benches will help to create a pedestrian-oriented environment.*

**Physiological** –Human scaled places are more comfortable for the pedestrian and promote healthful walking because they are easier to get around. Frumkin, Frank and Jackson (2004, p. 100) argue that highly walkable places that are characterized by “high density, high land use mix, high connectivity, good walking infrastructure, pleasing aesthetics, and safety,” show an increase in physical activity in nearby residents.

To create a walking environment, street frontages will need acute attention. Research has shown that the most active frontages contain more than fifteen premises every 330’, a large range of land uses and functions, more than twenty-five doors and windows every 330’, no blank facades, depth in building surfaces, high quality materials and building details (Carmona, 2003, p. 174). Successful adaptation of these recommendations to the design of open-air centers will shift the focus of neighborhood

centers toward the pedestrian, thereby creating a more attractive, human-scaled space for potential walkers.

A good walking environment for humans will also have a smaller amount of surface parking lots than today's neighborhood open-air centers. These can destroy the scale of a center by making the pedestrian feel secondary to the automobile. According to Alexander (1977), it is not possible to have a successful human environment when more than nine percent, or 30 cars per acre, of it is reserved for parking. This is because when the density of cars reaches a certain limit, people start feeling that the site is not designed for people. This problem can be alleviated by the creation of parking zones which spread out the total amount of parking into smaller lots. Because parking can destroy the feeling of human scale – tiny parking lots (with 5-7 cars, spaced 100' apart) are better for the scale of a center – large ones overtake the environment and make people feel dominated (Alexander, 1977, p. 506). The addition of parking garages also helps to manage this problem by enclosing a very dense space for parking within an architectural structure that can hide the cars, and space, from view (Alexander, 1977).

**Safety** – Sidewalks are integral to the safety of humans in open-air neighborhood centers. Bosselmann recommends a 15' sidewalk in shopping districts to allow for retail-related activities to extend out of the store and onto the sidewalk in front of the shop. This also allows for street trees in planting strips near the curb. Shopping street work best when not too wide – 60' across to the other side can be easily seen. “The human eye recognizes details, smaller signs, and the identity of individuals” at this distance (Bosselmann, 2008, p. 143). This will provide a feeling of comfort and safety to pedestrians.

**Affiliation** – The idea of human scale is also important at the neighborhood level. It is natural that if the scale of a neighborhood open-air center caters to humans, they will feel a greater sense of connection to the place. The ideal neighborhood size has been defined throughout planning history. In 1920, Clarence Perry's ideal traditional neighborhood size was based upon a five-minute walking radius. The radius is measured from the center of the neighborhood and is about  $\frac{1}{4}$  mile and incorporates approximately 160 acres. More recently, the quarter-mile walking radius has been expanded to a  $\frac{1}{2}$  mile when it incorporates public transportation (A. Duany & Plater-Zyberk, 2003; TCRPC, 2004). The concept of neighborhood is important because it is the area where humans are more likely to be able to walk to. The  $\frac{1}{2}$  mile measurement can be used in the design and planning of the neighborhood open-air center to measure from its central part to its outskirts that should encompass as many residential units as possible, to encourage easy access. While it may not be feasible to immediately re-develop the entire  $\frac{1}{2}$  mile radius, an effective neighborhood open-air center should put positive pressure on an area to become denser over time.

Another aspect of creating a human-scaled neighborhood is to make sure the neighborhood has a range of uses and services they could need within a relatively walkable distance. The neighborhood center can provide some or all of these things. According to Credit 2 under Sustainable Sites in the LEED manual for New Construction, community connectivity can be achieved through renovating a building of a residential zone or neighborhood with an average density of 10 units per acre net AND within  $\frac{1}{2}$  mile of at least 10 Basic Services AND with pedestrian access between the building and the services (bank, place of worship, convenience, grocery, day care,

cleaners, fire station, beauty, hardware, laundry, library, medical/dental, senior care facility, park, pharmacy, post office, restaurant, school, supermarket, theater, community center, fitness center, and museum (USGBC, 2005). This idea can be applied to the entire neighborhood open-air center - the more uses located within the  $\frac{1}{2}$  mile radius, the more convenient and human-scaled the center will become and the more affiliations people will acquire with the center itself.

***Esteem*** - A better sense of scale will help people feel as if they are the most important feature in the open-air center. Human scale is easier for humans to comprehend. As defined earlier, human scale is directly related to the height and width ratios of building to street. Hans Blumenfield suggests that a building height of three stories, approximately 30', and a width of 36', with a street width of 72' are the dimensions for a building of human scale. Intimate scale is a building height of 21', a façade width of 24', and a street width of 48'. Buildings on the best streets tend to be less than 100' in height (A. B. Jacobs, 1993, p. 278). Spatial dimensions larger than 360' are rarely found in good city spaces. These dimensions aid in people feeling a sense of enclosure. It has been said that height and width ratios of less than 1:3 seem weakly enclosed and should be avoided, as does many gaps in buildings. It is best to keep a continuous façade of buildings along both sides of a street (Bentley et al., 1985, p. 52). These measurements are particularly formulated for humans and will create a higher quality of experience in the open-air center which will bring about pride and esteem toward the center itself.

## 6) Green Space

*The dominant material in an open-air center is asphalt. This is not a healthy or aesthetically pleasing environment for humans.*

**Definitions:** Green space is defined as an area that is not hardscape, with natural elements such as trees, shrubbery, lawn, etc. Green space is useful in an urban setting to offset pollution and mitigate stormwater. Strong green spaces within an urban setting can be linked together to provide continuity and wildlife corridors.

The majority of today's open-air centers lack green space and vegetation. Most current zoning regulations require that open-air centers include vast amounts of parking and have large setbacks from roads, leaving little room for green space. Although some localities enforce tree requirements for parking lots, they are ineffective and tend to make little difference. The huge swathes of parking and lack any kind of vegetation or trees in neighborhood open-air centers causes problems for the pedestrian because there is no shade, no filtering of the air, and no aesthetically pleasant greenery to look at. This situation is also detrimental to the environment and unsustainable; the large amounts of asphalt create a heat island effect and can cause stormwater management issues.

The lack of green space in neighborhood open-air centers represents a missed opportunity for suburban residents who generally do not spend a lot of time experiencing the outdoors. This is evident both in transit to the centers, to which most people drive instead of walk, as well as at the centers themselves, which feature asphalt instead of greenery. Various studies have shown that a lack of activity in outdoor environments has a distinct negative psychological effect on people, and especially children. Richard Louv reports, "In a typical week, only six percent of children age nine to thirteen play outside on their own. Even riding a bike is down by thirty-one percent since 1995 (Louv, 2007).

The absence of green trees and other environmental features in open-air centers, such as rain gardens, community gardens, and vegetated areas, poses other health problems for its users. Water and air quality suffer in the area, as does management of the open-air center's microclimate which can add tremendously to the comfort of its users.

### **Human Needs Solution:**

*Integration of green space, trees, and other vegetation will result in a more environmentally sound, aesthetically pleasing, comfortable, healthier, and pleasant open-air center.*

**Physiological** – Vegetation such as trees, shrubbery and lawn will provide many health and comfort benefits to the users of open-air centers. The natural environment is so powerful that it is proven to provide restorative affects that help people recover from mental fatigue. Natural elements such as trees, greenery, and water features help to create a relaxing environment (Carr et al., 1993, p. 98). Even a single tree outside a window can provide human benefits (Kaplan, Kaplan, & Ryan, 1998). Street trees will also help to filter oxygen, and provide shade for comfort.

Including street trees can also contribute to the street definition with a neighborhood center. “Fine streets are lined with trees and these may be as important as the buildings in creating street definition.” This can be achieved by tightly planning trees 15’ – 25’ on center (Watson et al., 2003, pp. 6.3-7). Definition of the street will help provide clarity to pedestrians as to where they are going, and help people feel more comfortable and confident when walking.

The environmental benefits of green space can be significant. In order to realize the greatest possible benefits, sensitive environmental features, such as riparian habitat, slopes, and waterways should be avoided or restored during re-development. The use of

biological systems such as rain gardens can be used to filter and treat on-site rainwater. The inclusion of native, drought tolerant trees and shrubbery should be used along sidewalks, green medians, and public spaces within the center. The beneficial cooling effects of these plantings on the micro-climate of the neighborhood center can help to lower energy consumption (Bosselmann, 2008; Calthorpe, 1993). Streets can also be conduits for nature and act as green connectors or migration corridors of high value because plant species and small animals, including birds, can migrate along such routes (Bosselmann, 2008, p. 235). Not only do vegetated areas regulate microclimates, they also help to mitigate stormwater quantity and quality.

**Safety** – Vegetation can provide safety from cars for users of neighborhood open-air centers. Street trees between cars and buildings as well as along sidewalks that border streets can provide safety to pedestrians because they act as a protective buffer. By making parking lots smaller and increasing the number of trees in the parking areas, each lot becomes more manageable for people to navigate safely, both on foot and in cars. These changes will also make drivers slow down, creating a safer pedestrian zone. Pedestrian walkways within the parking lots can be buffered by bands of plantings, further increasing the safety for walkers going to and from parking lots. Vegetation can also provide safety from the elements, particularly the sun.

**Affiliation** – People tend to gather on large lawns or green areas. These types of green places such as central lawns can be successful in attracting people and promoting interaction among people. Alexander et al. (1977, p. 606) says that a public space “without a middle is quite likely to stay empty.” They advise that between “the natural paths which cross a public square...choose something to stand roughly in the middle: a

foundation, a tree, a statue, a clock-tower with seats, a windmill, a bandstand...Leave it exactly where it falls, between the paths; resist the impulse to put it exactly in the middle” (Alexander et al., 1977, pp. 606-608). A successful central plaza/lawn will help meet users’ affiliation needs and add valuable green space to an open-air center.

***Esteem*** – Green space and trees will create an appealing atmosphere that can boost the esteem of its users in many ways. The natural environment has the power to “contribute to a distinctive, memorable, and symbolic urban form” (Spirn, 1984, p. 10). Nature will give people a reason to come to the center and be proud of it. A well-maintained green space has the potential to be held in high esteem by the surrounding communities and it can become a status symbol for the area. Green aesthetic improvements are important as esteem needs are fulfilled by associating one’s self with something that one considers beautiful.

Green space is a coveted feature in all types of locations. Jack Nasar (as cited in Carr et al., 1993, p. 130) defines “naturalness” as one of his five generalized human preferences for environments. It helps to provide a better and more pleasant atmosphere. Gordon Cullen suggests, “the art of bringing trees and buildings together is based on the tree lending its richness to buildings, and on buildings pointing out the architectural qualities of trees so that the two together make one ensemble” (Cullen, 1961, p. 168). In that sense, the design of the buildings in the neighborhood center should be conceived with the form and use of trees and other natural elements in mind. Natural features can also inspire esteem through providing an opportunity for discovery and learning.

## 7) Character and Sense of Place

*Neighborhood open-air centers do not form bonds of attachment to their users and are usually bland; they have a tendency to look similar and lack unique character.*

**Definitions:** “Sense of place” is difficult to define in words. It has been called the genius loci – a concept that suggests people “experience something beyond the physical or sensory properties of places and can feel an attachment to place” (Carmona, 2003, p. 96). Place, according to Punter, is the combination of activity, form, and image. A mix of vibrant activity, strong and clear form, and a memorable image will create sense of place (Carmona, 2003). Character, on the other hand, is an important part of the creation of place. It refers to the quality and charm of the atmosphere in a place.

James Howard Kunstler, in *The Geography of Nowhere*, states that “eighty percent of everything ever built in America has been built in the last fifty years, and most of it is depressing, brutal, ugly, unhealthy, and spiritually degrading” (Kunstler, 1996). This is especially true of most neighborhood open-air centers, which lack a sense of place and do not provide the opportunity for users to connect to a physical place. “The identity of a (great) place cannot be altered,” in other words the identity of a great place is unique to where it is located. Since suburbia, characterized by developments of sprawling sameness, lacks a unique identity it therefore lacks the essence of *place* (Lukez, 2007, pp. 10-20). According to Norberg-Schulz, place is “a focus where we experience the meaningful events of our existence” (1971, p. 19).

Like suburbia as a whole, open-air centers are characterized by placelessness, defined as “a weakening of the identity of places to the point where they not only look alike but feel alike and offer the same bland possibilities for experience” (Relph, 1976, p. 90). These places do not have the ability to provide cultural meaning, diversity,

significance and a sense of place within people. They have little or no human attachments and, because they lack unique character, they feel the same no matter where they are located.

These placeless landscapes create an inauthentic attitude within a community. According to Relph, “an inauthentic attitude to place is essentially no sense of place, for it involves no awareness of the deep and symbolic significances of places and no appreciation of their identities” (1976, p. 82). The idea of community has become less about the relationships fostered and developed in a particular place, and instead is defined by a corporate image developed by marketing departments. The social and psychological link to a place has become secondary (Lukez, 2007, pp. 10-20).

Humans need to feel a relationship to their environment. They want to feel like they are going “someplace” and not in transit, which is the current feeling experienced by users of open-air centers. People want to feel connected to a place that provides a feeling of pride for the community. A large part of the problem of placelessness is a lack of history and meaning. In his book *Edge City*, Joel Garreau says that for an edge city – a new concentration of business, shopping and entertainment outside a traditional urban area, including landscapes such as strip malls – its biggest problem is that they have no history. As they exist today, neighborhood open-air center are characterless and provide little feeling of attachment and ownership to the surrounding neighborhoods.

### **Human Needs Solution:**

*Special attention to the activity, form, and image of a center, in addition to the context and character of the neighborhood it is located in, can be used to help create a sense of place within a neighborhood open-air center and turn it into something special and unique for its surrounding community.*

**Affiliation** – An established sense of place in a neighborhood open-air center affects both the affiliation between people as well as the affiliation between a user and the center itself. People want to go to, and linger in, open-air centers that have a strong sense of place, thereby helping to build relationships among users. On the other hand, if the center is a reflection of the community and it contains uses that are not only necessary, but optional and particularly useful or special for the user, it will enforce a bond between the user and the place itself.

Establishing sense of place requires achieving a successful combination of activity, form, and image (Carmona, 2003; Punter, 1991; Relph, 1976). Activity is made up of diverse and vital actions such as people watching, café culture, events, local traditions, and diverse opening hours. The diversity of activity will attract more people to the center. Form consists of scale, permeability, landmarks, building ratios, vertical grain, and public realm. Strong form will help to create comfortable environment. Image, includes the cognition, perception, and information that people receive about a place. Image is concerned with the symbolism, memory and legibility of a place (Carmona, 2003, pp. 98-99). A center with a positive image will have a positive connection with its adjacent neighborhood. It is imperative to be aware of nearby land uses and make use of transitions. For example, if the neighborhood center is directly next to single-family residences, it is important to be sensitive to that area by creating a buffer or gradient of

development density that goes from low to high as it moves away from the homes; this will create a better image in the mind of the community.

A center that successfully integrates strong form, a mix of activity, and a memorable image, will create a greater connection between its users and the place. If there are more activities offered in the center, there is a greater chance of its users actually going to the center and feeling a connection to it. If there is strong form within the center and it produces vivid memories for its users, they will feel affiliated with the center.

In addition, “being associated with a geographic area and/or a role in society is a major contributor to the fulfilling of affiliation needs” (Lang, 1994, p. 241). The neighborhood open-air center can take on certain attributes that are strong identifiers of an area’s culture or customs through distinctive architecture or public space for special events or festivals. If the center reflects the people and is sensitive to the geographic area it is located in, it will create deeper bonds with the center.

**Esteem** - According to Bosselmann, “Sense of place and a sense of time are dimensions of the sense of belonging.” A sense of belonging is the emotional tie, feeling of ownership, and esteem that comes from living in a neighborhood even without having any true material ownership over it (Bosselmann, 2008, p. 141). Bosselmann states that “research on sense of place has focused on place attachment, dependency, and identification with place, in natural or constructed settings” (2008, p. 181). Sense of place is experienced when the user feels a connection or attachment to the place itself, has a certain sense of dependency on it, and can identify with it.

Tony Hiss describes place attachment as a bond between a person and a particular setting. When an individual has made an emotional investment in a place, they feel attached to it, not through one particular experience, but an ongoing relationship with a physical setting that is usually shared with other people (Hiss, 1990). Norberg-Shultz says that who we are as people, or our “sense of self,” has a direct relationship to our surroundings and “sense of place” (1980, p. 18). This type of personal relationship with a place will often create the feeling of dependency Bosselmann refers to.

A place that corresponds to its surrounding context strengthens the identification a community will have with it. Strong sense of place is created by elements that define and identify a place to a particular location. Recognizing and including the existing character and nature of the surrounding neighborhoods of a site, such as architecture, other uses, demographics, etc., will help the center to become better integrated into the area and make it more distinctive in comparison to other centers. “Placemaking occurs when multiple layers of design and utility are integrated into a plan that creates an attractive and functional environment for the people it serves” (Schmitz et al., 2006, p. 25). Lively streets, public areas, signage at gateways, landmarks and public art will all create the notion that the visitor has reached “someplace.” Unified landscape elements such as street trees will also help contribute to sense of place.

Sense of place contributes to a strongly personalized and unique center that is a reflection of its frequent users. Personalization, or the process of tailoring a site to individual users' characteristics or preferences, provides for self-expression of a community, and allows for adaptability in the center. Lynch (1960) writes that “a sense of place in itself enhances every human activity that occurs there, and encourages the

deposit of a memory trace” (p. 119). Human activity will leave impressions on a place and build personality within a place, enhancing its character and history. Therefore, the center can become a symbol of the people and a sense of pride for the community.

## **8) Legibility**

*Neighborhood open-air centers are usually part of sprawling development that has no distinct boundary. The centers lack organization and, therefore, are not legible to its users. In addition, poor signage is a dominant feature can often cause confusion and create visual clutter to an area.*

**Definitions:** Legibility is a term used to describe the ease with which people can understand the layout of a place. Distinct paths, edges, districts, nodes, landmarks and signage all contribute to legibility.

The similarity of open-air centers contributes to a problem of poor legibility in the suburban environment. They offer no point of reference or distinct character, and provide no information to the user that helps to define them as unique locations. Ian Narin's term, “subtopia “ characterizes this problem well, as he describes open-air centers as “mindless mixing up of all man-made objects without any pattern of purpose or relationship” (Narin, 1965, p. 7). Subtopia has little spatial ordering and cannot be experienced by a pedestrian. It is a “set of apparently randomly located points and areas, each of which serves a single purpose and each of which is isolated from its setting, linked only by roads which are themselves isolated from the surrounding townscape except for the adjacent strips of other-directed buildings” (Relph, 1976, p. 109).

Open-air centers often lack important transitions into surrounding neighborhoods and do not fit in with them aesthetically. Instead of a transition that creates a gradual intensity of use from residential areas to commercial areas, open-air centers are cut-off completely from their surrounding neighborhoods. “Marketers and designers, only

thinking about what will be seen by motorists and first time visitors, have neglected nearby residential neighborhoods that could be walking to their shops" (Langdon, 1994, p. 73). The similar look shared by most open-air centers does not fit in with or add to the distinct personality of any given community. Typically found in great numbers along strips of highway, neighborhood centers do not form any sort of groupings or order that could relate functionally or aesthetically to their surrounding neighborhoods, except in the context of automobiles. Gordon Cullen says, "we appear to be forsaking nodal points for a thinly spread coast-to-coast continuity of people, food, power and entertainment; a universal wasteland...a chromium-plated chaos" (1961, p. 59). This placeless geography lacks diversity and a sense of legibility within the landscape. Open-air centers are places that are essentially the same despite their different locations.

The roads adjacent to open-air centers are lined with eye-catching signage readable from a moving car and have been designed to attract drivers who are passing by at high speeds. This signage is not aesthetically pleasing and can be distracting and difficult to use. It is usually out of scale with the rest of the suburban landscape, and adds to visual clutter. Walter Kulash of Glatting Jackson Kercher Anglin compares this kind of environment to a newspaper headline because it gives you basic information quickly. The negative issue with this is that drivers who live in the suburbs are forced to use the same route over and over and their senses are dulled to such messages, thereby lessening their ability to respond to important signage encountered on the road (as cited in Langdon, 1994, p. 36).

The sameness of open-air centers and their relationship with the community could eventually prove to be their financial undoing. The "competitive position of the strip

center will be eroded unless there is a rethinking of their role, a repositioning of their offerings, and a restructuring of their physical layout to reflect the more mature nature of the communities that surround them” (Beyard, 2001, introduction). The open-air center must communicate something different to its surrounding neighborhoods in order to succeed.

Currently, the lack of legibility within the open-air center does not accommodate human needs adequately. Open-air centers are difficult to navigate and create a feeling of disorganization and clutter that proves frustrating to both pedestrians and drivers. In contrast, community members need a legible and navigable neighborhood center that is well-defined and gives the visitor a sense of arrival at a unique place with a connection to the community.

### **Human Needs Solution:**

*Organization, elimination of fragmentation, and integration of tasteful signage and way-finding tactics will help to make the open-air center legible for people.*

***Physiological*** – Organization is crucial in providing comfort to the user of a neighborhood open-air center. A sense of orientation in time and place is a strong force in creating physiological and mental comfort in the user as legibility is “the quality that makes a place graspable” (Bentley et al., 1985, p. 42). Ordering a neighborhood center around a well-defined grid of streets, as well as clear, connected sidewalks with minimal curb-cuts helps create an easily understandable frame of reference for the user. A legible physical layout is described by Kevin Lynch, (1960), as the “ease with which [the city] can be organized into a coherent pattern” (p. 2-3). It will have distinctive elements such as paths, edges, districts, nodes, landmarks. In contrast, “chaotic environments overwhelm our ability to discern which information is relevant (Kaplan et al., 1998, p. 8).

“In a legible place, one can imagine finding one’s way, not only to a destination but back again as well. A single landmark or an area that is distinctive makes way-finding much more straightforward” (Kaplan et al., 1998, p. 15).

Transparency is an important element of comfort and legibility. When walking thought the best streets, a pedestrian will be able to see street definition and feels an “invitation to view or know, if only in the mind, what is behind the street wall” (A. B. Jacobs, 1993, p. 285). Entryways, windows and doors can help to create this atmosphere of transparency.

Gateways, on the other hand, are very important as they define the entries and exits to the defined area and assist with user navigation. Clear entries and exists into and out of a neighborhood center will not only be inviting to a potential user, but also make pedestrian and vehicular traffic move easier.

**Safety** – Improved legibility makes it easy and safe for users to get navigate the open-air centers. An environment that is clear and legible provides people with the ability to know where they are in space and time and “to be able to organize the universe and people in it into some meaningful whole” (Maslow, 1987). Signage strengthens legibility by helping people find their way; a sense of orientation provides a feeling of security within a user and will lessen the chance of them getting lost and ending up in an undesirable area.

Signage in the open-air center should separate messages for drives and pedestrians and will help with safety issues in a center. Signage for drivers should be high, larger mounted storefront signs, and signage for pedestrians should be blade signs hanging overhead perpendicular to building facades (Schmitz et al., 2006, p. 34). “A road

generally feels more comfortable when businesses employ low, monument-style signs (signs whose bases rest entirely on the ground) or signs that are integrated into the buildings themselves” (Langdon, 1994, p. 228). By using these signage techniques, not only will the center be more attractive, but also safer because there is better communication specifically for drivers and specifically for pedestrians.

Successful spaces provide open and closed areas that fit seamlessly into the organization of a place. Scholars such as Camillo Sitte (Sitte & Stewart, 1945), Clare Cooper Marcus (Marcus & Francis, 1990) and Alexander (1977), have all noted that successful outdoor space must be partially enclosed and open at the same time, so that they lead into one another creating positive space, or “leftover” space between buildings that is very usable and desirable. Neighborhood centers can include a sense of enclosure in outdoor open spaces by surrounding them with vegetation, fences, building walls or covered walkways. Including these types of spaces will increase the success of the center as well as perceived safety within the center because there will be no vacant, or perhaps, dangerous space in the center.

**Affiliation** – According to Alexander (1977), “People need an identifiable spatial unit to belong to.” Effective organization within a center will create an identifiable place, and if a center makes a strong impression on the individual, it often has to do with its legibility. Users will find themselves more affiliated with a more legible place, than with a chaotic environment, as humans require places they can make sense of.

**Esteem** – The integration of uncluttered, clear, prominent, and attractive signage in the open-air center will affect the esteem needs of its users as good signage is a positive symbol for a community. Tenants should have the ability to choose awnings,

signage, and storefront designs, although a certain amount of coordination such as building heights, massings, and setbacks should be controlled for pedestrian scale (A. B. Jacobs, 1993, p. 282). Not only will the spaces appear more natural, the tenants will feel ownership over their stores, bringing a feeling of esteem, and regard for their store and the center. “The best commercial districts feel as if they’ve evolved over time. Too much coordination of casual elements creates the sense of being in a theme park” and cause the area to lack authenticity, which is important in fulfilling esteem needs as an authentic place will be more respected (Schmitz et al., 2006, p. 33).

A neighborhood open-air center that is well-organized can lead users to a greater appreciation of the different choices offered within, which can improve esteem satisfaction as choice is a reflection of personalization (Brehney, 1992). Strong legibility within an open-air center creates a better understanding of what the center has to offer in terms of activity and use. “In practice, the degree of choice offered by a place depends partly on how legible it is: how easily people can understand its layout” (Bentley et al., 1985, p. 10).

Legible places promote a sense of territoriality that causes people to feel as if they belong to the place. Territoriality is defined as “people’s definition and defense of themselves – physically and psychologically – by the creation of a bounded, often exclusive domain” (as cited in Carmona, 2003). A legible open-air center can instill territoriality in its users by focusing on the creation of distinct boundaries that blend well into nearby neighborhoods.

## **Conclusion**

The exploration of what defines human needs in a universal context and an examination of the history and the problems of contemporary neighborhood open-air centers has culminated in the creation of eight neighborhood open-air center theorems: Activities and Density, People Attractors, Connections and Movement, Green Space, Character and Sense of Place, Public Realm and Street Life, Human Scale, and Legibility. These theorems are loose in nature and open to interpretation, and are expected to be adjusted contextually according to the specifics of an individual project. They are intended for use as guidelines and as a “call to action” for designers to address human needs in open-air centers. It is important to note that careful attention to all of the elements covered in the theorems is critically important in the creation of whole, coherent environments such as neighborhood open air centers. The success of neighborhood open-air centers is dependent upon a critical mass that is only achieved as a result of a comprehensive inclusion of a mix of activities, increased density, people attractors, connectivity, green space, a sense of place, a public realm with street life, human scaled design, and strong legibility.

The following chapter uses the theorems as a filtering device to give structure to the analysis of four case studies that give actual examples of the theorem’s application within the built environment.

## CHAPTER 5

### CASE STUDIES AND ANALYSIS

#### **Introduction**

“Retrofitting suburbia” is a very timely topic that has become increasingly important by touching on many of nation’s most pressing issues: rising gas prices, climate change, the realization of the diminishing health and well-being of Americans, the desire for a more urban lifestyle, aging properties, migration of jobs, changing demographics and markets, and the recognition of negative environmental impacts (Dunham-Jones, 2009a, p. xiii). This contemporary issue has been addressed lately by some innovative and progressive thinkers, such as Lee Sobel, author of *Greyfields into Goldfields*, who writes, “Better suburbs will increasingly take on the positive aspects of larger 24-hour cities – multi-faceted environments with a critical core of prime residential neighborhoods, a thriving business environment, and service retail integrated together” (Sobel, 2002, p. 9).

Following, are four case studies: Mashpee Commons, in Cape Cod, MA; Saffron in Sammamish, WA; the Uptown District in San Diego, CA; and Santana Row in San Jose, CA, that have attempted to ameliorate the current problematic conditions of suburban neighborhood open-air centers by retrofitting the project site into a denser, urban environment that functions as an innovative catalyst for economic change in their surrounding environments. Characterized by sprawling commercial use and parking lots, these cases make improvements to the pedestrian realm by incorporating human needs in

a context where they were previously ignored. Each case study is examined through the lens of the theorems described in chapter four: activities and density, people attractors, connections and movement, public realm ands street life, human scale, green space, character and a sense of place, and legibility.

### **Mashepee Commons, Cape Cod, Massachusetts**

Duany, Plater-Zyberk & Company (DPZ) attempted the first retrofit of a strip shopping center into “a mixed-use, mixed-income, pedestrian friendly town center” (Duany & Plater-Zyberk). DPZ, Imai Keller Moore Architects, and the developer Cornish Associates Limited Partnership, created a commercial center master plan and design code for Mashpee, Massachusetts and its surrounding neighborhoods called Mashpee Commons.



Figure 5-1: New Seabury Shopping Center (Nozzi)

The Mashpee Commons site was previously home to a 1960's era strip mall called New Seabury Shopping Center. It was a typical, 75,000 square foot open-air center at Routes 151 and 28 that contained a supermarket, pharmacy, and other convenience

businesses (Figure 5-1). Shortly after its opening, Cape Cod went through a residential explosion that saw housing units triple in number over the 30 year period between 1950 and 1980. Mashpee, in particular, grew from 438 residents in 1950 to over 14,000 in 2007. With such a great increase in population, it became clear that the New Seabury Shopping Center did not meet the community's expanding needs (Dunham-Jones, 2009b).

Though much of the original 1960's era center was retained, the new Mashpee Commons which commenced building in 1986, was necessarily larger than its predecessor containing more uses (Dunham-Jones, 2009b, p. 98). But because of this expansion, the new center faced some hurdles in its early planning stages. Cape Cod did not have a large-scale municipal sewer system so the developers had to build a private facility to treat wastewater at Mashpee Commons. In addition, the area had become a no-growth environment because of poor recent development that had left the area with irreparable ecological damage (Dunham-Jones, 2009b, pp. 97, 99). The developers also faced a challenge in convincing the community and the Cape in general that high-density, mixed-use nodes near transit stations and affordable housing would help relieve development pressures on Cape Cod as well as preserve its remaining open space (Dunham-Jones, 2009a, p. 97). Only after a long permitting processes and several modifications along the way was DPZ able to push through the legalization and transform the low-density New Seabury Shopping Center into a more urban complex containing open-air shopping with on-street parking and apartments over retail stores (Dunham-Jones, 2009a).

Mashpee Commons was the first example of an open-air center retrofit and it has many desirable attributes. The following is an analysis of the design of Mashpee Commons according to the ways in which Mashpee Commons demonstrates the theorems set forth in chapter four:

### ***Activities and Density***

Mashpee Commons improved its density problem, and is now 140 acres, 60% of which is preserved as open space, and it contains 460,000 square feet of commercial space and 482 residential units (Figure 5-2). Its 23 square miles of urban core for the area includes a range of national and local retailers and merchants (Duany & Plater-Zyberk).

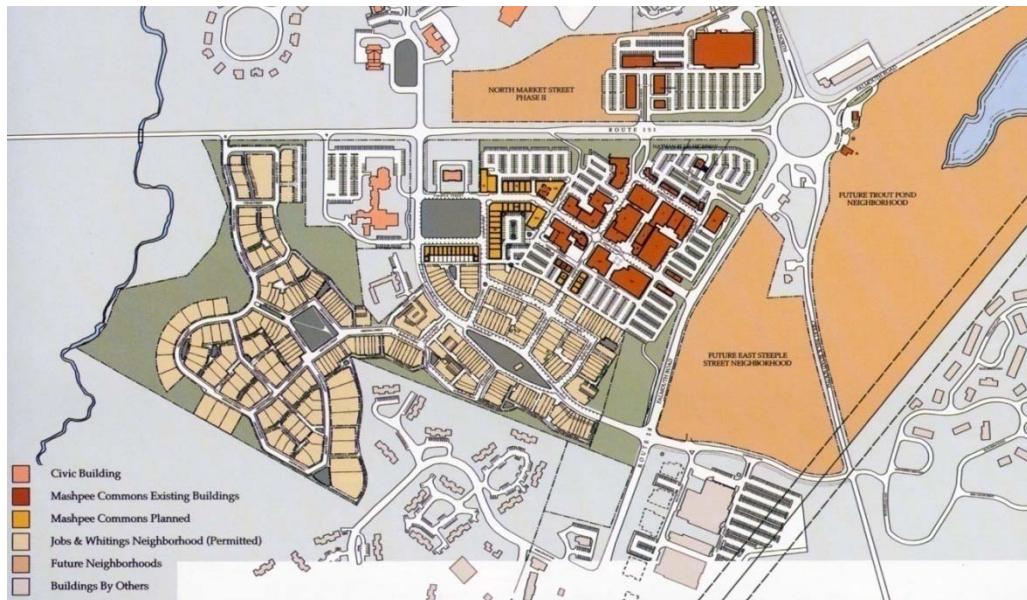


Figure 5-2: Master Plan of Mashpee Commons  
(Andres Duany et al., 2001, p. color plate 16)

Mashpee Commons features a relatively diverse mix of amenities that helps to create a more urban typology and a higher density relative to the previous New Seabury Shopping Center. The amenities include a network of civic uses – a library, post office,

and church – as well as a mix of national retailers and local merchants such as realtors, an optometrist, a dialysis clinic, a Starr Market and a CVS. In total, there are over 100 retailers at Mashpee Commons.

The project makes innovative use of small, shallow liner buildings that are only 20 to 42 foot deep and placed on the edges of parking fields to hide the parking from pedestrian area (Figure 5-3). The liner buildings create two-sided retail streets in the village core and are rented to local mom-and pop stores thus providing a unique variety of retail offerings in the area. Because the rents for the liner buildings are lower, they are perfect for “incubating” local stores (Dunham-Jones, 2009a, p. 107).



Figure 5-3: Liner buildings at Mashpee Commons (Duany & Plater-Zyberk)

In addition to the extensive retail component of Mashpee Commons, housing units are interspersed throughout the development, including market-rate housing that serves diverse income and age levels, from starter and senior to luxury homes. Some apartments were built above stores in the retail district as part of the initial phase of

development and more housing will be constructed in future development phases. In 2007, the Mashpee Zoning Board approved two new neighborhoods, Jobs Fishing Road and Whitings Road, which will contain 382 dwelling units, of which 100 will be affordable homes. The neighborhoods will offer a great variety of housing options such as loft over commercial, apartments, townhouses, live/work units, duplexes, cottages, patio houses, and single-family homes. Figure-field diagrams (Figure 5-4, Figure 5-5, Figure 5-6) show how the intensity of development has increased, and will continue to increase, over time at Mashpee Commons (Dunham-Jones, 2009b, p. 101).

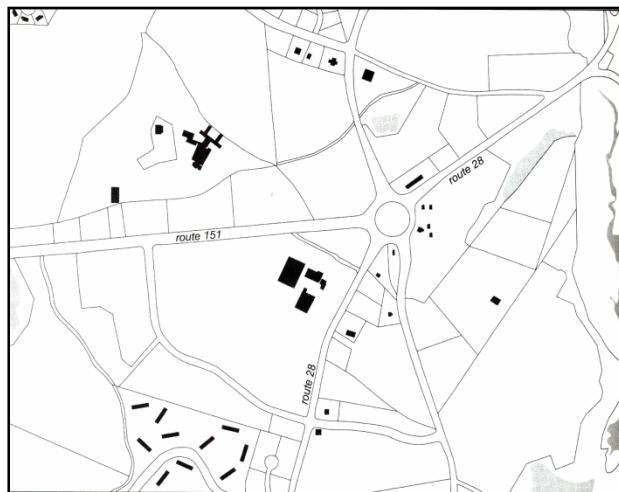


Figure 5-4: 1985 Figure-Field Diagram (Dunham-Jones, 2009b, p. 102)

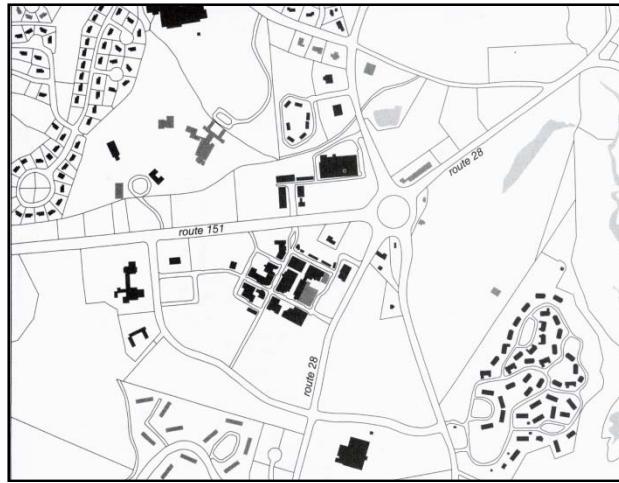


Figure 5-5: 2005 Figure-Field Diagram (Dunham-Jones, 2009, p. 103)

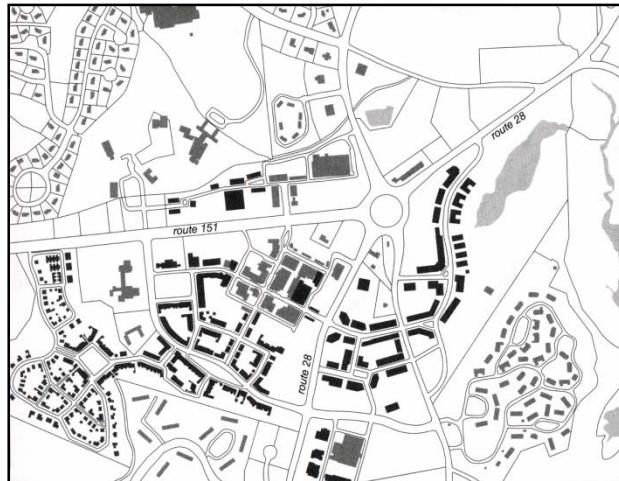


Figure 5-6: 2025 Figure-Field Diagram (Dunham-Jones, 2009, p. 104)

### ***People Attractors***

The project attracts people with its numerous retail and restaurant options, as well as civic uses. Mashpee Commons hosts a number of community events, such as outdoor movie night, August 4<sup>th</sup> Pops on the Heights event, and a variety of free concerts that have helped it become a destination for those that live in the area, as well as visitors to Cape Cod. It also publishes the *Commons Courier*, a local community paper. The project

includes comfortable amenities such as benches, pedestrian enclaves, and green areas in which to sit and relax.

### ***Connections and Movement***

The retrofitting plan focused on reconfiguring the strip center into streets and blocks to make the core of a “village center.” The new design for Mashpee Commons started with two primary cross streets: Market Street and Steeple Street. Around these streets, the development has grown into what it is today. Although better than a traditional open-air center, Mashpee Commons is still disconnected from its adjacent community, surrounded by several large parking lots that line the neighboring highways. This causes problems of separation and disconnection similar to those faced by traditional shopping malls. Thus Mashpee Commons “remains a pedestrian haven surrounded by a sea of parking, lining the perimeter so that it is readily visible to passing motorists” (Torino, 2005, p. 69).

Despite this current problem, the future plans for Mashpee Commons call for a logical network of streets radiating from the center of the development that will create connectivity with future neighborhoods. Furthering connectivity, the Hyannis-Falmouth Breeze bus system passes through Mashpee Commons and is available to its users (Dunham-Jones, 2009b, p. 107). Chuck Bohl describes it as an “attachable fragment of urbanism.” There are now opportunities to attach new neighborhoods to this “well-established fragment” (as cited in Dunham-Jones, 2009b, p. 105). Its unique concept to build the commercial core first, the “attachable fragment,” that will be able to support higher-density residential development later is a complete success.

### ***Public Realm and Street Life***

According to Mashpee Commons developer Arnold "Buff" Chace Jr., the project's goal is to "improve- not weaken- the quality of community life by creating a place where pedestrians rule and citizens can gather," through the creation of "public spaces that are designed so people have interactions where they speak. It is about thinking about the public realm, designing the public realm. That is the room in which community takes place" (Torino, 2005). There is "a substantial complement of civic infrastructure in the mix of uses at Mashpee Commons [that] helps to complete the community" (Duany & Plater-Zyberk). The plan includes a church, hotel, museum, library, medical office building, and a proposed performing arts theater, daycare facility, fire station, and city hall. Furthermore, the most used public space is the interior corridor which is popular for socializing and sun-bathing.

### ***Human Scale***

By including human-scaled features into Mashpee Commons, it was transformed from auto-oriented to pedestrian-oriented. The typical zoning provision in the area was for 20' setback on each side of the street, so the streets actually had to be defined as service alleys and driveways and remain privately owned to conform to county code. This allowed for smaller setbacks and closer street frontage for the buildings. In addition, new buildings and shops were added to the existing shopping center to form a double-fronted outdoor mall surrounded by streets with sidewalks (Dunham-Jones, 2009b, p. 99).

Other characteristics add to the human-scaled nature of the site: wooden arcades lining the shop fronts, as well as sidewalk amenities such as awnings and benches.

Extended sidewalks calm traffic and make for a friendlier pedestrian experience and varied building facades provide visual stimuli for users (Figure 5-7).



Figure 5-7: Downtown Mashpee Commons  
([www.tndtownpaper.com/Volume9/mashpee.jpg](http://www.tndtownpaper.com/Volume9/mashpee.jpg))

### ***Green Space***

Green space was integrated into the development. Compact residential, multi-family and single-family housing options are each organized around common greens. There are also street trees as well as additional lawn areas for people to relax in the shade.

### ***Character and Sense of Place***

The style of Mashpee Commons relates to the culture of the area by taking inspiration from the many village centers that dot Cape Cod. It also contains many local, unique retailing options that are made possible by the shallow liner buildings. “Mashpee Commons provides a refreshing alternative to the many other, more exclusively tourist-oriented businesses and developments on Cape Cod” (Dunham-Jones, 2009a, p. 107).

Even though Mashpee is considered a success by many, it has received its fair share of criticism. The *Providence Journal* called the project a “unified product” that is a “fancy, automobile-dependent shopping center that simply masquerades as a traditional town center”(as cited by Langdon, 2004). Langdon argues against this claim, defending Mashpee, and explains its building forms and public spaces are remarkably varied and distinctive to the area, which is “a relief from the sameness of roadside commercial strips.” Mashpee Commons is an important case study as it was the first example of a suburban open-air center retrofit. Although it has been criticized by those against new urbanism, it has many redeeming qualities and features, and it is a step in the right direction for future developments and open-air centers.

### **Saffron, Sammamish, Washington**

Saffron is a unique place because it is a “pedestrian environment within an entirely automobile-dependent context” (Schmitz et al., 2006, p. 202). Even though it is built on a greenfield site, it demonstrates a better land use alternative to strip development. Located within an area full of planned communities and tract housing from the 1980’s, Saffron stands out as something unique. The project is located on the Sammamish Plateau which is inside the Puget Sound regional urban growth boundary, so there are few development restrictions. It is located at the northeast intersection of 228<sup>th</sup> Avenue Northeast and Northeast 8<sup>th</sup> Street and is at the center of the plateau and surrounded by multifamily residential development. Saffron sits on the same intersection as a large commercial strip development from the 1980’s that contains offices and a branch of the county library. It is a busy crossroads that sees about 31,550 cars per day (Schmitz et al., 2006, p. 204).

Joe Blattner and Michael Corliss, founders of Tarragon LLC, which develops, builds, leases, and manages real estate in the Puget Sound area, purchased the site in the early 1990's with the purpose of creating a different type of mixed-use development. At this time, the usual response to "upzoning" would be to build retail along the street edge at the intersection and to put condominiums at the back of the site. Instead, their vision was to produce a "walkable place that could serve as the beginnings of a pedestrian-friendly, mixed-use downtown for the city of Sammamish" (Schmitz et al., 2006, p. 206).

Completed in the spring of 2000, the project is a successful collaboration between Baumgardner Architects, The Berger Partnership Landscape Architects, and consulting engineers, Bargausen. It is an upscale residential and commercial development and the first mixed-use project ever permitted in an unincorporated part of King County, featuring vibrant and bold architecture and plenty of outdoor spaces for people. It is both a success as a residential community as well as a desirable destination for shoppers. Saffron "is a delicate and precious spice that can add a rich color and flavor to an otherwise mundane dish. Like its namesake, the recently completed development in the heart of the Sammamish Plateau infuses architectural verve into a pattern of generally undistinguished strip malls and condominium complexes in that sector of East King County" (Hinshaw, 2001). Following are the ways in which Saffron demonstrates the theorems presented in this thesis:

### ***Activities and Density***

Saffron has a healthy density for its size. It contains two, three-story apartment blocks above ground-floor storefronts that face an inner parking and pedestrian court. There are 99 apartment units that sit above 19,714 square feet of ground level retail,

restaurants and offices. This is all situated on a compact 4.4-acre block that is divided by a grid of streets and sidewalks (Figure 5-8). There are 333 parking spots (144 spaces on the surface, and 200 spaces in a 66,000-square-foot underground parking structure) (Schmitz et al., 2006, p. 203). Renters say they choose to live at Saffron because they like the “convenience of being so close to shops and restaurants and the appeal of the streetscape. In good weather and especially on weekends, sidewalks are populated by pedestrians running errands, shopping or just strolling” (Schmitz et al., 2006, p. 212). In its entirety, 49,000 square feet of retail is planned, and 94,000 square feet of residential planned.



Figure 5-8: Site plan of Saffron (Schmitz et al., 2006, p. 212)

### ***People Attractors***

Saffron is extremely inviting and visually strong to the passerby as well as an interesting and comfortable place for residents to live and visitors to eat, shop, and pass

the time. Saffron features outdoor enclaves and seating areas, as well as a number of pedestrian-friendly places and a variety of sheltered areas. Of particular note are the attractive landscapes that offer many opportunities for sitting outdoors on 18" high seat walls and a surplus of movable chairs.

In addition, there are 17 stores in Saffron, some commercial tenants include: Evergreen Community Health Care, Columbia Fitness, dentist, skin care specialist and plastic surgeon, Pacific Bicycle, and DC Steakhouse, which includes outdoor seating that faces Northeast 8<sup>th</sup> Street. These diverse tenants are people attractors themselves. Furthermore, because Saffron is located in close proximity to a high-technology center it was designed with young tech professionals in mind; there is wireless internet and other appealing amenities for these workers.

### ***Connections and Movement***

Instead of the expected suburban street pattern that normally surrounds development with parking lots, Saffron boasts an urban grid system. The adjacent arterial roadways are integrated into the project. Saffron contains a midblock driveway that can be entered from Northeast 8<sup>th</sup> Street, which divides the mixed-use buildings on the west side of the site from one-story retail buildings on the east. There is a diagonal drive between Saffron and the county library, which fronts the retail area and features wide sidewalks and awnings, and leads to a broad set of steps that go to the corner of 228<sup>th</sup> Avenue Northeast.

The project is also bike-friendly. There are bike racks every 20' in Saffron, in addition to a popular bike shop often frequented by local cyclists. (Schmitz et al., 2006, p.

209). “The project contains offices, restaurants, apartments, retail shops, open plazas and intimate courtyards that connect to community trails” (“Saffron,” 2009).

### ***Public Realm and Street Life***

“Here is a development in the hinterlands that finally reflects the importance of creating a “public realm” (Hinshaw, 2001). It contains large sidewalks that are lined with shops and awnings. It has pedestrian-scaled signage, a water fountain and “most any pleasant day finds people strolling about, meeting friends and lounging in chairs” (Hinshaw, 2001).

### ***Human Scale***

Saffron is scaled appropriately for humans. “Creating an urban environment in the midst of suburban sprawl meant deliberately calibrating new scales for massing and creating a street grid within the development” (Schmitz et al., 2006, p. 208). Its sidewalks and street to building ratio feel comfortable for walking (Figure 5-9). The project also engages the chaotic nature of the surrounding roads and was able to balance this chaos with a lively pedestrian environment that includes outdoor walkways and seating. There are many pedestrian-friendly enclaves for visitors to relax and enjoy the surroundings.



Figure 5-9: Sidewalk of Saffron (Schmitz et al., 2006, p. 208)

### ***Green Space***

Although not a large feature of the project, Saffron does include some green space. The sidewalks and parking lots are all tree-lined and well shaded. “Abundant plantings and artworks soften the edginess of the architecture” (Schmitz et al., 2006, p.209).

### ***Character and Sense of Place***

“It [Saffron] should raise the bar for future projects by demonstrating that smaller, newer communities can also have a real sense of place” Saffron is a unique project, in that it stands out from its bland background with an “edgy, urban look” that is inspired by the drive-in aesthetic of the 1950’s, focusing on “bright colors, quirky angles, sculptural elements, and metal details” (Schmitz et al., 2006, p. 209). Subjective in nature, the bright colors can also be viewed as distracting and loud. In the center of the development is an attention-grabbing landmark; a glass-fronted commercial space with a tilted-out roof

that draws attention to the center of Saffron. It also features a fountain that functions as another landmark.

The buildings of the development use simple materials in a creative way; the three top floors of the residential blocks are wood-frame construction with metal siding. “This is completely authentic and very sophisticated architectural design” (Hinshaw, 2001). Saffron includes a dominant, triangular, one-story retail building at the intersection and well as the use of metal siding, deep colors, irregular angles, bright colors, stylistic features; simple materials are used in creative ways. In addition, life-sized bronze animals such as raccoons, turtles, and deer created by local artists, and paving mimics the path of a watercourse (Schmitz et al., 2006).

### ***Legibility***

Saffron is suitable for both cars and pedestrians as a result of distinct transitions from adjacent uses incorporates existing roads. Parking and circulation are visible from the nearby arterials, and therefore, easy to access and read. To attract pedestrians, Saffron has eye-catching ground level commercial storefronts near the corner and four-story residential buildings in the interior that face an inner courtyard (Schmitz et al., 2006).

Saffron’s signage is unique and easy to understand. Its three scales of signage appeal to auto traffic as well as pedestrians. For cars, there are seven thin standards with “Saffron” spelled out in tall letters (Figure 5-10). At the pedestrian level there are lighted blade signs hanging from canopies just below the head level. Finally, there are logos affixed to the bright-yellow storefronts that are geared toward pedestrians as well as slow-moving traffic (Schmitz et al., 2006, p. 209).

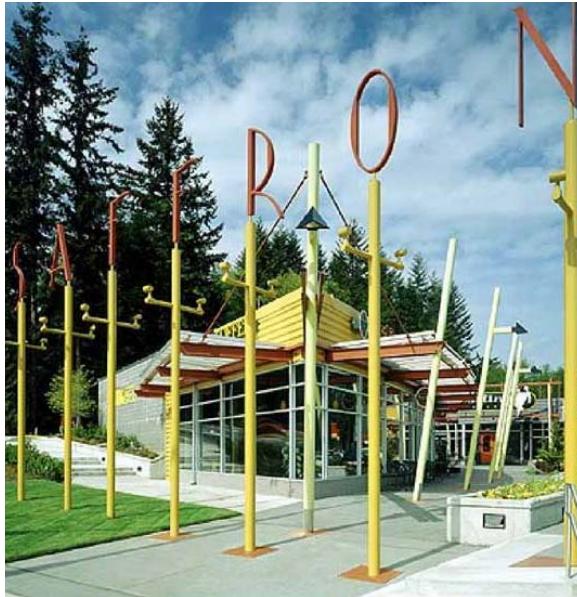


Figure 5-10: Signage for Automobiles ([www.bumgardner.biz](http://www.bumgardner.biz))

In conclusion, Saffron proves it is possible to create an urban setting within a suburban environment and demonstrates the benefits of many of the proposed theorems. Saffron can be used as a model for future designs that also attempt to incorporate automobile and pedestrian environments, urban and suburban scales, as well as residential and retail uses. It is a hybrid development - part urban, part suburban - with a vision toward the future.

### **The Uptown District, San Diego, California**

The Uptown District in San Diego, CA is an excellent example of the potent effect a successful infill project can have in areas that have fallen prey to low density development (Dunham-Jones, 2009b, p. 73). Uptown District is a 15 acre site located in a neighborhood of San Diego called Hillcrest, near attractive landmarks as Balboa Park and the city's famous zoo. After WWII, the area became inundated with strip development, exemplified by the Sears store built on the site (Canty, 1990). Eventually, the store was

left abandoned, and the structure and parking lot proved particularly problematic to the city, which purchased the site in 1896 (Figure 5-11). The original intent of the purchase was to construct a new central library, but community groups decided they wanted something different ("Unsprawl Case Study: San Diego's Uptown District," 1998).

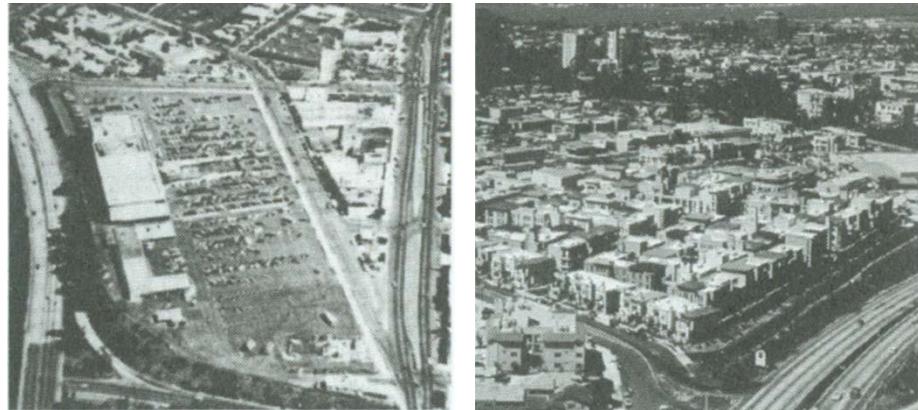


Figure 5-11: Uptown District Before and After (Sobel, 2002)

Redevelopment of the abandoned Sears store site, known as a “greyfield,” reinvigorated the Hillcrest neighborhood by offering an attractive mix of uses. The redesign introduced a residential component in the form of housing over retail facing the arterial corridor. It was completed in 1990 by developers Oliver McMillan/Oldmark and Thelan and the design team: SGPA Architecture and Planning, Gast Hillmer Urban Design, economic consultants Williams-Kuebelbeck Associates Inc, and transportation consultants Urban Systems Associates (Dunham-Jones, 2009b, p. 73). “Its significance lies in its success in repairing an older city fabric that was damaged by 1950’s commercial ‘strip’ development, restoring density, physical connections, economic and social vitality to an urban neighborhood” (“Uptown district,”). Following are the ways in which Uptown District embodies the ideals of the thesis’ theorems:

### ***Activities and Density***

The Uptown District project increased the density of the area by transforming the derelict Sears strip center into a unique and lively mixed-use community. Each day, there are nearly 23,000 people per square mile at the project, compared to an average of only 3,200 in the City of San Diego overall ("Unsprawl Case Study: San Diego's Uptown District," 1998). Such intense usage has been accomplished through a mix of both residential units – over 500 people live in 318 townhomes, flats, and artist's lofts ranging from 652 to 1,249 square feet – and 145,000 square feet of commercial and retail space. Mixed-use buildings along Vermont Street have ground-floor shops, with offices or residential lofts above (Figure 5-12). Although it has a variety of shops and activities, it has been noted that there have been difficulties for local retailers to stay in business here. While some blame the design of the project, the struggling stores may also be due to lack of experience on the retailers in the area as well as economic troubles ("Unsprawl Case Study: San Diego's Uptown District," 1998).

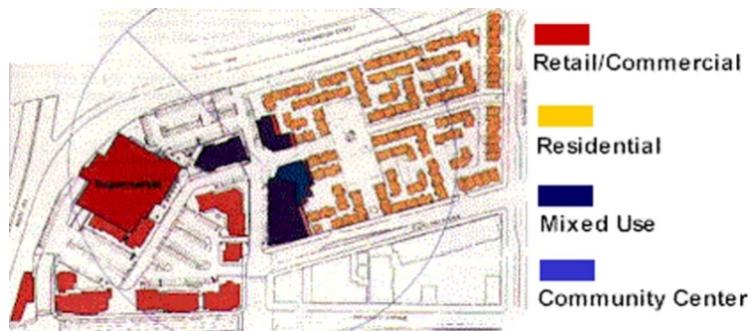


Figure 5-12: Uptown District Site Plan ("Unsprawl Case Study: San Diego's Uptown District," 1998)

### ***People Attractors***

Uptown District features magnet use attractions as well as smaller pedestrian amenities to attract its users. It includes a large array of neighborhood-focused uses: a

3,000 s.f. community center, artist lofts, cafes, grocery stores, boutiques, and more than 300 dwelling units. Uptown District is home to one of Southern California's most successful Ralph's grocery stores as well as a bustling community center. The grocery store, Ralph's, is a huge attraction for the local community on its own (Figure 5-13). The 42,000 square foot structure was built as a farmers' market. It was placed on top of 115-car garage that has an escalator that carries shopping carts down to their cars. It also has nearby outdoor seating that attracts people to stay and eat outside. To accommodate the high volume of people, the project contains 1,200 parking spaces, in total, that are located both in structures and in on-grade lots ("Unsprawl Case Study: San Diego's Uptown District," 1998). Uptown District also contains many aesthetic amenities to enhance its appearance, such as a variety roof-line elevations, awnings and banners, public plazas, landscaped parks, and public artwork throughout the site.



Figure 5-13: Ralph's Grocery Store ([www.epa.gov/smartgrowth/case/updis\\_p4.htm](http://www.epa.gov/smartgrowth/case/updis_p4.htm))

### ***Connections and Movement***

“The very name of the development, the Uptown District, suggests a desire on the part of all concerned that the project be integrated with the neighborhood rather than stand apart as an island of brash newness” (Canty, 1990). The plan emphasizes linkages to the existing neighborhood. To this end the developers bought the strip of land that was in between Hillcrest’s main retail corridor and the Sears site to build a bridge as a walkable connection to the surrounding area (Canty, 1990). The pedestrian bridge is artfully decorated and connects Uptown District to the nearby neighborhood of University Heights. In addition, buildings on the site were brought to the sidewalk line to reinforce the street edge.

Re-organization of roadways was central to creating linkages both within the new development and to the surrounding areas. San Diego’s street grid was brought into the project and the typical superblock of the city was subdivided into a grid and broken down into four blocks that are each in turn broken up further with courtyards (Dunham-Jones, 2009b, p. 73). An existing roadway, Vermont Street, was widened to create a “grand boulevard” where the commercial and residential uses would meet (Canty, 1990). As part of this plan, streets that had been removed during the creation of the old Sears parking lot were restored. By organizing Uptown district around smaller, walkable blocks with buildings brought to the sidewalk line and ubiquitous pedestrian pathways, designers were able to help make walking safer and easier for both residents and shoppers alike.

Although Uptown District is not focused around a single stop on a rail system, it is situated within one of San Diego’s most walkable neighborhoods and because of the location excellent transit service provided by several of San Diego’s municipal bus

routes, it may be thought of as a bus Transit-Oriented Development (TOD) ("California transit-oriented development database," 2002).

### ***Public Realm and Street Life***

The public realm of the residential component of the Uptown District is greatly enhanced by its car free design; all the parking is below ground. Instead of parking lots, residents enjoy a network of pedestrian-only "paseos," courtyards and a miniature main street ("Unsprawl Case Study: San Diego's Uptown District," 1998). In contrast, parking in the retail area of Uptown is located approximately mid-block and behind buildings. The only building facing a parking lot is a Ralph's supermarket with most of its parking underground it is actually the best performing in the company's chain ("Unsprawl Case Study: San Diego's Uptown District," 1998).

Uptown District was "designed with the community in mind and community participation in pocket, [the project] blends the built and natural environments into a new urban landscape that coexists well with current neighborhoods, working subtly through positive example to enhance those neighborhoods" ("Unsprawl Case Study: San Diego's Uptown District," 1998). An example is the landscaped courtyard in the center of the development that rises in a series of terraced steps and doubles as an amphitheater for community events (Canty, 1990).

### ***Human Scale***

Uptown District encourages people to get out and walk around (Figure 5-14). According to the designer:

To keep that feeling at Uptown District, we were intent on making the residences orient toward the streets and walkways within and around the perimeter of the project. This encourages the residents to interact with the street activities. It makes for a lively and vital community ("Unsprawl Case Study: San Diego's Uptown District," 1998).

Parking is limited, which encourages pedestrian use, and puts the human ahead of the automobile, making the development greatly human-scaled. “[Parking] ratios are 2.0 spaces per townhouse, 1.7 per apartment, and 1 space for every 270 square feet of commercial floor area. The vicinity average is 2.25 spaces per residential unit and 1 space for every 250 square feet of commercial floor area. Higher density in Uptown District equates to more efficient land use” ("Unsprawl Case Study: San Diego's Uptown District," 1998).



Figure 5-14: Uptown District  
[\(http://www.sgpa.com/mixed-use/uptown-district/project.pdf\)](http://www.sgpa.com/mixed-use/uptown-district/project.pdf)

### *Green Space*

The green space in Uptown District consists of a large central park around which buildings are organized and smaller landscaped courtyards interspersed throughout the

development, each with a distinct design. Outdoor areas are also incorporated into the buildings of the complex. Where there would normally be interior hallways in apartment buildings, there are outdoor passageways. Finally, “where there is surface parking, it is modest and heavily planted with flowering jacarandas. Landscaping and street furnishings throughout contribute an ‘urban village’ feeling, in the architects' words” (Canty, 1990).

### ***Character and Sense of Place***

The designers of Uptown District attempted to achieve sense of place in the development by employing a coherent, but varied set of design styles for built structures that some have generally likened to “Mediterranean” (“Unsprawl Case Study: San Diego's Uptown District,” 1998). SGPA Architecture and Planning decided that it would be best not to choose a single style for the development because there was not one predominate style in Hillcrest and having only one style would adversely affect the scale of the development (Canty, 1990). They attempted to make the 48 buildings in Uptown look as if they had been done over a period of time by different architects. Michael Labarre, principle architect primarily responsible for the commercial segment, describes his intentions:

What we tried to achieve was the creation of a series of architectural images that worked together but do not give the sense that this was just one giant project built at the same time. We tried to provide a sense of streetscapes and a sense that the project is a diverse gathering of architectural images built over a number of years (as cited in “Unsprawl Case Study: San Diego's Uptown District,” 1998).

Uptown District’s final design has a “lively skyline” of contrasting buildings (Canty, 1990).

### ***Legibility***

According to Dave Lorimer, an architect of Uptown District, "The project is like a quilt. There's a variety, yet everything is tied together (Figure 5-15). Uptown District has a city texture all its own" (as cited in "Unsprawl Case Study: San Diego's Uptown District," 1998). It fits into the local context, but stands out as something special. It has enough landmarks and unique attributes to become a destination on its own. The street grids, pedestrian or automobile oriented, are easy to navigate and add a sense of organization to the site.

The redevelopment is anchored by a large supermarket, a highly legible landmark, yet the grocery store has only a minimal sign on the arterial road, is not adjacent to a large parking lot since most parking is underground and "designed to be inconspicuous," according to the City of San Diego Planning Department.



Figure 5-15: Uptown District Master Plan by SGPA Architecture and Planning  
[www.sgpa.com](http://www.sgpa.com)

### **Santana Row, San Jose, California**

In contrast to Uptown District in San Diego, the Santana Row development in San Jose, California did not receive any public funding. Optimistic developer and CEO of Federal Realty Investment Trust, Steven Guttman, who had success at Pentagon Row and Bethesda Row in the Washington, DC area, decided to work on the Santana Row project (Dunham-Jones, 2009b, p. 79).

Santana Row replaced a 1950s-era suburban strip mall called the Town & Country Mall that previously occupied the site (Figure 5-) (Sobel, 2002, p. 79). The aging, single-story mall catered solely to the automobile with 100% surface parking and unappealing aesthetics. Santana Row, in contrast, is a thoughtfully designed, multi-story mixed-use community and it incorporates all of its parking needs within the new structures.

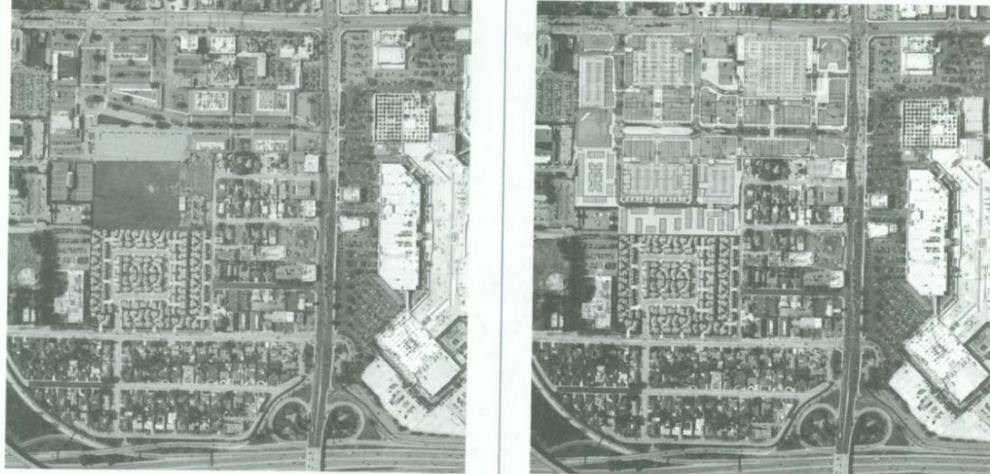


Figure 5-16: Santana Row Before and After Images (Sobel, 2002, p. 79)

### ***Activities and Density***

The adaptive reuse project is another successful transformation of a suburban development pattern into a high-density urban pattern (Figure 5-16). Santana Row's 42 acres are now a thriving, highly dense center that combines shopping, retail, landscaped parks – 680,000 s.f. of retail spaces and restaurants, 1,201 dwelling units, two hotels and seven parks (Verdon, 2004). The development is characterized by stacked multi-story buildings that each include a mix of uses (Figure 5-17). There are three anchor stores: Best Buy, the Container Store, and Crate & Barrel, located on Stevens Creek Boulevard near the highest concentration of automobile traffic.

The 1,500 foot long main street, called Santana Row, contains the most high-end shops. Residential units, named Serrano and Santana Heights, sit above and behind the shops. The same organizational pattern is utilized in other areas of the development, where three residential units – the Villa Comet, the DeForest, and the Margo –sit above more high-end shops. Hotel Valencia, a 213-room boutique hotel, also sits in the middle of Santana Row and contains first floor, street-accessible shops. Independent and smaller shops and convenience stores are located along Olsen Drive and Olin Avenue (Verdon, 2004).

Santana Row may be an improvement over its prior use, but it some critics say it lacks the diversity of activities necessary for a well-rounded, affordable, mixed-use development. Santana Row contains an extremely high percentage of high-end retail options, but would benefit from more convenience retail for day-to-day activities, especially as a neighborhood center. There are also no specific buildings for civic use,

although the development does provide physical open space infrastructure for public functions.

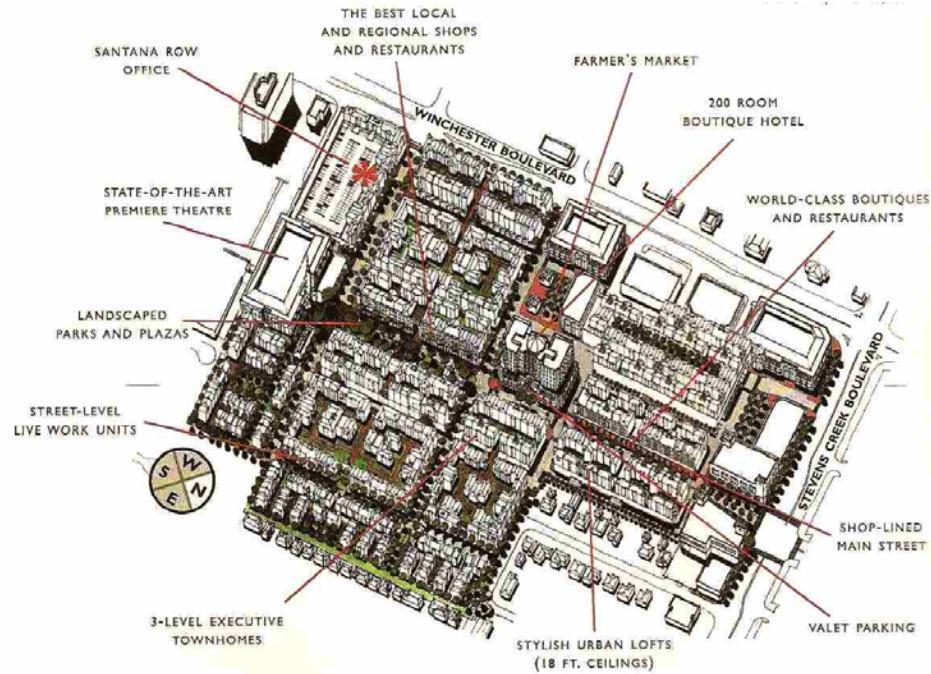


Figure 5-17: Plan for Santana Row

### *People Attractors*

Santana Row's magnet uses and unique programming are successful in attracting people to the center. Landscaped parks and plaza, a theatre, a farmer's market, restaurants, and a boutique hotel all entice people to come to the area as a destination. In addition, located at the heart of the project, is Santana Row Park. This main pedestrian area has a median park and is lined with ground-floor retail, restaurants and public gathering spaces. Within the development, the four blocks of the central street transition from two-way traffic to a pedestrian boulevard that has arcaded shops as well as three- to five-story buildings. "The result is a very lively, very popular, urban "room" that is open at its ends but is spatially more compact than anything in its immediate context" (Dunham-Jones, 2009b, p. 79). Piazza di Valencia (Figure 5-22) is another popular public

gathering places and features ample seating opportunities as well as a variety of activities and uses.

### ***Connections and Movement***

Santana Row is located at the intersection of two major regional highways and withstands intense automobile usage, yet manages to accommodate both pedestrians and cars in the same space. “Instead of segregating cars and pedestrians, they boldly mixed them together, making it work by narrowing the streets just enough to slow the cars so pedestrians could jaywalk safely” (Hess, 2007). The project is located on Stevens Creek Boulevard, and has direct access within a half-mile to Interstates 880 and 280 and Route 17.

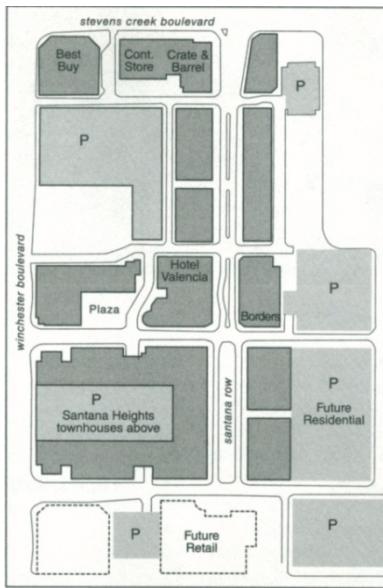


Figure 5-18: Santana Row Parking Plan (Dunham-Jones, 2009b, p. 79)

The project has a fine-grained grid and its parking is hidden in the interior of the blocks behind a layer of buildings (Figure 5-18). The streets are successful pedestrian realms within the grid. Two of the most dominant streets are Santana Row and Olin

Avenue. They have wide sidewalks that contain outdoor seating for restaurants and cafes and are part of the promenade for strolling (Figure 5-19).



Figure 5-19: Median and Walkway at Santana Row (SWA, 2009)

Although Santana Row does have a grid, it does not connect with the pre-existing street network, which unfortunately creates a bit of an “island effect.” Santana Row could do a better job at integrating itself into the surrounding neighborhood by creating linkages with the surrounding arrangement of streets (Torino, 2005). In addition, it can only be seen from the inside and, as a result, the project turns its back on the existing roads. The “face” of the project is on Winchester Boulevard and it showcases a parking garage and unadorned residential buildings. Because the two arterials bordering the site are not appropriate for pedestrian access, the project remains internally focused and disconnected from its neighborhood (Dunham-Jones, 2009b, p. 79).

Fortunately, Santana Row is accessible via public transportation thanks to the bus system operated by the Santa Clara Valley Transit Authority. Furthermore, the VTA is planning to extend its light rail lines to the center in the future.

### ***Public Realm and Street Life***

Santana Row has a vibrant public realm. Its residential units add life to the streets; high-density urban living lofts are located in the most urban, retail-oriented location within the development, one block away from Stevens Creek Boulevard in the DeForest and the Margo residential buildings.

Residents of the townhomes on the upper levels of Santana Row's blocks can look from their windows and balconies and see something pretty much like real life on the streets below: fitness freaks on their way to the health club at dawn, mothers with strollers sitting in the parks in the mid-morning sun, business people business-lunching at sidewalk cafes at noon, shoppers cruising in and out of stores all day long, and San Jose residents of different sorts arriving to dine, drink, shop, buy a book, watch movies or dance until late at night" (Hess, 2007).

Townhouses, on the other hand, are located at the edges of the project and area along the less busy side streets for more privacy and quiet (Verdon, 2004).

Santana Row capitalizes on the tendencies of people to want to be by other people and get near the action. The sidewalk cafes and street interactions made possible by the design serve only to make the development more attractive to its users. "Santana Row realizes that we want to be with our fellow humans for reasons other than selling or being sold to" (Hess, 2007). Santana Row has an extensive and diverse lineup of special events, from "Paws in the Park" to a weekly farmer's market on Sundays, among other activities, that attract a broad variety of people (Figure 5-20) (Hess, 2007).



Figure 5-20: Farmer's Market at Santana Row (SWA, 2009)

Santana Row is not without its critics who report the project has the potential to become too much of a tourist attraction. The development is also controversial with the local community because they say it competes with the nearby downtown San Jose. Even so, Santana Row has a positive impact on civic health and adds an element of public life to an area that previously had little. “Like a mall, Santana Row is privately owned but makes space available for public use. This space is highly programmed with concerts, fashion shows, and farmers’ markets...” (Dunham-Jones, 2009b, p. 80).

### ***Human Scale***

San Jose is mostly made up of post WWII single-story tract housing, but Santana Row stands out as something unique and very human-scaled because of its many intricate features such as: arcades, small courtyards, plazas, narrow streets, balcony-lined facades, grand gateways, decorative fountains, and the illusion of numerous, narrow-fronted buildings, and outdoor seating accomplishing a true sense of enclosure in the area (Figure 5-21) (Torino, 2005).

In addition to the small-scale details, designers also were cognizant of how larger elements of the development would create a human-scaled environment. “The optimal placement of buildings and the use within them was based on their relationships to the streets, views, parking, and access, as well as the need to create a sense of privacy and security” (Verdon, 2004).

The main goal of the project was to create a pleasant pedestrian experience. “The buildings were designed to promote pedestrian activity and conceal its parking” (Verdon, 2004). Most of the parking at Santana Row is in garages hidden behind retail stores, some is underground, and other parking is raised on top of a podium. There are also several surface lots that will eventually be developed into other uses in the future. Parallel parking is located along all the streets and helps to provide a buffer for pedestrians on the sidewalks, making them safer and more appealing for dining, strolling, and shopping. Service areas are accessed from side streets.



Figure 5-21: Outdoor Seating at Santana Row (SWA, 2009)

### ***Green Space***

Santana Row includes many green spaces throughout. Its main street, Santana Row, has a park that runs throughout its large continuous median. Also, behind the Hotel Valencia, bordered by restaurants, is the Piazza di Valencia, one of the principal plazas in Santana Row (Figure 5-22). The plaza has an outdoor area serving two restaurants and the general public. Outdoor seating on the terrace overlooks the central plaza (Verdon, 2004).



Figure 5-22: Santana Row's Piazza di Valencia (Takemoto, 2006)

In addition to the main street, landscaped medians are also located at the one end of the project that lies between Olin Avenue and Olsen Drive.

### ***Character and Sense of Place***

Santana Row stands out from the surrounding low-density areas by addressing the aesthetics of mixed-use development in a unique way. When asked about the overriding principles that guided his approach to urban revitalization, Heapes, designer of Santana Row, said:

The key word is place. The mall is a place, but it's not very urban, and it's really only one use, though many mall owners try unsuccessfully to change that by adding diverse elements. And in a mall, you feel like you're in someone else's place. If you look at the top ten destinations in America, which include cities such as Boston, New York and San Francisco, they're all about urban places (Lewis, 2001).

The design firm Maestri has a strong philosophy for placemaking and infused this into the project. Maestri searched for “found objects” such as: “a French chapel façade, antique metalwork, pottery and fountains which were imported from Europe and reconstructed on-site to add a sense of history and patina” (Maestri, 2005c). Attention to detail was instrumental in creating character within Santana Row. Maestri designed metal work, tiles, detailing, railings, lanterns, fountains, street plaques, and lighting. The design of signage also helped to create a sense of place by giving the “texture of an urban streetscape where the layering of information has the advantage of time” (Maestri, 2005c).

A powerful part of Santana Row is the range of colors employed. Color use throughout history was studied with the goal of “honoring the ancestry which is Hispanic and Chinese” and used to contrast with the “Anglo-bias” of the area (Maestri, 2005a). A rich palette of colors from Latin countries, Asia, East India and Europe were used throughout the development. In addition, the marketing center is a reused strip center building that previously housed several “greasy-spoon” restaurants (Maestri, 2005b). Its coral pink and turquoise exterior was repainted, the interior gutted, and the building reused for the new development.

The architectural details of the buildings at Santana Row were designed to optimize the pedestrian experience. The urban design guidelines for Santana Row were

not overly detailed in order to facilitate and encourage creative design. “The reasoning behind this approach was to mirror the way a true city street evolves. The blocks were meant to have an “evolutionary” feel – as though they had been built separately over time by different owners” (Verdon, 2004). Furthermore, artists were commissioned to create 16 ceramic mosaic fountains, a moon phase mural, and freestanding sculptures placed along pedestrian pathways.

### ***Legibility***

The design of Santana Row is organized on a grid, which makes the development easy to navigate. It has a hierarchy of streets where the most important are widest and contain the most amenities. The highest building in the development, a hotel, is located in its center, providing a visual landmark for the area. Most of the parking is hidden, so the sidewalks are well connected, easy, and safe to use. Finally, Maestri design group created unique signage throughout Santana Row. While adding to its sense of place, it also helps to orient visitors to the area.

### **Conclusion**

The four case studies: Mashpee Commons, Saffron, Uptown District and Santana Row are all high-quality examples of the possibility for the future design of neighborhood open-air centers. All the projects, with the exception of Saffron, are retrofits of existing strip malls. They all possess a mix of activities, an increase in density, pedestrian amenities, strong physical connections, public places, human scale, character, green space, and legibility.

Mashpee Commons, the first retrofit of an existing strip mall, makes good use of existing buildings and incorporates a mix of uses into a pedestrian friendly village center.

Its urban core is vibrant and filled with business, live/work lofts, and public space. The interesting and successful use of liner buildings and creative use of civic features and a healthy mix of chain and local stores make for a vibrant and dense, more “urbanized” space.

Saffron, although not a retrofit, is a good example of how to creatively integrate the pedestrian and the automobile into the same space. It successfully incorporates retail and residential uses and responds to its surrounding uses, such as the nearby library. Saffron’s application of interesting and innovative signage works well for both pedestrians and drivers.

The Uptown District development is very successful creating linkages with the adjacent neighborhood. The previously unfriendly neighborhood design was transformed into a highly accessible and vibrant pedestrian realm featuring a strong street edge, smaller blocks, and a strong street grid. Its efficient land use creates high density and limited parking. In addition, the large grocery store, Ralph’s, solidifies Uptown District as a convenient and neighborhood-appropriate place.

Finally, Santana Row, a multi-story, mixed-use community, funnels a huge number of cars into its innovative parking locations – mostly garages built within the new structures, but also parallel parking on the street, and a few surface lots. At the heart of the project is a central main street with a park in its median and ground floor retail, restaurants, and public gathering spaces. Santana Row has strong street frontages, with parking and service areas in the back of buildings. The project’s strength lies in its pedestrian spaces and activities.

All of these projects will help to aid in the redesign of the open-air center in Athens, GA. The innovative transformation of these auto-centric places into pedestrian-friendly nodes, will serve as inspiration for the following design application.

## CHAPTER 6

### DESIGN APPLICATION

#### Introduction

The redesign of the Barnett Shoals corridor (Figure 6-1) into the Barnett Shoals Neighborhood Center emphasizes human needs by incorporating solutions from the eight theorems established in Chapter Four: Activities and Density, People Attractors, Connections and Movement, Green Space, Character and Sense of Place, Public Realm and Street Life, Human Scale, and Legibility. The goal of the design is to create a new model for the neighborhood open-air center that changes its current form into something new and unique that caters to the human and is functionally sound.



Figure 6-1: Barnett Shoals Corridor (Photo by author)

#### Site Background

The project site consists of 52 acres located in Athens, GA, on the east and west sides of Barnett Shoals Road between the intersections of College Station Road and

Barnett Shoals/Greencrest Dr. (Figure 6-2). Currently, the area consists primarily of fast-food restaurants surrounded by asphalt parking lots, drive-through windows, mini-malls, gas stations, big-box retailers, grocery stores, and convenience stores. The adjacent land uses to the east are two gas stations, the Green Acres Baptist Church, and the Green Acres residential neighborhood; to west of the area, are the Cambridge Apartments, and the Polo Club Apartments; to the north of the site are various commercial uses and residential developments Georgetown Village Condominiums and Ansonborough, the Covenant Presbyterian Church, Gaines Elementary School and Hillsman Middle School; to the south of the site is open land owned by the University of Georgia.



Figure 6-2: Site Map nts

This area provides many services to the entire community of East Athens. The corridor functions as: the major multimodal transportation route for bus, auto, bicycle, and pedestrian traffic; the major retail shopping center for the eastern half of the county; the linkage between the major eastside residential neighborhoods, the major eastside retail shopping centers, and the major employment centers in the county – Downtown Athens and the University of Georgia; and primary access to other major transportation arteries; and destination points such as the Athens Perimeter, Highways 78 and 29, the Airport, Winterville and Watkinsville (*SPLOST IV Project No. 22 - Barnett Shoals Road Widening Project, 2000*).

Because the area provides so many important functions, it is vital that it is well-designed and functional. Unfortunately, as it currently exists, the corridor has many problems. Over the past twenty years the area grew without the organizational control and proper planning. The result is a fragmented landscape without sufficient drainage and transportation infrastructure. It is inundated with open-air centers that are not connected to the adjacent neighborhoods.

This is not the first time the Barnett Shoals Corridor has been examined. SPLOST Project No. 22 (Figure 6-3) was proposed to widen the street and provide proper drainage for the area. The project was initiated for a variety of reasons. The population of southeastern Athens-Clarke County had grown and there was a 55% increase in traffic volume on the Barnett Shoals/Gains School Road corridor due to increased residential and commercial development. Simultaneously, the number of accidents had risen to more than 100 per year. In addition, the corridor had many curb cuts along the roadway, few interconnected parcels, long delays from side streets, and traffic congestions. At the time

of the project, the year 2000, there were over 1,800 vehicles during the peak hour of 5:00-6:00 p.m. and traffic volumes were projected to increase to 35,000 vehicles per day by the year 2015. In addition, the area lacked a proper stormwater drainage system and has problems with flooding (*SPLOST IV Project No. 22 - Barnett Shoals Road Widening Project, 2000*).

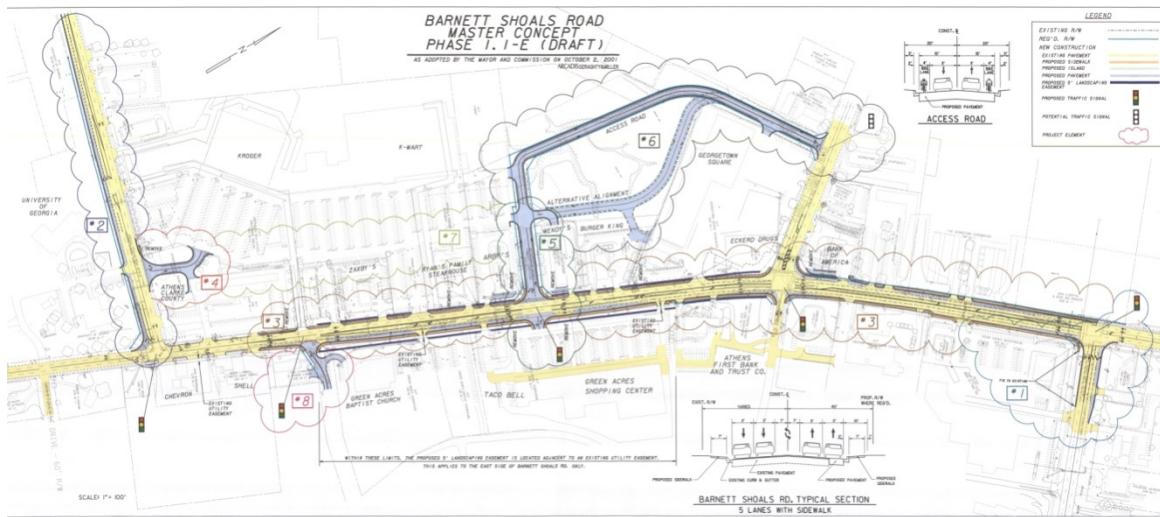
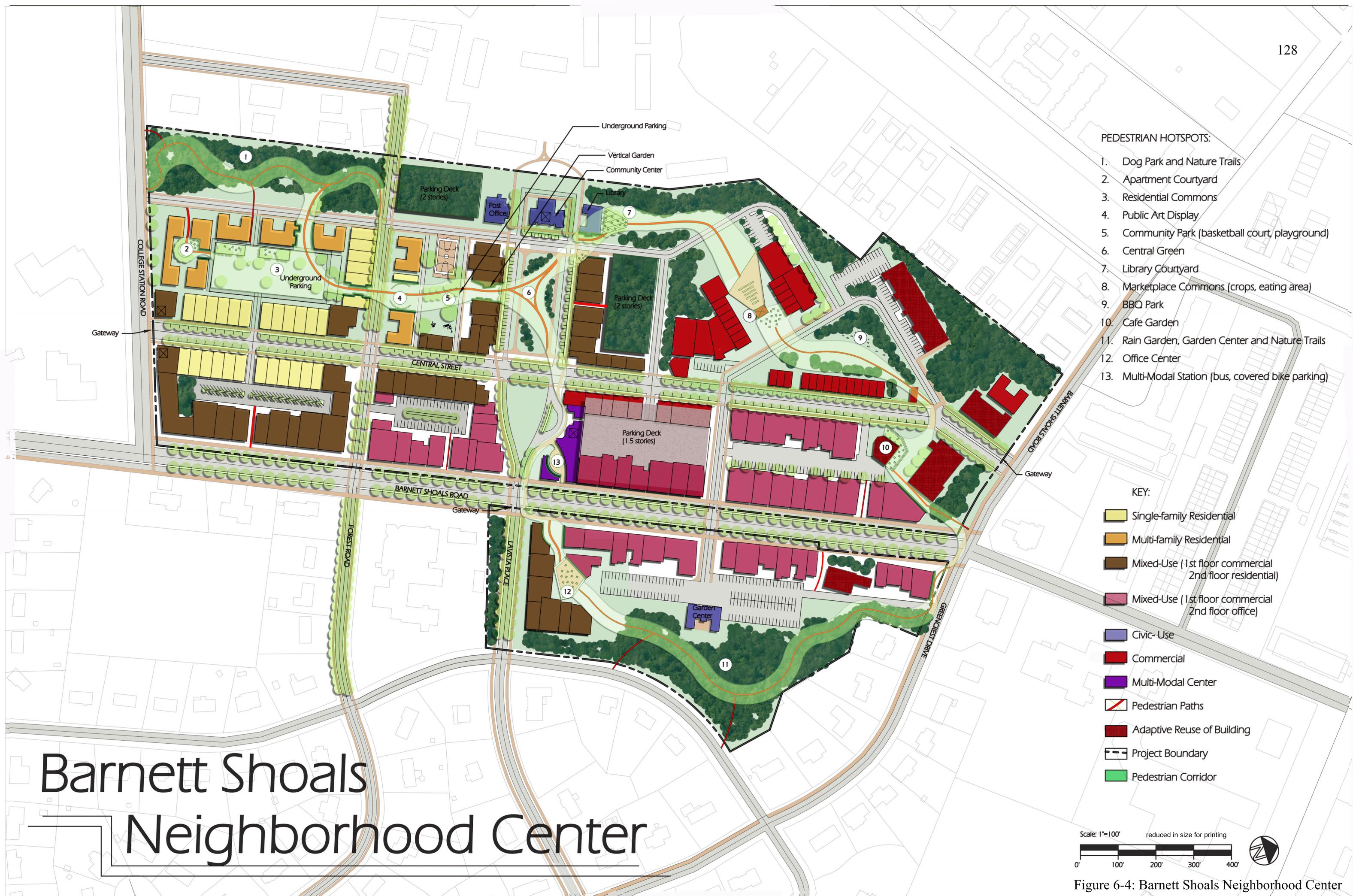


Figure 6-3: Master SPLOST Concept for Barnett Shoals Road  
(*SPLOST IV Project No. 22 - Barnett Shoals Road Widening Project, 2000*)

The SPLOST Project No. 22 did fix some necessary drainage problems, safety concerns due to traffic problems, and circulation and congestion issues. The project also proposed planted medians on Barnett Shoals as well as a continuation of the new road in between the Kroger parking lot and Barnett Shoals Road, but unfortunately these two features were never realized, and other important human needs issues were not examined.

## **Design**

The intent of the design application is to use the site of the Barnett Shoals Corridor to create a model for change in the form and function of open-air neighborhood centers. The new plan focuses on the needs of humans within such a place. The design is discussed using the same format as the case study chapter and views the design intent and features through the lens of the eight theorems (plan shown in Figure 6-4).



### ***Activities and Density***

The Barnett Shoals corridor is currently a low-density area with parking lots as its dominant feature (Figure 6-5). It contains large big-box retail stores, mini-malls, obtrusive signage, and many fast food chains that require individual parking lots and curb cuts to accommodate their drive-through take-out windows. Each building is surrounded by asphalt parking, as well as limited and disconnected sidewalks resulting in a fragmented place that is not conducive to walking. It is common for people to drive from store to store within the development because it is so difficult and dangerous to walk, and there is little to no connectivity to adjacent land uses.



Figure 6-5: Barnett Shoals Corridor (Photo by author)

A key feature of the redesign's attempt to tackle the lack of activity in open-air centers is the creation of a distinctive “pedestrian corridor,” shown on the plan as a green overlay in the shape of a ribbon, which is sprinkled with programmed pedestrian spaces or “hotspots” of activity (Figure 6-6). The corridor was created work with the existing road and sidewalk grid while at the same time providing an additional alternate route for walkers. The pedestrian corridor functions as an “urban nature trail,” emphasizing the

# Pedestrian Corridor and Hotspots

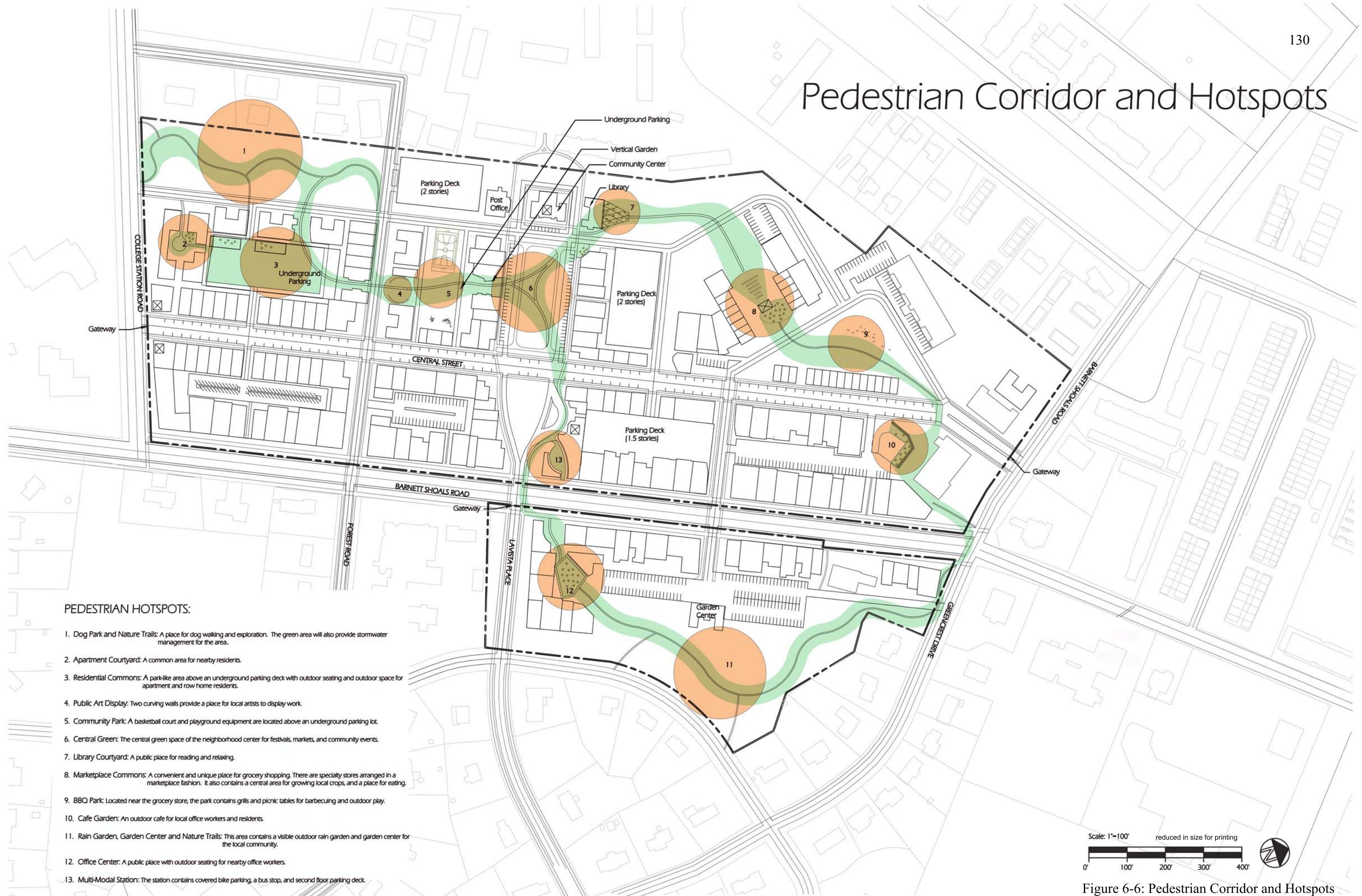


Figure 6-6: Pedestrian Corridor and Hotspots

importance of human over auto in the center. The corridor features pedestrian only places connected via pathways and green spaces along its route. These destination “hotspots” of diverse activity are specifically neighborhood and pedestrian driven and will pull the user through the site. The featured “hotspots” are: a dog park; an apartment courtyard, a residential commons that sits on top of the residential parking garage that features a variety greenroof plants such as sedums that will act as an educational area; a public art display area with large walls for local artists to display their work; a community park that features a basketball court and various children’s play equipment, a central green for community functions and events; a library courtyard; a marketplace with outdoor crops and eating area; a park for barbequing and picnics; a café garden for nearby office workers and shoppers; an office-oriented outdoor plaza; a natural area with a rain garden, garden center and more trails for walking; and a multi-modal station with covered bicycle storage. These diverse activities will provide a great amount of choice for users of the Barnett Shoals Neighborhood Center that will help to foster a sense of belonging or affiliation and even esteem for the center’s users.

In order to make the Barnett Shoals area safer and more comfortable for pedestrians, it is necessary to increase the density of development within the corridor and offer diverse options for activity (Figure 6-7). As stated in theorem one, the densification of an open-air center is accomplished by including multi-story buildings, parking structures, and minimal surface parking, thus mimicking the principles that contribute to successful and interesting urban areas. The increase in height and concentration of buildings within an open-air center will bring uses closer together, and, therefore, decrease walking time for pedestrians using the center. Most of the buildings on the site

will be two-stories high. The important or featured buildings, such as the civic and corner buildings, in the redesigned Barnett Shoals corridor will three-stories high. This added building height will add to the density of the area and give a comfortable, human-scaled environment for the pedestrian.



Figure 6-7: Figure Ground: An Increase in Density

The plan calls for a mix of uses in the Barnett Shoals area to encourage a 24-hour atmosphere of activity. The center of the project contains the densest development clustered around a central lawn area with pathways and sidewalks that will serve as a focal point and landmark for the neighborhood center. Bordering this central green space are two and three-story mixed-use buildings containing first floor retail and second floor office space or residential space. Along the western point of the central development are proposed civic uses, including a post office, a community center, and an Athens Clarke County branch library that will encourage a healthy public dynamic in the center.

The plan incorporates a wide variety of uses – residential, office, and commercial. The Barnett Shoals Neighborhood Center will offer 31 two-story, single-family row houses, as well as 220,500 s.f. of residential space (approximately 220 units ranging from 700 s.f. -1600 s.f.) within seven apartment buildings and second floor units throughout the site. The residential plan offers a variety of housing options such as one-bedroom and two-bedroom apartments, lofts, live-work units, and studio apartments that would attract the large student population at University of Georgia. On the southeast side of the project site, the apartment buildings front a natural green area that contains trails and an open dog park area that could also serve as a potential connection to the future greenway currently planned by Clarke County. Throughout the site, particular second floors above commercial space will contain 154,600 s.f. of office space. This flexible space will accommodate a variety of office needs. Finally, the neighborhood center will provide 410,000 s.f. of commercial space throughout the site also range in size and shape to suit a wide variety of restaurants, shops, boutiques, and cafés.

Like Mashpee Commons, the plan for the Barnett Shoals Neighborhood Center incorporates a range of commercial building sizes for diversity of retail options. 20-42' deep liner buildings - located across from site of the former Publix - may house local merchants, while a mix of national retailers will be located in the larger spaces. Similar to Saffron, residents of the new Barnett Shoals corridor will certainly enjoy the convenience of being so close to shops and restaurants.

Five of the existing buildings in the Barnett Shoals corridor will be re-used. The three buildings on parcel 241 001 were retained because of their recent construction date of 2007. The other two buildings, the drug store (parcel 231 001A), and the bank (parcel

241A3 B001), were retained for their neighborhood uses that would accommodate the nearby residents and maintain the neighborhood convenience environment. In accordance with the case studies, it is important to save buildings that are suitable for re-use as part of a “retrofit” that is environmentally-conscious. The Publix grocery store footprint will also remain, but its form has been altered. Instead of a big-box format typical of chain grocers throughout the country, the grocery store has been “broken apart” and separated into small specialty shops to function more like a European marketplace. The central area of the market will house crops that can be harvested and sold in the central structure alongside the harvests of local farmers. Adjacent to the crops is a “marketplace commons” where people can go to eat, sit down, and enjoy the goods they purchase at the marketplace. Nearby is also a barbecue area with picnic tables and grills that can be used in a similar fashion. Like Uptown District’s Ralphs’ grocery store, the marketplace is a necessity and a place of shopping convenience for the nearby residents. In its new form, the grocery store will cater better to humans and create a unique and interesting shopping experience. The food will be local and the additional stores will contain more variety and specialization. The format will also foster more interaction between users and store owners.

### ***People Attractors***

The design for the new Barnett Shoals Neighborhood Center proposes new magnet uses that will attract people to the site. The civic uses (library, community center, and post office) as well as central green that can accommodate markets, festivals, events, and concerts, will provide specific reasons for people to come to the area and gatherings for them to attend. In addition to the special events, there will be typical neighborhood

conveniences such as a drug store, grocery store, a variety of retail stores, and offices. It is also important to note that in the residential area of the new plan, the corner structures will feature neighborhood-related commercial uses such as a dry-cleaners, day care center, drug store, or small convenient store. The pedestrian “hotspots” will also be significant assets in attracting users to the center.

In addition to magnet uses, the new Barnett Shoals Neighborhood Center will also have amenities that will encourage people to linger in the area. Pedestrian-oriented features such as street trees, paving patterns, kiosks, street vendors, green spaces, awnings, lamp posts, sculptures, awnings, sidewalks, and benches will all contribute to the comfort of users and entice them to linger in the center. As recommended by Project for Public Spaces (PPS) the site will include one linear foot of seating per thirty square feet of plaza area (Watson et al., 2003, pp. 6.8-8). Primary and secondary seating opportunities, such as steps, walls and planters are incorporated in many pedestrian spaces along the way to provide for comfort and choice.

There are also many southern facing outdoor spaces that will allow maximum sun exposure and comfort to pedestrians in cooler weather months. These spaces also contain shade-giving trees, awnings, and umbrellas for pedestrian comfort during the steamy summer months.

### ***Connections and Movement***

The new plan helps stitch together the existing fragmented street grid in the Barnett Shoals corridor area. New streets are proposed to connect with current streets, and existing streets are lengthened to provide greater connectivity and movement within the site (Figure 6-8).



Figure 6-8: Connecting the Street Grid

Continuing the alternate “access road” that goes half-way into the site from the north at Barnett Shoals Road was integral to the improved street system of the center. This road, named Central Street, will continue all the way through the site and will connect into College Station Road. Within the hierarchy of roads in the development, it will be the north/south “Main Street” and function as a “promenade” for the site. The new road has a right of way of 66' R.O.W. of (two 10' wide central lanes of traffic, each with 7' for parallel parking along both sides; 2 bike lanes 5' wide; 2 sidewalks 7' wide; and two medians 5' wide with street trees). The parking lane and street trees provide a buffer for the comfort and safety of the pedestrian. At either end of the road will be “gateway”

features that include taller buildings and signage to indicate that it is an entrance and an exit.

The redesign establishes important connections with adjacent residential neighborhoods, similar to the strong street linkages of the Uptown District development. Lavista Place, currently a dead-end road, will be extended from the Green Acres neighborhood to flow directly into the proposed Barnett Shoals Center. This is one of the main connections, pedestrian and auto, from the neighborhood to the center and is very important to the site. It is a primary entrance to the Barnett Shoals Neighborhood Center and its design will provide a sense of arrival to the site. The road enters the site and quickly splits to form a one-way road with on-street pull-in parking and street trees as it makes its way in a circular manner around the central green area. Forest Road will also continue to connect into the new center and wrap around to connect with College Station Road, providing a connection to the western residential neighborhood. Finally, a new road will serve as the main connection between the former Green Acres Center strip mall site and the new Barnett Shoals Neighborhood Center. It will also help to complete the grid formation of streets.

Barnett Shoals Road will be transformed from a busy corridor filled with many curb cuts and turn lanes, to a boulevard design, similar to Allan Jacob's design, from *The Boulevard Book* (1993) described in Theorem 3, Connectivity and Movement. Jacobs' design has 2 parts: a through-going realm and a pedestrian realm. The distribution of right-of-way between the pedestrian realm and the through-going realm needs to be at least equal to create a strong human space. The new Barnett Shoals Boulevard accomplishes this task by utilizing a 100' R.O.W. (4 central lanes each 10.5' wide; access

ways 16' wide, allowing for one passing and one parking lane; two medians 5' wide; and 2 sidewalks 8' wide) (Figure 6-9).

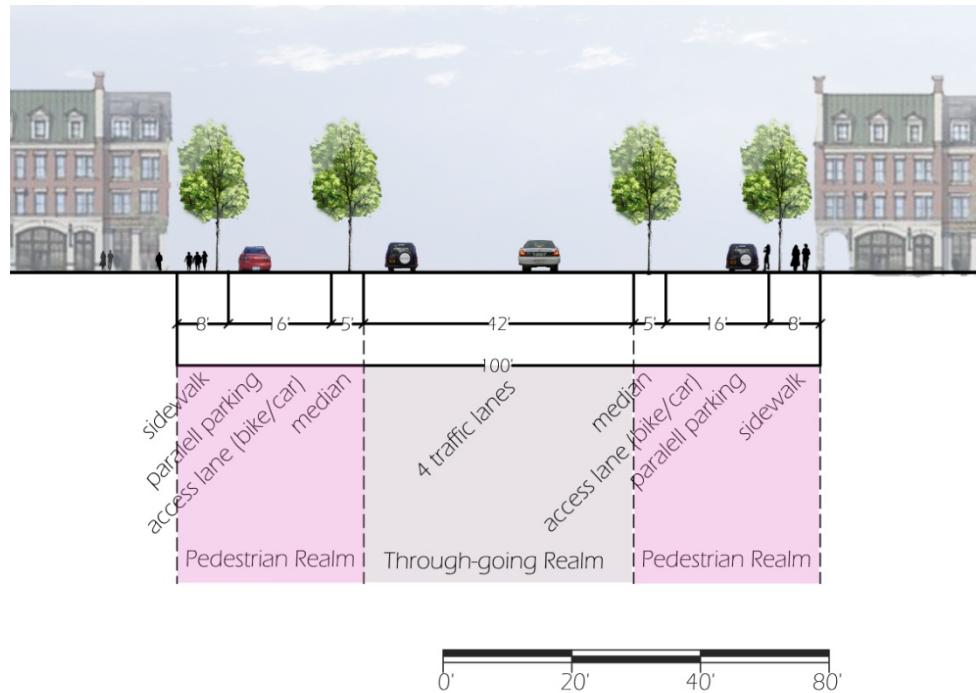


Figure 6-9: Barnett Shoals Boulevard R.O.W.

Block size in the design are similar to the pedestrian-friendly blocks of Oak Park in Chicago, and the blocks of Uptown District, and do not exceed 600' in length. The grid-like nature of the streets in the plan in combination with a strong network of sidewalks creates a convenient and easy walking realm for people.

Pedestrian circulation is addressed in three categories: a green pedestrian corridor, a pedestrian way, and sidewalks that follow the roads (Figure 6-10). The green corridor is the primary pedestrian circulation and allows for an alternate, pedestrian only route. The pedestrian way provides routes through longer blocks, breaking up the length of the walk.

Finally, sidewalks follow along each road to provide a safe pedestrian realm next to traffic.



Figure 6-10: Pedestrian Circulation Diagram (n.t.s.)

Public transportation is another key feature in the new plan. The bus stop, once located in front of the Green Acres shopping center in a dangerous area of the road with no shade structure or pedestrian features, has been moved to the entrance of the central green space of the plan. This will bring the bus route into the new development, making a stop at a new multi-modal station that accommodates not only buses, but bikes, and pedestrians as well. A parking garage with 100 total spaces is located on the second-story and part of the first story of the block nearest the multi-modal station in order to provide a convenient place for people to park before using public transportation. A large, covered bike storage area is a unique feature of the multi-modal center that encourages people to forego their cars and bike to the area.

### ***Public Realm and Street Life***

As the area currently exists, it is missing a vibrant public realm and pedestrian-oriented street life. In order to remedy this problem and liven up the street, the Barnett Shoals Neighborhood Center brings buildings closer to the street and pedestrians by using minimal building setbacks of 15'-20' (Calthorpe, 1993). In addition, outdoor space is carved from the buildings for the use of outdoor seating and pedestrian-only activity, especially at street corners and throughout the pedestrian corridor that will create an enlivened atmosphere that is more interesting for pedestrians to experience. The number of doors, windows, and entrances visible from public spaces are greatly increased and will help to create good street life (Carmona, 2003, p. 173). This kind of interesting and active street life promotes walking and contributes to pedestrian health.

Many potential “third places” are created in the new Barnett Shoals Neighborhood Center. New bars, restaurants, diners, as well as the entire pedestrian corridor with its programmed “hotspots,” will serve as places for nearby residents to spend their time outside of work and home and interact with their local community members, such as the library courtyard (Figure 6-11).

The large central green space is a meeting area for the community, providing a venue for civic events that will encourage public engagement. It measures 80' by 270' in accordance with Lynch's size for an intimate plaza whose width is 80' (Watson et al., 2003, p. 6.84). Gehl reports a maximum distance of 230' – 303' for being able to see events and the new green space fits within those guidelines, and will therefore feel both intimate and safe, as the pedestrian can see what is going on around the area. Squares and

buildings give people a reason to come to the center and, in turn, create a greater chance for affiliation needs to be met.



Figure 6-11: Perspective of the Library Courtyard (By Author)

### ***Human Scale***

The current Barnett Shoals corridor is dangerous and uncomfortable because it is focused around the automobile instead of its users. Human-scaled places are more comfortable for the pedestrian and promote healthful walking because they are easier and more enjoyable to navigate. Human scale “is the combination of the ratio of building height to street width, relative distance, permeability and the sense of grandeur or intimacy of space” (Montgomery, 1998, p. 9). In accordance with Hans Blumenfield’s recommended dimensions, the new Barnett Shoal Neighborhood Center constrains building heights to no more than three stories and widths to 36’. Most of the buildings in the central shopping corridor adhere to these dimensions and therefore are appropriately scaled for humans.

Special attention in the redesign has also been paid to street frontages. Research has shown that the most active frontages contain more than 15 premises every 330', a large range of land uses and functions, more than 25 doors and windows every 330', no blank facades, depth in building surfaces, high quality materials and building details (Figure 6-12) (Carmona, 2003, p. 174). The new center also uses Bosselmann's recommended 15' sidewalk in the shopping district to allow for retail-related activities to extend out of the store and onto the sidewalk in front of the shop. This also allows for street trees to be utilized in planting strips near the curb (Bosselmann, 2008, p. 143).



Figure 6-12: Example of Active Street Frontage ([www.mocoloco.com](http://www.mocoloco.com))

A good walking environment for humans will also have a much smaller amount of large surface parking lots than today's neighborhood open-air centers. These destroy the scale of open-air centers by making the pedestrian feel secondary to the automobile. The new plan for Barnett Shoals calls for a variety of parking solutions. In total, the parking offered at the new neighborhood center is roughly 44% less than required by

Athens-Clarke County code, because it assumes that with more people living nearby and with greater pedestrian and bus transportation, less people will need to drive to the center. The reduced amount of parking could also be the extra bit of incentive needed to push those people within walking distance to utilize the newly designed pedestrian linkages with the surrounding neighborhoods. But, because it is still a “convenience” area, the project offers a variety of parking options across approximately 1,221 parking spots in total. Overall, there are 374 spaces at smaller, hidden, at-grade lots tucked behind buildings, 107 on-street parallel parking spaces, two underground parking garages, each with 90 spaces, two above ground parking garages with 100 spaces each, and one multi-modal center garage with nearly 160 spaces. The two underground parking garages are located on the southern end of the site to accommodate the residential parking needs of the center. These basement-style garages feature separate space for each unit, and, importantly, conserve street level space in the development, allowing for a shared park to be constructed on top (Figure 6-13).

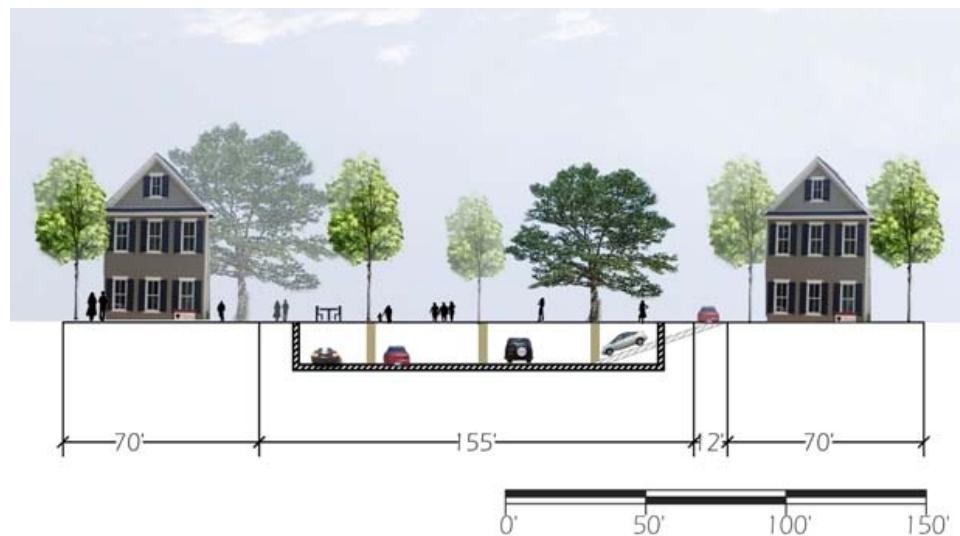


Figure 6-13: Underground Residential Parking Section

A good indicator of appropriate walking distance for a pedestrian is the  $\frac{1}{4}$ -mile to  $\frac{1}{2}$ -mile walking radius (Figure 6-14). It is important that the new residential units be integrated with the existing residential units in a way that encourages pedestrian usage from a high percentage of potential walkers. The new site does include new residential units, but it also abuts the existing Green Acres residential neighborhood, as well as the various residential developments west of the site. The  $\frac{1}{2}$  mile radius nearly touches the existing Ansonborough residences as well as Hillsman Middle School and Cedar Shoals High School. Because the new plan creates so many uses within the walking radius, more people will have a reason walk to, and within, the center.

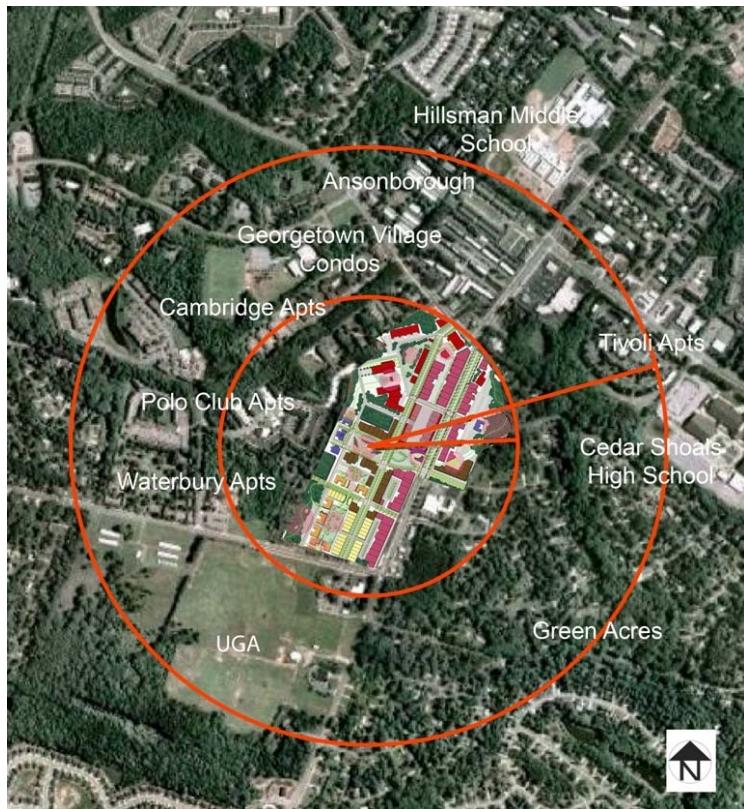


Figure 6-14: 1/4-Mile and 1/2-Mile Walking Radius

### ***Green Space***

Green space is a main focus for the design of Barnett Shoals Neighborhood Center. The dominant green ribbon provides an alternate, pedestrian-only route for its users. Vegetation is the connective tissue for the pedestrian corridor and functions as a signal to pedestrians that they are on the correct path. As the pedestrian walks through the corridor they will notice that each time the corridor passes through or borders the side of a building, the building features a vertical garden, or green wall, on either side of the pathway. It will lead to another green space, pocket park, or courtyard. The new plan increases the percent of green space from a meager 3.9%, 2.05 acres of the site, to nearly 31.5%, or 16.5 acres of the site, which is about a 700% total increase of green space on the site.

The green space in the new Barnett Shoals Neighborhood Center was planned as a “green gradient” that moves from natural/rural to more urban/constructed form (Figure 6-15). This gradient moves in a bull’s eye fashion: at the outskirts of the site, the green space is forested with a more natural appearance, and as the project moves toward the central, most dense, commercial area, it becomes more planned and urban in nature.



Figure 6-15: Green Gradient

The new Barnett Shoals Neighborhood Center features many other unique green areas. The prominent central green feature will also act as underground water runoff detention for the entire site. There are also three fairly natural green/forested areas, as well as more designed areas, such as a recreational park, a residential park, common spaces, and two greenroofs located on the top of two parking decks. The plan includes many street trees placed at 25' on center to provide the ideal amount of shade and street definition (Watson et al., 2003, pp. 6.3-7).

The vast increase in green area will also help with stormwater management and provide other potential benefits. A large re-forested area at the southwest corner of the site includes stormwater collection, pedestrian pathways, and an open lawn area that will act as a dog park for local residents as well as a potential connection to the future greenway of Athens plan. To the eastern side of Barnett Shoals Road at the former Green Acres Mall site, the significant grade change will be used for more stormwater

management, and the current asphalt will be removed to create a natural area where water can infiltrate at the lowest part of the site, where it naturally flows. This area can also be partially used for a community garden center and rain garden.

### ***Character and Sense of Place***

The new Barnett Shoals Neighborhood Center will have far more character than the current placeless development in the corridor. Instead of a hodgepodge of inexpensive and easily constructed architecture, the site will be unified with similar, higher-end architectural features that unify the site and give it a sense of place. The area will feel more like a destination in its own right and a place for people to go.

Because the new Barnett Shoals Neighborhood center will be successful in providing a mix of activities, a human-scaled form, and unified image, it will produce a strong sense of place. As Punter says, sense of place is the combination of activity, form, and image. The new Barnett Shoals Neighborhood Center will have a diverse range of activities for people to take part in such as people-watching, shopping, going to cafes and restaurants, participating in civic events, and lingering in the site at all hours of the day. The unique and pedestrian-focused green corridor with its programmed “hotspots” is one key feature in creating sense of place within the site. Not only will the pedestrian corridor tie the entire site together, but spaces like the marketplace with outdoor crops and the public art display lend character to the site that relates to the locale. The new plan will have a stronger form that will establish a pleasant scale, greater permeability through a new street grid, landmarks such as the central green and civic buildings, and a stronger public realm. The new center’s image, or the perception and information that people

receive about a place, will be strong and vibrant for many reasons, such as increased hours of use, featured landmarks, and green space.

Another important aspect that will create sense of place in the Barnett Shoals Neighborhood Center is the visibility of stormwater management. The rain garden on the eastern side of the site not only helps reduces rain runoff by allowing stormwater to soak into the ground, it provides a learning opportunity for the community. In addition, the multimodal parking deck will visibly collect rain water in a clear tube in the center of the structure, which can then be used to water the crops in the marketplace area.

“Placemaking occurs when multiple layers of design and utility are integrated into a plan that creates an attractive and functional environment for the people it serves” (Schmitz et al., 2006, p. 25). Like Santana Row, which has a very strong pedestrian realm, the pedestrian corridor in the Barnett Shoals Neighborhood Center will contain lively streets, public areas, signage at gateways, landmarks and public art to enforce the notion that the visitor has reached “someplace.” Unified landscape elements such as street trees also help contribute to a sense of place. In addition, the center will have a stronger connection to the surrounding neighborhoods, which will help to strengthen the connection between the nearby residents and the new locale.

### ***Legibility***

As it currently exists, the Barnett Shoals corridor lacks organization and legibility. Organization is the key to providing comfort to a center’s user. A well-organized neighborhood center, like the new Barnett Shoals development plan, will be aesthetically pleasing and tie in seamlessly with the surrounding neighborhood. The well-defined grid of proposed streets, clear and connected sidewalks with minimal curb-cuts, definition of

space through street trees and strong building frontages, will help with the legibility of the area and create a frame of reference for the user. Unique landmarks, such as the central green, the marketplace, the civic buildings, etc. will provide memorable markers in the minds of the center's users. The entire area functions as a regional node to the eastern part of Athens, GA and will be a major destination for the community.

Borders and gateways also help to provide a delineation of the site. The borders of the development property will be marked by forested, soft edges and signal to a user that they are entering or exiting a particular place. The main entrances of the site function as gateways: they are located at either end of the extended access road that goes directly through the center of the plan, and one is located at the center of the site that extends Lavista Place into the heart of the project. This new sense of orientation will help in creating physiological and mental comfort in the user.

According to Camillo Sitte (Sitte & Stewart, 1945), Clare Cooper Marcus (Marcus & Francis, 1990), and Alexander (1977), it is important to have open and closed areas. The new plan does this through providing a series of open, pedestrian-only spaces, whose scale of enclose changes, throughout the “pedestrian corridor” that are adjacent to denser commercial and residential buildings.

The programming along the pedestrian corridor also provides legibility for the user. The series of events and activites attached by green features acts as a guide for its users. The corridor itself is a symbol for the center and will act as a point of pride for the community.

Similar to Saffron, signage in the new open-air center will provide separate messages for drivers and pedestrians. Signage for drivers will be placed high, on larger,

mounted storefronts. Signage for pedestrians will primarily involve blade signs hanging overhead perpendicular to building facades (Figure 6-16) (Schmitz et al., 2006, p. 34). Even so, individual store owners will have control over their signage to help create a unique and interesting character within the center, while at the same time facilitating way-finding for the center's users.



Figure 6-16: Example of Blade Signage in Winter Park, FL. (Photo by author)

## **Conclusion**

The new design for the Barnett Shoals Neighborhood Center focuses on human needs. It is a new form with organization and component parts that suggest humans are superior to the automobile, displayed most evidently through the way in which the green pedestrian corridor supersedes the rigidity of the grid pattern that characterizes the development in a way that is easily legible to the users of the site. The plan significantly increases the site's density and offers features and activities never seen before in a traditional neighborhood-open air center. The variety and flexibility planned for the new center will cater to individuals' needs and help to create esteem for its users. The

pedestrian corridor is special because it will help to attract people to the center as a destination as well as provide the character and sense of place currently lacking in the area. Its proposed uses are unique and distinct, such as the marketplace with crops and an outdoor eating area that focuses on the “experience” of shopping. Important connections, physical and aesthetic, are made to integrate the center into its surroundings and help with comfort and safety concerns. The grid of roads is continued into the center itself. Adjacent land uses and the needs of the people in the surrounding area are considered in the design of the site. Green space is greatly increased and parking is better incorporated through a variety of options – garages, underground spaces, small lots, and parallel parking on roads. Public and civic features are included to increase community activity and the affiliation needs of its users. Better organization of the site, through signage, gateways, and defined elements, increases legibility, and therefore, the comfort and safety of the pedestrian.

The Barnett Shoals Neighborhood Center plan is designed to satisfy the physiological, safety, affiliation, and esteem needs of its users. It is a new and better neighborhood-serving form that will act as a potential model for change in this type of development.

## CHAPTER 7

### CONCLUSIONS

With our changing preference toward more urban lifestyles, increasing public health problems, growing social problems, rising oil prices, climate change, and water shortages, new forms of suburban development are inevitable. The ideas posited in this thesis will not only be desirable, but essential as the current commercial and residential suburban development pattern is not sustainable or beneficial to its inhabitants. This thesis provides examples and ideas of ways in which we *can* invigorate places such as neighborhood open-air centers to become landscapes and structures that will create a sense of place, positively connect with the environment, reengage community, and most importantly satisfy human needs.

New neighborhood centers, such as the one proposed in this thesis, will offer great benefits to a community. These centers can reduce vehicle miles traveled and improve public health by creating transit ready mix of uses in a walkable street pattern connected to adjacent uses, increase the feasibility of public transit and efficiency of transit, increase local connectivity, increase permeable surfaces and green space, increase public and civic space, increase choice in housing type and affordability, increase diversification of the tax base, establish an urban node within a polycentric region, and conserve land on the periphery (Dunham-Jones, 2009).

The format of the thesis proved to be a powerful research tool to get at the heart of the problem in suburban open-air centers, but also posed some difficulties. A study of

human needs, history, and case studies of qualitative and quantitative examples of good “human-focused” design helped to answer the proposed questions of what is humans needs theory, what characteristics in the built environment affect and support human needs, and how can human needs theory be used to specifically address the problems in neighborhood open-air centers. The research aided in the creation of the theorems that can be used in future designs of open-air centers, and also helped to formulate a final design application that pushed for the satisfaction of human needs. The created theorems were beneficial in organizing the thesis, but proved to be restricting at times. It is difficult to categorize issues in open-air centers and issues in human needs, as both topics are very complex with many overlapping and integrated components. The theorems appeared to cover all the areas of intent, but might have left out important factors of the design that were missed or under-researched. The topic of human needs and the design of the built environment is so large, it is nearly impossible to look into every author or theorist that also researches this area. Perhaps, the theorems could have looked into a number of further design-related studies to prove their relationship to human needs.

The design application section of the thesis proved to be a positive experience and a good exercise in applying ideas to the built form. The site chosen was an ideal location to test the ideas posed in this thesis. Originally, the design was to be located on a smaller site, similar to Saffron or Santana Row, but after studying the site more thoroughly it was apparent that looking at a larger portion of the Barnett Shoals Corridor was necessary for it to serve as a catalyst for change in the region. It proposes new and unique forms and programs while incorporating essential human needs throughout the site.

The design's weakness lies in the fact that it is only a theoretical design. Currently, it would not adhere to code or zoning laws and the design contains many ideas that need further research; is the idea of the crops in the supermarket feasible or sustainable? Is there enough density to support the stores and commercial space economically? Will the decrease in parking amounts hinder or help the site? Will it function as intended? Will people get used to the new form and new ideas posed in this design? These are important concerns because the plan is only successful if people use the space.

Another area of concern is the issue of authenticity of the site, which is an example of something that could have become another theorem itself. The New Urbanist developments have been criticized as being sterile, fake, and unnatural. Is there an incremental approach to implementation that could be taken in construction of the plan to foster authenticity and mimic the natural formation of cities? Perhaps public/private funding and partnering, including a variety of architects and designers to design certain features to appear unique and individual, and phasing can help with creating authenticity in a “designed” neighborhood center.

The topic of the thesis is a timely one that should be looked into in greater detail. The breadth of this thesis focused on the human-needs aspect of the open-air center, but further research could look into the implementation of a design such as the one created in this thesis, the economic concerns of this type of development, the policy and zoning changes that would need to occur, and the strategy of a public/private partnership within a neighborhood center. Further studies into affordable housing, social issues, adaptive reuse, and public transportation would also provide great insight into this topic of concern.

The redesign of the Barnett Shoals Neighborhood Center is one that will, perhaps, never be realized, but will serve as a catalyst for change. The design combines longstanding ideas with new ideas that create a potent combination. It proves that old ideas for pedestrian-oriented places are important and worthy of looking at, but they must be re-formatted and re-worked to function with automobiles and already poorly-built places.

These neighborhood centers will not change overnight, but can possibly become a reality through small, incremental changes such as an increase in density at strategic nodal points, gradual introduction of public transportation, and the addition of green space and new activities. A new approach, communication of fresh ideas, change in mindset, and acceptance of the possibility of risk, will help position our neighborhood open-air centers to become the future hearts of healthy, vibrant, unique, and dynamic suburban places.

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