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CHARACTERISTICS of the Modern Metropolis:

SUSTAINABLE CONFIGURATIONS of the Suburban Residential Environment

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ABSTRACT

The following is neither a criticism of the city nor of the surrounding suburbs. It is simply a realization that the role of each has changed. Old generalizations no longer apply. For example, given the question "do you live in a city?" most of us would be required to answer "yes." In fact over eighty percent of us live in metropolitan areas. But within these metropolitan areas we overwhelmingly live in portions that are "suburban" in effect or character. A more likely question "what is your city like?" will probably result in a curiously manifold answer. At some level we can all recognize that a city is a "center of population." Depending on our experiences and knowledge, however, some of us will attach to the term "city" a connotation of "urban," seeking to distinguish it from the conditions of "suburban" and "rural." To others, "city" acts merely as a legal definition. All are correct, of course, depending on your frame of reference. In actuality, none of us live in either "the city" or "the suburbs." A strong argument can be made that we now live in a new type of city, a city that has grown beyond the political boundaries that once divided its parts. It is a city that cannot easily be described as urban or suburban. Our modern city is the metropolis. By a thorough analysis of cultural history and "city life" this project will put our modern city into proper context and begin to answer an important question. The question becomes: how does the architect design in this new type of city?

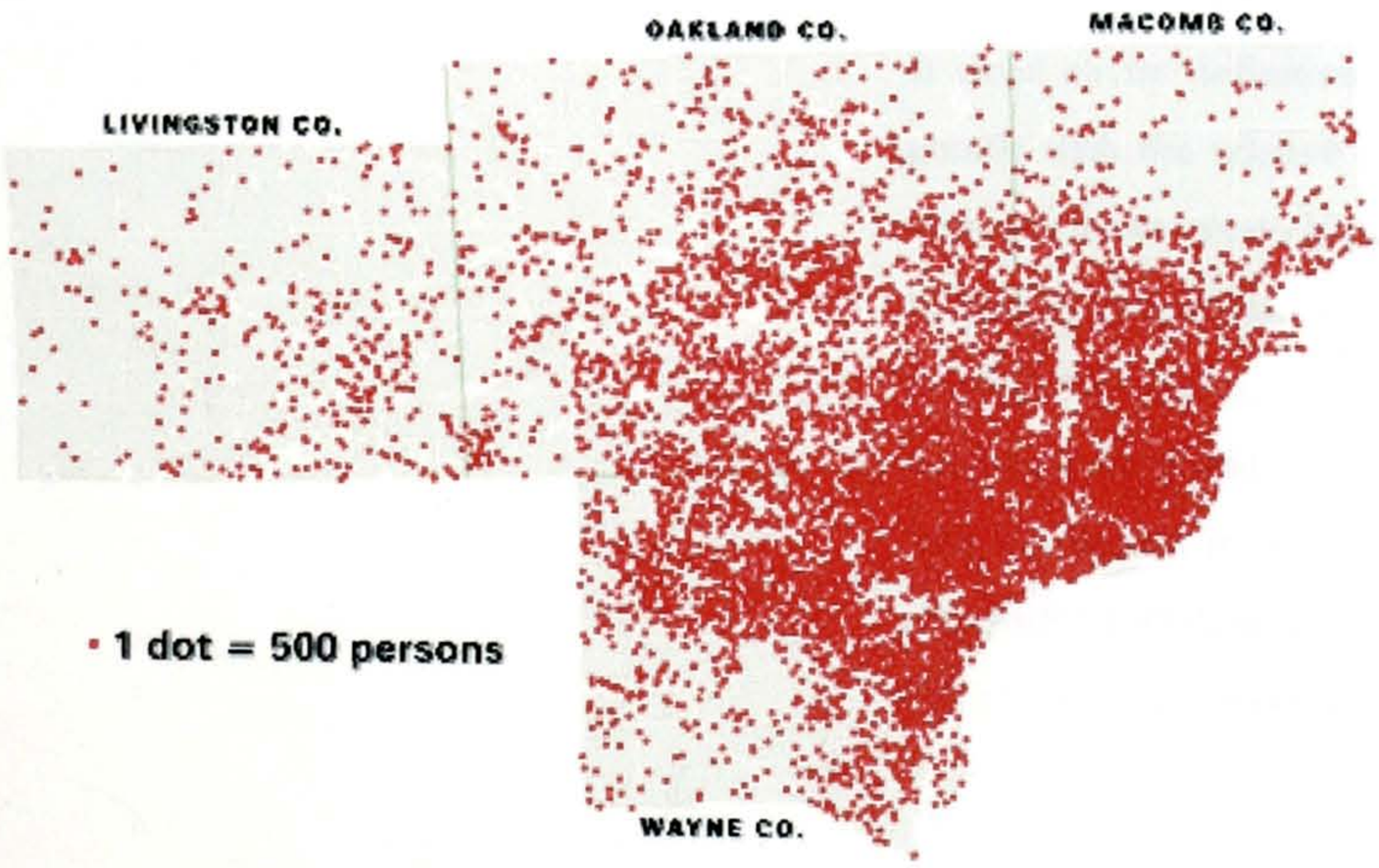

Figure 1 - Population Density of Metropolitan Detroit – "The Detroit News"

CIRCUMSTANCE

Our new city is a result of natural growth; indeed it is a result of sprawl. People naturally seek different environments depending on their stage in life, level of income, personal interests and individual desires. A full city will provide for these variable desires. It is a fundamental goal of this thesis project to provide a basis for this full city. Unfortunately, the architect cannot determine the shape of this new city. The power of the architect is limited. His powers lie in the creation of the parts that make up the whole (although prerequisite is an understanding of the whole). It is here that he should focus his attention. The architect's influence on the city exists on only one site at a time. Within this site he shapes the individual structures—the built environment—that determine our relationship with both the rest of the city and the elements of the earth. Therefore, the context in which the architect must work is based two things. First, he must consider the visceral (more theoretical) understanding of one's place within the metropolis. Secondly, he must consider the perceptual (more physical) experience of that place. The program and design for this project, then, will be developed emphasizing the latter as it is the most fundamental, influential experience we have of any given site. Furthermore, design and programmatic decisions must derive from an understanding of our modern culture.

While some aspects of cities have remained the same since the beginning of civilization, human advances in technology have changed the way human beings live in cities. Evidence suggests that we are at a nexus between the city of the past and the culture of the future. Both are constantly evolving but at different rates. Architectural innovation lags behind cultural innovation. It does so by definition. The relative permanence of built form contrasts greatly with the relative impermanence of the lives of those who build. The architect must create his or her architecture based on his or her observations of society in general. This must happen so that architecture stays in step with cultural innovation, if two steps behind. Today, the architect must adapt his designs to fit within the modern cultural invention of the metropolis.

The metropolis is characterized by a freedom of movement and choice. It responds to all demographics. Once an understanding of the problems facing the metropolis is realized, architects must give attention to all components of

PROJECT DESCRIPTION

the city (they will be asked by society to do so). To limit the scope of this project and to fulfill an unfulfilled need, this thesis project will focus on only one component of the metropolis, the suburban environment. By choosing to study and design within a suburban environment, I do not necessarily wish to preference it over denser, urban environments. Both environments, urban and suburban, are equally valid. Both require the attention of architects, urban planners, designers and politicians. But the current trend in schools, professional practices, and state legislatures is to emphasize the need for urban development and redevelopment.

This thesis, on the other hand, believes that it is the vast suburban territory that has been neglected (and avoided) by architects. It is this environment, which responds to the needs of the largest demographic population, that daily affects the lives of most of us. In the end, this project seeks to propose an alternative vision for the future of the suburban landscape. This new environment shall better reflect the desires and actions of contemporary society.

This thesis project seeks to find alternative configurations of the residential suburban environment that allow for a sustainable metropolis. The metropolis describes the current form of our cities, small and large.

Contemplating specifically the residential portions of the metropolis provides an opportunity to clearly illustrate and conceive of the intense interaction between our uniquely modern ways of living and the buildings we live in. Everything from the Internet, the car, and our changing economy, to mass media, cell phones, and our handheld computers have contributed to the form of our new city, the metropolis.

The metropolis can be defined as a mosaic of self-sufficient areas of population that share proximity and are interdependent on each other. It no longer follows the center-periphery city-suburb model: we now have *urban* suburbs and *suburban* cities, and life in cities is not fundamentally different than life in suburbs. In each case, the urban or suburban, by and large we commute by car, we have the same entertainment venues, we have equal access to cultural centers, and we watch the same evening news and listen to the same types of music. Our electronic forms of communication and the decentralized

nature of our infrastructures mean that "community" is no longer dependent on "geography." Cell phones, for example, allow us to carry on conversations instantly and clearly with virtually anyone else on the planet. The car has allowed us to locate our communities anywhere and everywhere we choose. The differences between urban and suburban are becoming matters of aesthetic preference. Income segregation, however, and longer commute times, gridlock, and poorly designed suburban architecture are problems that the suburban environment must overcome. But more importantly, it *can* overcome them.

This thesis seeks to suggest an alternative to one of the suburb's most overlooked problems. The suburban residential landscape is composed mostly of single-family residences. While this is not a problem, per se, the relationships between these houses, it seems, should be more effectively arranged.

The locations of these houses fail to make use of the landscape around them. By bringing the surrounding landscape into a closer relationship with the program of the house, and creating a more appropriate relationship between the single family house and the surrounding houses, as well as with the surrounding houses and the whole subdivision of houses, the entire suburban landscape can be more effectively arranged to provide the type of environment that suburban residents seek. The suburban nature of our metropolis is representative of the desire of some to have a best of two worlds. The quasi-rural suburban landscape fulfills, on the one hand, our innate human desire to live within "nature" or in "space." On the other hand, few of us seek to live away from the community and convenience that more "urban" environments provide (the access to entertainment and cultural facilities, as described earlier, for example). As a result of its popularity, perhaps this desire for the best of both worlds, the suburban territories of the metropolis have expanded at a faster rate than the urban territories.

While individual preferences for the urban or the suburban aesthetic might vary from year to year or decade to decade, the wide expanse and growth of a decentralized suburban and urban metropolis is here to stay. Architects must realize that it is important to design within it. We can start with the residential environment. The following is hopefully one possible conception.

INTRODUCTION

"I was losing my shirt and I just couldn't keep it up," Gail said. She closed the Bloomfield Hills location in 1999 and the Detroit, Wyandotte and Birmingham stores last week, "putting 24 of us out of a job."

Where does Ann Gail go from here? "I may go back to college or go into urban affairs," she said. "But luckily, I didn't borrow any money to keep going, so I don't have to declare bankruptcy. I'm thinking about writing a book about the end of the American Dream."[i]

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"The Ann Arbor Area Parks and Greenbelt Program calls for a 0.5-mill property tax for up to 30 years. About a third of the money would be used for parkland acquisition in the city, with the remainder used to buy development rights on farmland and open space in townships surrounding the city...The plan is expected to raise $84 million and preserve between 7,000 and 11,000 acres."[ii]

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"Gov. Jennifer Granholm is pushing a "Cool Cities" initiative to make people want to live, work and shop in Michigan. "Cool cities mean hot jobs," Michigan's 43-year-old freshman governor told a conference called Digital Detroit on Wednesday. She launched the project last month, after a Census Bureau report that listed metropolitan Detroit as first in the nation in the flight of young adults between 2000 and 2002."[iii]

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The three seemingly disconnected articles above represent the future of the American city; it is a city called "the Metropolis." We all intuitively understand the metropolis. When a resident of Ferndale, for example, tells somebody from out of state that he or she lives in "Detroit," he is referring to the fact that he or she lives in the *Metropolis* of Detroit—he lives in Metro-Detroit. The reality is that he or she lives in a suburb that has some kind of relationship with Detroit. It is a reality that we all subconsciously accept. But as the above articles indicate, there is currently an uneasiness associated with this new pattern of suburban development. It is a pattern in which more people live in "the suburbs" than in "the city." It is a pattern of personal mobility and low density. It is a pattern that leads to what many have called "sprawl."

In the last decade the uneasiness has been gaining in strength. Many have come forth who claim to have solutions to perceived problems. These solutions range from building cities in more traditional ways to building cities that are completely decentralized and untraditional. The solutions to the problems of the metropolis will determine the future of our built environment. What follows is an architectural thesis paper that is concerned with this future environment. It is not necessarily concerned with urban planning. For the architect, the fundamental decision of how to build in the metropolis will *not* decide how the metropolis finally exists as a pattern. It will decide something even more important. The architect should be concerned with this new form of civilization because he or she will either enable or hinder the quality of life of those living within it.

The rest of us should be concerned with contemporary metropolitan developments because we are the ones that will decide the metropolitan city's future. Technology and social liberalization has advanced the way we live. The biggest change between yesterday and today is that we now have more choices as to with what and how we fulfill our needs and desires. We decide how we want to live. Those who physically build our environments do as we command them to.

This is a fundamental assumption of this paper. We, ourselves, control our environment. Sometimes we choose agents to work on behalf of ourselves (builders, governments, and developers act as our agents) but ultimately a house is 3,000 square feet and sits on a one acre lot because we want it to be this way. Or we have bought the house because it is this way. It is a choice that we make. A person makes a choice by weighing his needs and desires with the options that will provide for his needs. It is not by accident or in ignorance that we make a decision. It is by everyday experience. If we are looking for a new house and we now only have two bedrooms now and we need three (in the past we didn't have the option to buy three so we settled for two) we will buy a house with three bedrooms. Simply stated, our needs and desires depend on the options that are available to us. Furthermore, big business or big government doesn't control our decisions. If we look at today's world, in fact, businesses are competing to be our employers—they are moving to where the talented people live[iv]; it's not the other way around. Choosing where we live is now our responsibility. We no longer simply move to where the jobs are. We move to cities to live *life* – we believe the jobs will

follow us. Consider the number of city rankings that have come out in the past few years. Top 10 lists for cities are now extremely popular.[v] This is a reality of modern life. The capitalist city, essentially, is becoming the optional city. We ask "what can this city provide us?" It is because of our strong democracy that we have this decision. Every decision, however, has its costs.

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A HISTORY OF THE CITY: THE SUBURBAN DECISION

Before man lived in organized civilizations he lived independently in small tribes. Humanity's first decision was to live in cities. Looking back throughout history, we see that man began to advance when he decided to live collectively. The first cities were built by the Sumerians of Mesopotamia. In their temple-cities they came together and created nothing less than the calendar, the wheel, the plow, and the ability to write. Cities at this most primitive level were simply communities of people who decided to stop hunting and gathering and combine their resources to achieve more than they could independently. For the most part, these pre-ancient cities were not large; few had more than a few thousand inhabitants.

Within the perspective of our suburb-or-city decision in the year 2003 it becomes obvious that our suburbs *are* cities even if they don't take on the form of traditional European ones or even traditional American ones. When we collectively decided to live in the suburbs (and subsequently expanded the city into a metropolis) we decided nonetheless to live in a city, of some sort, and to combine our resources by paying taxes and building infrastructure. At the same time we decided not to live independently in the countryside. This decision should be seen as a continuation of the one we made when we, as humanity, decided to live in cities. The suburban decision is not an escape from cities so much as a decision to build a new kind of city. There are generally four ages in the evolution of the American suburb. The first suburbs occurred before 1900. The first real "suburb" as an independent identity in America occurred as early as 1814 in Philadelphia. They existed as soon as cities were platted. The first substantial suburban movement was the garden cities movement during the first 30 years of the 20th century. Unfortunately this period is largely forgotten. More memorable is the postwar housing boom from about 1945 to 1970. This is the period in which the majority of Americans became "suburbanized." The final period of suburban design is evidenced by the sprawling suburbs that are criticized today for their haphazard development and consumption of farmland. These last suburbs are trending toward gated communities and more exclusive environments that seem to act as "suburbs from suburbia."

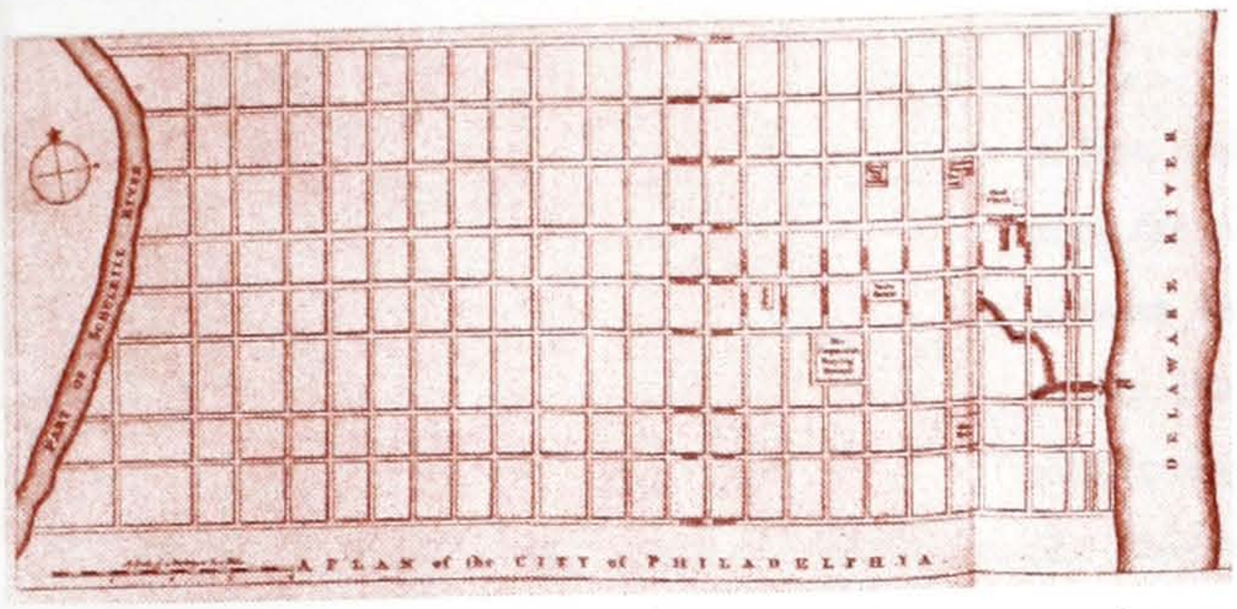

Figure 3 - Plat of Philadelphia

Figure 2 - Industry used to be centered in the city, requiring people to live in denser neighborhoods within walking distance to work or at least the nearest streetcar or train stop.

The central issue is often one of density. Suburbs are less dense than cities. The question that follows is how does a city achieve a certain density and what makes that density the correct one? To say that the suburban portions of our metropolis are "not dense enough" is to make a relative statement. The cities we celebrate, now, as models of community and examples of neighborliness were designed with other objectives in mind—namely, proximity to industry in the early American city and placement within protective walls in the European city.

Take Philadelphia as an example. It was platted by William Penn in 1683. The existing settlement there at the time only contained a few churches and homesteads located along streets that were built to connect them to each other. Penn established the present day grid of streets from the Delaware to the Schuylkill Rivers. He originally intended the city to be park-like with buildings at the centers of lots surrounded by gardens or orchards. Needless to say, it didn't grow the way Penn intended. The speculative nature of land sales and market forces led to the development of dense blocks of commerce on the lots near the river and private homes along what was intended to be the main village square in the center of town.[vi] In the following years the settlements of Southwark and Moyamensing to the south, Northern Liberties, Kensigton, Spring Garden and Penn District to the north, and West Philadelphia grew around the original plat of Philadelphia laid out by Penn.[vii] These first suburbs developed because of their proximity to Philadelphia. The pattern of suburbs surrounding the city of Philadelphia then is not unlike the pattern of suburbs surrounding Philadelphia now or the suburbs surrounding modern day Detroit, for example. In fact, some suburbs, then, were independent of the center city just as suburbs today are often independent of the cities they surround. The trend toward our metropolis is inherently a result of the type of society we live in. In the early 1800s the "suburbs" that would later be annexed into the "city" contained houses, churches, places to work, and their own municipal governments. These first suburbs were built with the same grids of streets in the same densities as the original platted cities. This is because the prevailing technology and natural forces is primarily what influences the form of a territory. These early suburbs were easily incorporated into their bigger city neighbor. Today we can't tell the difference between the two. This suggests that cities themselves are not inherently "urban" in nature and suburbs are not inherently "suburban."

In fact, aside from a few areas claimed by wealthy industrialists who escaped from the city as soon as they could, if we were to try to distinguish in 1850 between the suburbs of Philadelphia and the buildings in the original portion of the city as platted in 1683, we would see little difference. From an anthropological viewpoint we don't consider these "suburbs" to be towns at all. They just represent the growth of Philadelphia before it was annexed as part of the actual city that we know today. Both parts were built around America's growing industrial needs and their patterns were limited to the technology and transportation methods of the age. Industry required the labors of many people and transportation was limited. For these reasons cities were uncontrollably dense, noisy, and polluted. But a nation's wealth is determined by what it produces. And as America produced, its wealth increased—and so did the number of people able to buy their own houses.

In 1854 the city of Philadelphia extended its legal boundaries and consolidated the entire county of Philadelphia into its jurisdiction. In the early 1900's the first modern day suburbs began to appear outside of the newer, bigger cities. This time, however, the physical characteristics of the suburbs are clearly distinct from the city itself. City residents were growing wealthier and demanded their own houses. They wanted to live in a better environment than the industrial city. This was the beginning of the American dream. The suburbs during this time were made up of large numbers of single-family houses on street after street to feed the demand of the burgeoning middle class. Before the car became affordable, however, these neighborhoods largely relied on rail lines for transportation into the city, which still held the factories and the jobs for those living in the newly formed suburbs.

It was during this period that the blueprint would be created that was to eventually become the pattern for our modern suburbs with curvy, tree lined streets and single-family houses on large green lots. The blueprint was started in England by Ebenezer Howard, the author of "Garden Cities of Tomorrow." The garden cities were to be of relatively low density and surrounded by greenbelts to preserve the countryside. Howard intended for them to be economically self sufficient by having both industry and commerce. Essentially he wanted to build the equivalent of what we would think of as picturesque small towns in the countryside. In the United States there were many garden suburb developments. They usually included main streets of commerce and were urban in character despite their low densities. [viii]

Figure 4 - Many wanted it. (And still do!)

The garden cities of the early 1900's thrived. They are still impressive communities to this day. Suburbs like Chestnut Hill in Philadelphia or Beverley Hills in Los Angeles or Shaker Heights in Cleveland proved to be successful methods for city planning—even if they were technically suburbs. They provided a distinctly urban feel on streets lines with trees and single-family homes.

The combination of an affordable car and a post WWII housing boom, however, ensured that there would be little time to create impressive self-sustaining communities. The demand for the suburban lifestyle reached a peak and developers struggled to keep up with it. Suburban developments like Levittown sprang up on the edges of cities. The objective was to provide a house in the suburbs for anyone who wanted it. *Many wanted it.* Street after street of "little boxes" sprang up to meet the great demand. Finally, anyone could own their own house and have their own "garden" *in the city.* The car, certainly, enabled their decisions to move. In fact, the availability of the car and the rising incomes of the nation contributed to the recognizable suburban form of many detached houses on endless rows of bare streets. The form of the "city" had changed concurrently with modern changes in technology and transportation. The geography of the suburb no longer had to conform to that of an urban neighborhood. There was no need to walk to the grocery store when a car could get you there in a matter of minutes. Unfortunately, the same convenience of a car changed the scale of the neighborhood so that you could no longer walk to the grocery store if you wanted to. Aside from the aesthetic changes resulting from this scale shift, the trend towards lower density is one problem that has not yet been solved by the developers who continue to build suburban neighborhoods. The goal has become to built suburbs that are as remote and as quiet as possible. It is as if they are building *suburbs from suburbs*—so instead of escaping a noisy city, modern suburbanites are escaping the quieter but still active metropolitan city.

Is there a sustainable configuration of this environment that would prevent this outward shift, a movement outward only for the sake of "getting away from the city?"

Aside from aesthetic criticisms of suburbs as being composed of monotonous little boxes lining monotonous concrete streets—can't urban typologies be just as monotonous?—the suburb presents the modern day developer several challenges. Today, suburbs are sprawling and even environmentally damaging. They consume more farmland than they could otherwise consume. The specific patterns of developments, some say, and the lack of a redundant grid of streets have led to a metropolis of commuters constantly tied up in gridlock. The reliance on the car has even made us a lazy, obese nation (at least some have gone as far to say so). Of more concern is that the suburb has allowed a social inequality to exist within the metropolis. Rich suburbs are said to consume taxpayer money that would have been dispersed throughout the entire city (which would have happened if the richer suburban developments had been annexed into the city). There is a trend currently, however, where the urban poor who had previously lived in the city are moving to the suburbs as soon as they acquire the means to do so. This corresponds to the trend of young suburbanites who are moving back into cities looking for vitality and diversity.

Old stereotypes do not apply. The new city, the contemporary metropolis, is different. The new city encompasses both suburbs and city. It is time politicians, developers, architects, and the rest of us begin to see this reality. Only when this happens can solutions be found. Only by understanding the shifting dynamics of a metropolis can we understand the shifting dynamics of the American Dream that may or may not be coming to an end.

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THE CONTEMPORARY METROPOLIS: A NEW KIND OF CITY

But are we justified to describe the metropolis as a city (and can we accept that a suburb is city-like)? The urban planner Kevin Lynch has developed three ways to understand any city. He has illustrated three urban typologies. According to Lynch cities are "cosmic" and symbolically planned, "practical" and functionally planned, or "organic" and planned by natural elements – perhaps personal movement or the natural landscape.[ix] Isn't the sprawling nature of our metropolitan city similar to the organic nature of medieval towns? Isn't the metropolis organic? In Europe, the medieval portion of any city is instantly recognizable. The narrow, tall streets have a quality to them that makes them popular places for restaurants and stores. The winding streets are perfectly scaled to the human being. But the streets were built as needed in the Middle Ages. There was rarely a grand plan. To counteract the

Figure 5 - The Main Artery Through San Gimignano

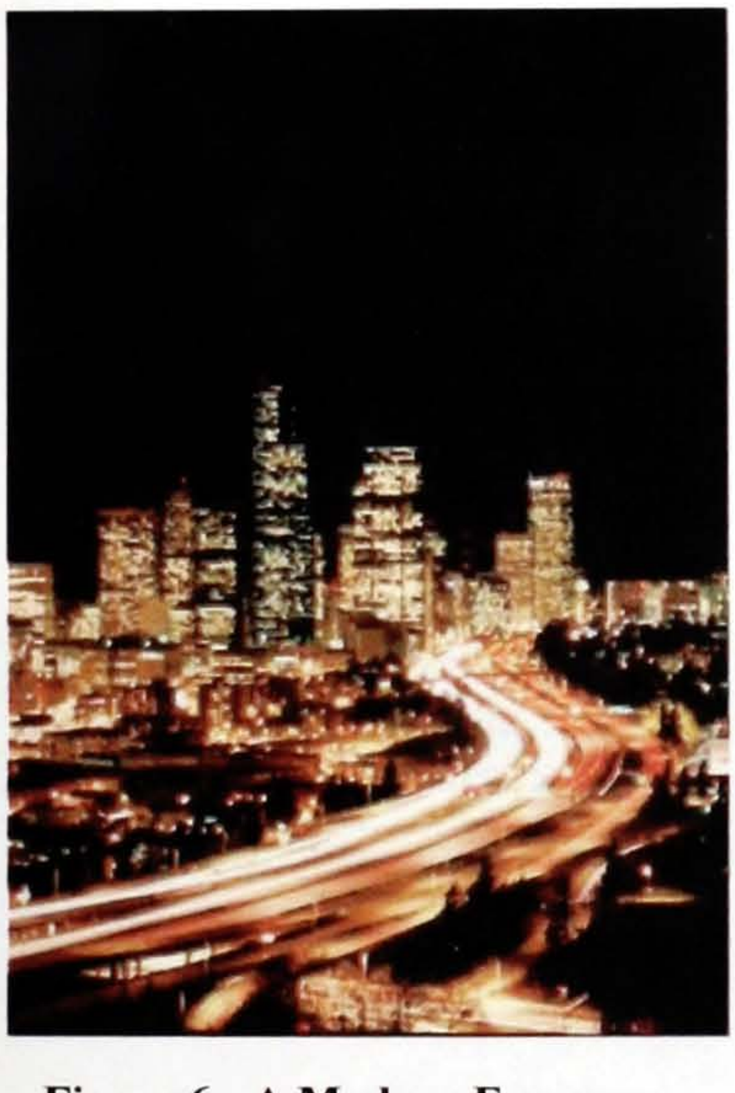

Figure 6 - A Modern Freeway Through the Central City

narrow, active streets, there were always large open plazas interspersed throughout the medieval pattern where residents of the city may sit and meet with each other.

The sprawling metropolis that has been created occupies the same form as the medieval city. They were both built by a natural procession of cause and effect. In the metropolis, freeways are built between centers of population. Residents of one suburb work in a second suburb while those who work in the first suburb live in yet another. There is no pattern guiding which suburbs become areas of concentration. The geography of the roads that connect each area to every other area is determined by the number of people who want to go from one point to another. The difference is that instead of our feet, we now use our cars.

This is the trademark of the metropolis—the speed at which we experience our built environment has increased. Thus, the scale has shifted. Instead of meeting in a plaza at the intersection of two medieval streets we meet at a place within some city (should we go to the movie theatre in Southfield or the restaurant in Ferndale?) The plaza in the city is analogous to a place (even though the same plaza in a suburb would be considered simply space). Instead of walking under awnings past shop windows, we drive past parking lots and freeway overpasses. A medieval building with a certain texture of brick may act as a landmark as we pass by it in the medieval city. In the metropolis the landmark is space itself—space, in this case, is the lack of place (defined by the occurrence of movement). The inspiration for human movement hasn't changed, only the space in which we move.

"Thus, the potential alienation and extreme individualism of [metro] Houston is contradicted by one thousand neighborhood organizations, one hundred twenty-three high school bands, six hundred meetings of faith, and by the cultures of a multitude of ethnicities."[x]

The characterization of the metropolis today, then, is something that is variable and dynamic. The chaotic effects on the human being resulting from the existence of space reinforced the notion of the metropolis as something that is oppressive and daunting. It is something to escape from.

"In Minneapolis, they tore down Met Stadium for a polyester ballfield with a roof over it, a ghostly greenish plastic baseball mall, and all those lovely summer nights were lost. The night train to Chicago was taken off, another broken romance, and all the little truck farms around the Twin Cities disappeared that sold fresh tomatoes, squash, and sweet corn at roadside stands or off the tailgate of a truck. Immense shopping malls sprang up in their place like fungus on the grass. One Christmas, after I wrote a book, I stood autographing copies of it for six hours at a chain store in the Ridgedale complex, as large and bewildering as an Air Force base, and felt its peculiar

Figure 7 – The Greenery of a Suburban Lot.

Figure 8- An Urban Core of Concrete

dementia, low and steadily throbbing from fluorescent lights, air conditioners, and electronic systems including synthesized violins playing homogenous hymns to anesthetized people, and knew that somewhere we had gone wrong." Garrison Keillor[xi]

As evidence, we can now observe the contemporary movement towards gated communities and remote "suburbs of suburbs." The architect should keep in mind that we no longer live in a space that is defined by the forms of the objects we pass by, like in a traditional city. We now must design the vast spaces that are created in-between these forms. The suburban territory contains many vast spaces. These spaces must be taken under control so that Garrison Keillor's anesthetizing effects don't lead to further sprawl—sprawl that is even more reclusive than today. This self-perpetuating cycle of extending sprawl can be stopped, however, by an acceptance that suburban space, too, must be controlled and designed. This is why the understanding of the metropolis as a system of both urban and suburban inhabitation is imperative. We must not preference one over the other. Each has a right to exist. Accepting this is the first step towards creating communities where choices are available and the default is not disastrous development.

Thus we need to define "urban" as space that is within our control. In other words, all urban space is controlled/designed/inhabited. Suburban space is just the opposite. In the suburbs there is too much space that is not under physical control (but it may still be under psychological control). The freeways, the parking lots, the empty front yards (some people must use them) and the driveways that sometimes have cars in them (and sometimes do not) are all spaces defined by movement. Movement or change, or more descriptively a change in perspective, defines space and is the opposite of place. We understand one only by occupying the other. To clarify, each segment of the metropolis can be understood by "megashapes." They are the parts that make up the whole. On the one hand we have a megashape defined by, lets say, green – by trees and grass in the suburbs. On the other hand we have a shape defined by, perhaps, yellow – by sun-lit skyscrapers slipping seamlessly into sidewalks and pavement. Lars Lerup describes his megashape concept:

"There seem, then, to be at least two readings of any megashape, one from inside leading to an appreciation of the algorithm of the shape…and one from outside which leads to an understanding of the whole—the figure (the result of the algorithm, once solved)."[xii]

THE STRUCTURES OF INHABITATION: THE AMERICAN DREAM REALIZED?

We understand the "figure"—our environment perhaps—in two ways. We understand it from being within it (for example, when we stand at our mailbox and look at our suburban house) or we understand it from being outside of it viewing the whole at once (when we speed through the freeways passing from one city to another). When we stand at our mailbox we can contemplate our position in the suburbs – but we contemplate it differently from the inside of the megashape—from this perspective our house is not part of the ubiquitous mass. From this inside position we understand our house by its individual structures. We recognize the color of the siding or the texture of the brick. We recognize the smell of the flowers or the position of a light in a window. When we drive down the freeway we recognize the suburbs only by concept as we pass by their megashape. It is important to distinguish between these two interpretations of our environment.

The architect must deal with both expressions. When we design either in the suburban or in the urban we must understand that as Lerup says, "the inside appreciation may well be the more interesting, because it suggests that a megashape may be imagined through a fragment and thus does not require completion, while the outside view requires the more traditional perspective as well as an apprehension of the whole."[xiii] After finding an appropriate neighborhood form on the macro/regional levels, this suggests an approach in which we seek to understand the architecture from an immediate physical and experiential level or from the sociological and psychology realms of this sensational experience. For instance, we must think within the context of the line of sharp looking SUVs parked along the street, the wooden fence from which our hands get splinters in the summer, or the leafy tree in the backyard that turns a golden yellow in the fall.

Understanding the metropolis is the first step towards designing spaces in it that are acceptable and inclusive for all desired environments. Some may prefer the lively city, others may prefer the quiet tree lined street and others may prefer one type of environment at one point in their lives and another environment at some other age. In the end, an architect who can design in the metropolis can contribute to the sustainable community. He can, then, contribute to the quality of life of its inhabitants.

This paper is not about urban planning, however. It is about architecture. Architects must accept that we live in a new type of city—the metropolis. The question becomes how does the architect go about designing within the new

city? New Urbanism, to the extent that it is urbanism re-implemented (even if it is at a different density) is at one end of the spectrum of possibility. Most advocates of New Urbanism have the contention that it is the suburb that has changed the city. Many people are attracted to the concept of the New Urbanism. Communities have sprung up throughout the nation which claim to be New Urbanist in nature. At the other end of the spectrum is a lack of urbanism entirely. In such a city, there is no central core. Services are dispersed ultimately by advanced networks; they are distributed by way of the internet in conjunction with physical distribution networks. Frank Lloyd Wright's Broadacre City would characterize this form of civilization. This form, too, can be achieved if we would like it, but would require giving up the city altogether. This extreme condition has little support and therefore is unlikely to exist anytime soon.

The obvious solution is to accept the metropolis and identify the systems of control inherent within it. Returning to old forms will only perpetuate the escape from them. Sprawl will increase, suburban alienation will continue. On the other hand, rejecting urbanism altogether will perpetuate the social inequity, environmental dangers, and anesthetization that may result from chaotic suburbanization. Thus Gov. Granholm is on the right track. Her "cool cities" initiative recognizes the redefined role of the city. The role of the city has most certainly changed. It is no longer the home of workers who want to work in the city. It is the home of people who want to live in the city because of the services it provides—or the aesthetic they prefer. But keep in mind, the role of the suburb has changed too. No longer just a place for living, no longer "bedroom communities," the suburbs have grown into industrial centers or commercial centers or even rural townships where one can get apple cider in the autumn. The new roles that suburbs and cities play define the metropolis.

Now we must decide how we are to build in a metropolitan city. This implies that the environments we design—the space we take under our control—must provide satisfactory solutions to the services that inhabitants look to the city to give them. What are the structures that promote this inhabitation? Think in terms of the smallest scale possible, the micro scale of the individual human's experience as he engages with the architecture. At its most basic level the nature of "inhabitation remains fundamentally territorial."[xiv] What does this mean? Humans are, of course, territorial.

If we use as a testing vehicle for architecture a residential environment, the territoriality of humans becomes even more apparent. It can be said that the

first act inhabitation is to carve out a territory. Or in other words, territory under the control of a person represents his inhabitation. In a living room, for example, the physical arrangement of furniture implies that the room is being inhabited. The room is under the control of its occupants. A visitor would not dare to move the furniture upon his arrival to the room because he would be taking the room under his control. Thus, a territory can be occupied by many people even when it is under the control of just a few people. As Habraken states, "Ownership is not necessarily congruent with control."[xv]

On a suburban lot, the houses are usually centered on a landscaped plot of green grass and trees. The yard appears to be open and not under the control humans as the green grass is clean and unused. It impresses upon us a message silently informing us not to walk on it because we do not control it, we do not mow it. The aesthetic that is created from this condition of large open yards is an ambiguous one because we view the lots as open space (as opposed to a place) but we know that it is actually under the control of its occupants. As soon as one steps onto the end of the driveway—even though it may be fifty feet away—the owner of the house is aware that someone is within the space that they control. But the owner at this point is unconcerned. When the person walks up to the front steps and sits on the owner's steps, the owner is concerned that his space is being intruded upon. What is happening, here, is that the yard of the suburban house is under the control of the owner but the areas which are being shared, the area where community takes place, is not obvious to the neighborhood. Perhaps the person who navigates a neighborhood of this sort feels slightly uncomfortable. Perhaps this is part of the anesthetization that Garrison Keillor insists is occurring in our new city. Maybe this is what those who claim the suburbs lack a "sense of community" have been observing? As Habraken has noted, "the front door…is not necessarily a territorial marker in the suburban house…[the marker] exists somewhere at the periphery of the lawn."[xvi] Beyond the residential neighborhood, the expanse of parking lots and freeways has this same ambiguousness. Neither the parking lot nor the freeway is under absolute control…the control is constantly shifting from one user to another. *Can the architect work to install a sense of surety to the ambiguous environment? Can the architect bring these fluid spaces under control? Can we make the suburban, in effect, urban without forgoing the relationship to the natural elements of open space and low density that those who live in the suburbs seek?*

One of the primary concerns, therefore, of the architect designing in the metropolis is to adjust the scope of inhabitation. Recall the medieval city

with its plazas and narrow personable streets. The great expanse of the plazas feels like a great expanse because of the scale of the streets surrounding it. In reality the plaza isn't as big as it feels. It has been carefully designed so that this space is known to be under the control of its occupants – this was done by creating a relationship between the impression of street and the impression of open space. The open space was designed to feel like a widening of the street. This clarifies the open space, the open plaza, as being under the control of the public occupants. What the designers of the suburban pattern have failed to realize is that it is not the margin of space between homes that matter; it is the space that is under the control of the occupants of the home.

A second priority is the connection between the site and nature. Architecture exists to modify this condition. The occupants who seek the suburban environment wish to have a certain relationship with nature. They seek a greater amount of nature under their control. Traditionally planners and developers have assumed (even William Penn when he platted Philadelphia in 1683) that the way to do this is to surround the building with "green" space. This tradition of placing a house in a "garden" has continued to this day. We inherited it from the Garden City movement. Today we see that the geography that results from this environment is not as we intended. The architect Richard Neutra had an answer of how to provide for these human desires for open air, sunlight and open space as far back as the 1930's. Not surprisingly he was working during the age of America when urbanism was at its height. Suburbs were just beginning to be popularized. As you will see in the following precedent analysis, Neutra's main idea was to bring the entire site into the control of the house. He did this by means of carefully located architectural elements that acted as a frame for the spaces. This clarified the spaces that were to be under the control of the house. In a sense, he created outdoor rooms adjacent to the house. This is, it seems, what many seek when they choose to live in the suburban environment. It is not a picturesque park-like setting they seek, rather, they seek a park under their control. Suburbs have the potential to consume much less space—to sprawl less—if these desires can fulfilled more efficiently. This can be done by strengthening the demarcation between personal territory and public territory (which is clear enough in traditional urban environments). Consider that "a street wall and sidewalk curb form a margin [that] softens and articulates the razor-thin line of demarcation offered by the architecture."[xvii]

This method of re-looking at the suburban environment requires us to first look at the component parts of the environment. These component parts may be simplified into the elements that we use to engage our environment. Hence, elements like a window, door, or wall must be examined closely to determine how such timeless elements can be reapplied towards our modern environment and modern needs. Attention must also be paid to our human interaction with architectural elements at this smallest scale. In his book "Supports" Habraken asserts a strong idea that "the introduction of the dweller into the housing process should dictate decisions in design and organization."[xviii] This has been lacking in our suburban environment. Today, however, one can see that it is clearly desired by suburban occupants. The growth and popularity of stores such as the Home Depot and Lowe's home improvement is an example of this desire for a more direct control over the suburban house and its suburban landscape. The number of speculatively produced suburban homes all based on a limited variety of floor plans designed only to assure the developer a profit have reduced the ability of the dweller to truly dictate his own relationship to the landscape that he seeks to live within. In Supports, Habraken illustrates his belief that "dwelling is first and foremost a relationship between people and environment, and because the relationship arises from the most common actions of daily life it is rooted in the foundations of our existence."[xix] This thesis project, additionally, has as one of its goals to provide a system for the single-family dwelling that allows the dwellers of the house to, by actions they take to build and therefore to dwell, have a more direct and "natural" relationship with the suburban landscape. The concept of the suburban realm is valid, the execution of the design of the environment, however, can do better to integrate the "best of both worlds."

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CONCLUSION: SUSTAINABLE CONFIGURATIONS OF THE SUBURBAN RESIDENTIAL ENVIRONMENT

In the end, urban and suburban do not correlate directly to city and suburb. There are urban suburbs and suburban cities. The metropolis as a unique form of civilization was prompted by a change in scale resulting from advancements in transportation technologies (once it was the train now it is the car). The metropolis acknowledges the interconnectedness of the suburb and city. The suburb is composed primarily of uncontrolled space (the freeway, the parking lot) connected by anonymous places (the ubiquitous strip mall or exclusive suburban home). This contrasts with the city that is composed primarily of distinct places (the building with a certain texture of stone) connected by controlled space (the urban plaza).

The architect can learn to control the temporary space of the suburban environment and in so doing make it acceptable for all of those within the metropolis. The suburbs no longer have to act as the place where we go when we want to escape from the city—the suburban aesthetic of the metropolis can be a sustainable alternative to the city aesthetic.

The metropolis, finally, is characterized by choice. We now have a choice between aesthetic environments. The role of the architect is to create sustainable configurations, one building site at a time, within the metropolis. As the environment around us has changed in modern times, the role of the architect, too, must change. It is no longer enough to design places within cities. The architect must now design all the spaces within the new city. These are characterized by what we have formerly thought of as the "suburbs." To do this requires the architect to acquire a new set of skills. These skills deal with the elements of the human being. His psychological needs and his social (sociological) needs are the factors that make up the architectural "site." These are factors that the architect must take into account to end the cycle of sprawl that generated the unpersuasive metropolis in which we now live. But in the end we will still be left with a metropolis. This *is* our new city. Our job is to sustain it, to enable our quality of life within it, one building site at a time.

PRECEDENT ANALYSIS

Salk Institute

Key Information:

Architect: Louis Kahn

Owner: Jonas Salk

Project: Salk Institute

Site: La Jolla, California

Date: 1959-1965

The main concept of this project was a center for biological studies founded by the scientist responsible for the first effective polio vaccine, Jonas Salk. It was to be a place where Picasso could come and visit a scientist. Salk favored the integration of the humanities and the sciences. From the beginning, the building was to be about more than simply a place where scientists could work. The idea was to look at the needs of the human being—not just what the human being *does* in a building. From the beginning, Kahn saw the parallels with his own ideas on the integration of art and architecture. He wanted to express a timeless quality of architecture. It was to be an architecture based on human factors such as psychology and sociology – which are the measurable factors that make themselves evident in the architectural form of light, space, and order. These were the building blocks, so to speak, that Kahn used to build a human environment—not a merely a laboratory.

The building's program consisted of laboratories, scientist's studies, and a central courtyard. Kahn intended the Salk Institute to function as a number of different spaces, a Meeting Place, a Living Place, and the Laboratories. The hierarchy includes a number of different social places. These can be observed in the laboratory complex (the only portion of the project completed). Each space is designed to function specifically for the purpose intended. Each of these spaces supports the other. Each would not work independently of the others. This hierarchy exists at all levels of Kahn's architecture.

The laboratories are the collective aspect of the social hierarchy. To facilitate the function of laboratory, Kahn created a structural system of trusses so that the space can span from one side to the other without columns or pipes. This is an example of his ordering of spaces into their appropriate functions. These were called servant and served spaces. The laboratories are served by the plenum space above but also by natural elements such as light. We can use this precedent to facilitate our integration of the human needs to the residential environment. The laboratories are flanked by towers on either side. Kahn pulled these towers away creating an in-between space that delivers light to the large and what would otherwise be dark, cold laboratories.

Between the two laboratory buildings is a central courtyard. Kahn originally envisioned this to be a lush garden where the scientists could meet. The garden was to become a place in itself. It later evolved into a plaza that acts as a metaphysical connection between the architecture and the site, the plaza and the sky. The plaza creates a strong central axis. The directional nature of this space and the fact that its axis continues into the landscape suggests that the

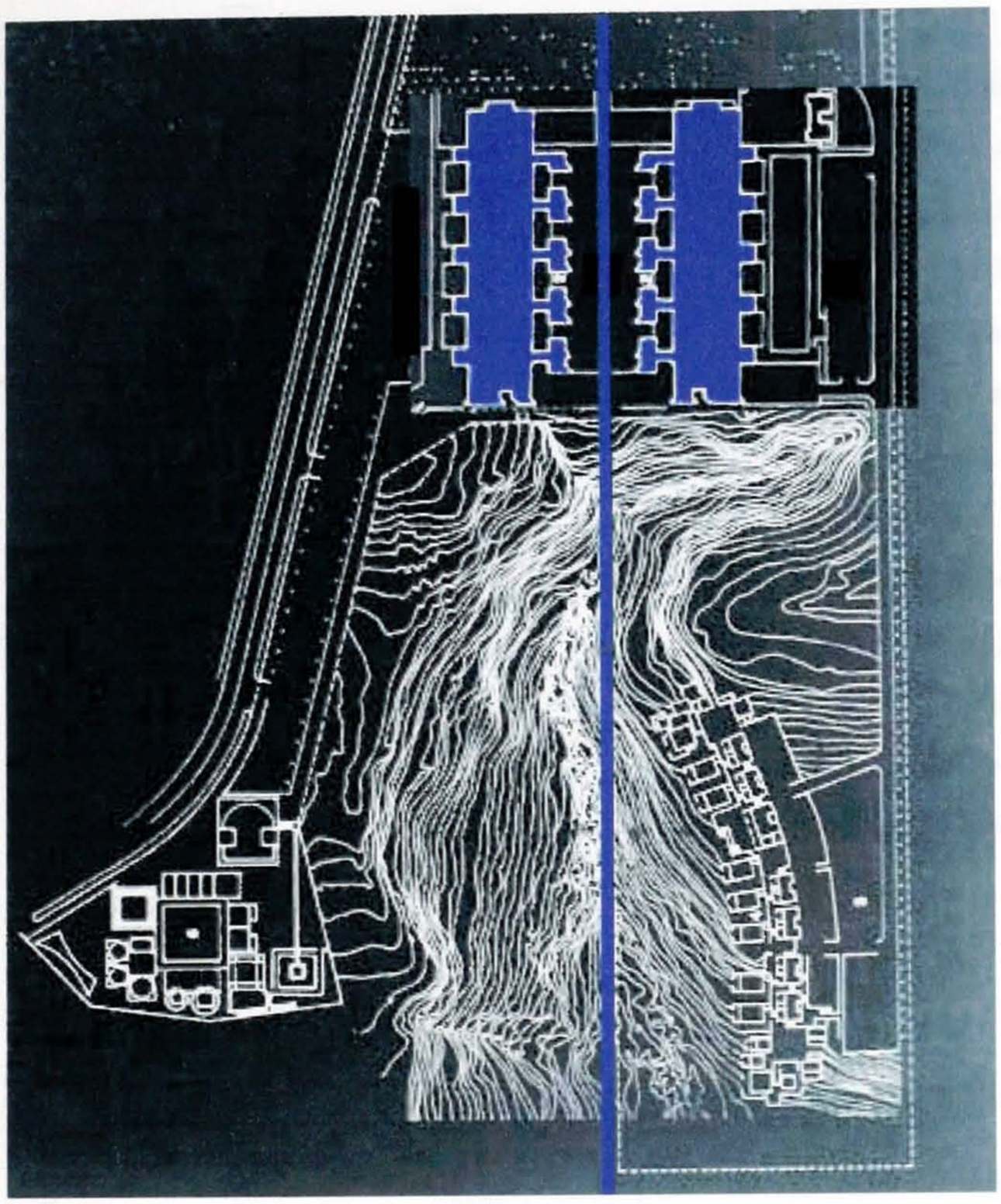
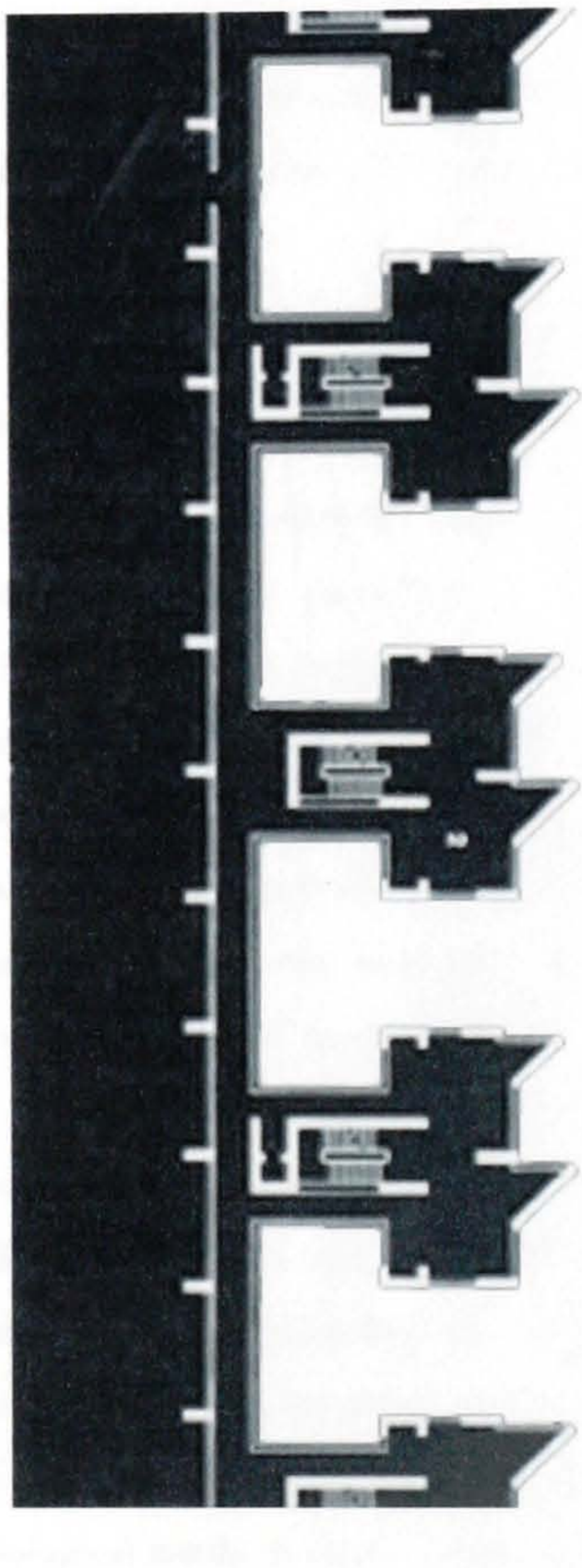


Figure 10 - The street, in theory, gathers the landscape into the site. So in many ways, it still is very much a place, in spite of its kinetic nature as a street. It is the place where the landscape meets the architecture. It is charged with psychological and sociological meaning.

Figure 9 - Kahn pulled these towers away creating an in-between space that delivers light to the large (and what would otherwise be) dark, cold laboratories. Between the two laboratory buildings is a central courtyard. Kahn originally envisioned this to be a lush garden where the scientists could meet. Thus the towers help to integrate, by demarcating and diffusing the two disparate places.



courtyard should act as a street. This street, in theory, gathers the landscape into the site. So, in many ways, it still is very much a place, in spite of its kinetic nature as a street. It is the place where the landscape meets the architecture. It is charged with psychological and sociological meaning.

At a smaller scale, Kahn's attention towards solving problems regarding human sense is apparent. The question for Kahn was how to give this very scientific, practical, and measurable function to an architectural form which exists in a very nonscientific and non-measurable way. This is the intangible, timeless character that Kahn seeks to provide in his architecture. He spoke of using intuition, but not the kind of intuition based on his own preferences. Rather, each element of the building has a natural form in which it exists. This natural form finds itself at different scales. The intuition that creates architectural form is one that follows the essential nature of what the form wants to be, itself, naturally. This is the basis for form and design for Louis Kahn.

Kaufmann House

Key Information:

Architect: Richard Neutra

Project: Kaufman Desert House

Site: Palm Springs California

Date: 1945

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Neutra was interested in architecture that represented the new American settlement – a settlement that provides for what he considered the most important underlying needs of man—natural physiological and biological needs. His new American settlement was just beginning to form as he was working on his radical new houses. The settlement he sought to work within is in many ways the new American Metropolis that we have today. His work, then, is extremely useful to this paper as a precedent of the new kind of residence that needs to be created to address the new city. It is a type of architecture in which man and nature could both thrive simultaneously. Furthermore, it is a settlement that solved problems of lower class housing. He viewed technology optimistically, but not as the answer to every problem – he advocated the use of technology as a tool. It was not a faith in technology that had to be the basis for architecture, but a technology that seeks to provide for the needs and desires of human kind. This emphasis on the human being led him to develop the idea of Biological Realism. He states that structures should be adapted to suit the biological needs of man. Again, these biological needs are thought to be the essential core needs. Normally, animals adapt to the environment. But as our technology has changed the environment this change has outpaced our ability to adapt to it. Architecture, then, is unnatural and acts as an impediment to our needs and therefore a destruction of our environment.

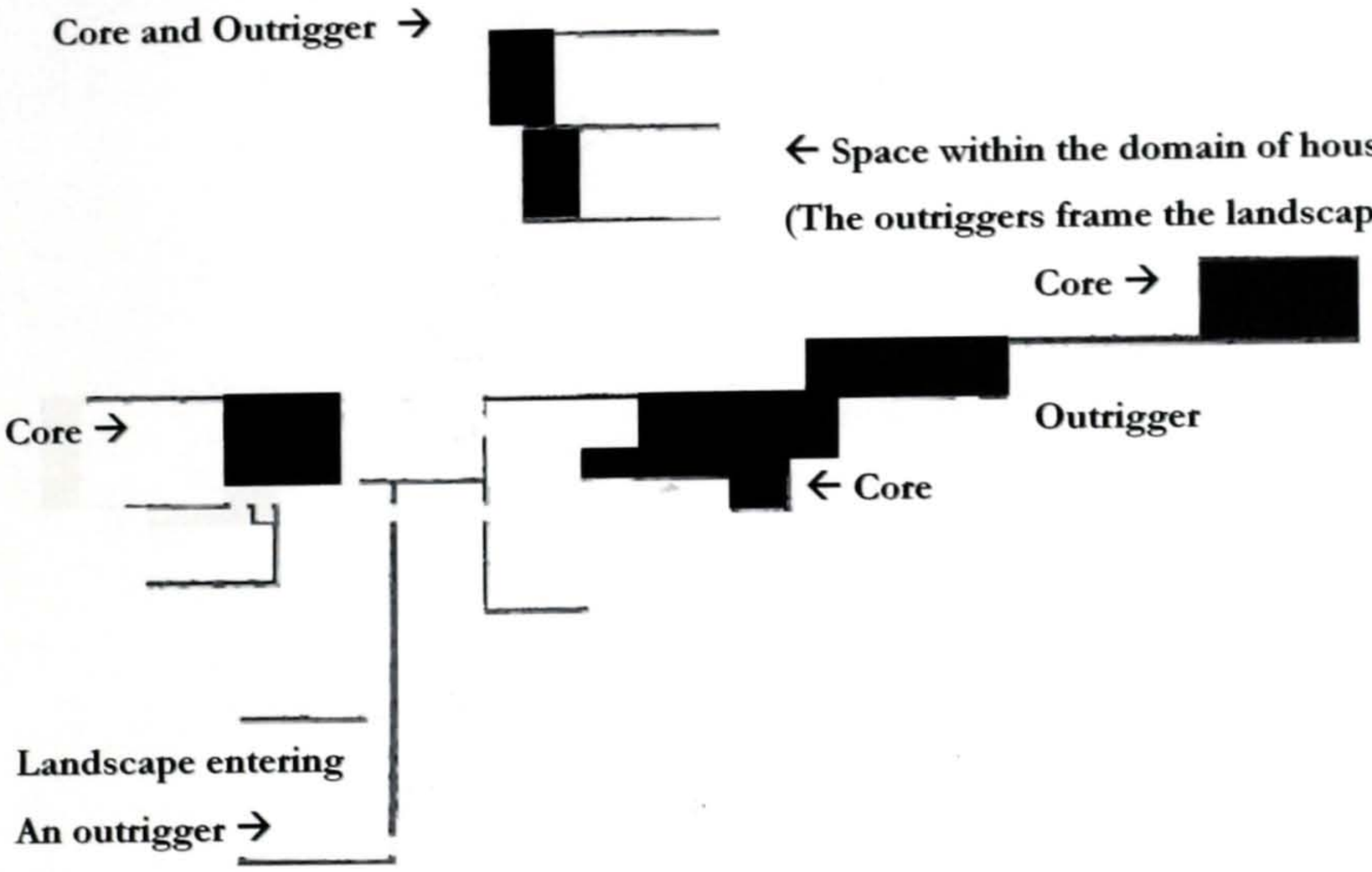

Figure 11 – Neutra used "outriggers" extensively. He used them "to extend architectural space into a carefully arranged landscape." The spaces of architecture, then, are the parts of the house that are displaced into the space as a means to facilitate human needs for space, light, air, and sight. Neutra was one of the first to use the concept of transparency. He used glass as a dematerialized wall. Thus, visual connections were created between the inside and outside. The domain of the "natural" landscape is brought within the program of the "technologically" built house.

Essentially "Biological Realism" is ahead of its time; it realizes the nature of the new city. Neutra coined the idea of Biological Realism as a rational for adapting architecture to suit our needs. The essential character of architecture, for Neutra depended on things like light, air, and territory. Architectural form and technology were only tools that could achieve this ultimate goal.

His architecture used "outriggers" extensively. He used them "to extend architectural space into a carefully arranged landscape." The architecture, then, are the parts of the house that are displaced into the space as a means to facilitate human needs for space, light, air, and sight. These are the biological needs that I discussed above. Neutra was one of the first to use the concept of transparency. He used glass as a dematerialized wall. Thus, visual connections were created between the inside and outside. Another element of residential development for Neutra was construction technology. This was the key to being able to produce houses quickly and cheaply. He only used materials that were abundant. He used only a few materials at a time and used them to their maximum potential.

His sites embody the idea of living in a garden as opposed to living in a house surrounded by a garden. He was able to accomplish this by placing central, public activities within the core of the garden. More private activities are distributed by outrigger to fill in other locations and to frame and create outdoor rooms, thus claiming open-air garden space as private territory. This is an example of an efficient use of a site as it contributes to human physiological concerns for space, fresh air, and sunlight throughout the space. When this plan is located in a neighborhood, it is obvious that changes must be made. But how do we make the changes so that we don't lose any of the beneficial spatial characteristics that Neutra invented? This is a timeless problem and is central to our neighborhoods today. In older neighborhoods the houses and buildings are close together and act themselves as an edge along the street that filters the public space of the front yards and porches into a very private space in the back. This is a preferable condition to the newer neighborhoods in which houses site on large lots and claim the entire space around them as private territory. But this territory is ambiguous. It is not under total control of either the occupant of the house or of the passersby. Thus, the owners of the house seek more and more space to act as a buffer – providing them with the amount of territory they desire. This is obviously a very inefficient configuration.

In-Side-Out-Side-House

Key Information:

Architect: Studio Works

Project: In Side Out Side House

Site: The Fifth Ward

Houston, Texas

Date: 1999-2000.

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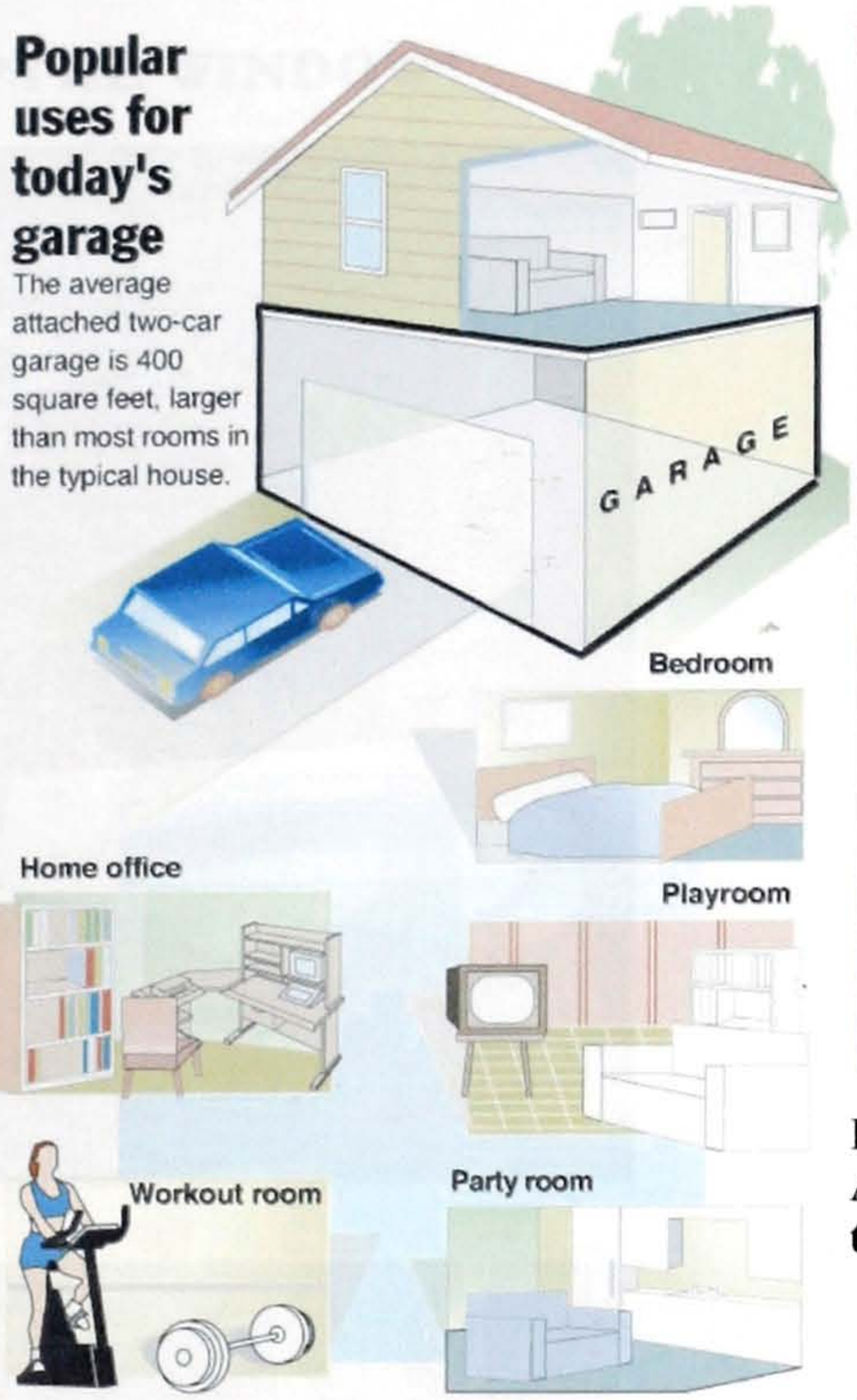
The main concept of the In-Side-Out-Side-House was to extend the inside of the house outside. The goal, the one that serves as our precedent, was to take the ambiguous territory of the suburban yard under the control of the occupants of the house. This more efficient use of the site serves two purposes. On the one hand, it extends the space for living without consuming more territory. On the other hand it begins to question the way humans interact with the natural elements of the site.

Essentially, this acts as a way to urbanize the suburban environment. If we accept that the urban environment is characterized by the design/control of the spaces in-between (the plaza), then the suburban environment is defined by a lack of designed/controlled space (parking lots are a good example). Density doesn't necessarily imply "urban." The design of the public space is a much more accurate definition of "urban" space. The plaza in an urban environment is the open space for the community—this makes it a physical place (in Habraken's terms it this way because it is under the control of its occupants). In the suburb, the spaces "in-between" are ambiguous. They are characterized by movement and the feeling of "emptiness" (Lars Lerup would



Stan Kohler/Special to the AP

Figure 13 – Suburbanites are attempting to use the most flexible space they have in ways that better suit their needs and desires…not coincidently, the demand for large garages has increased substantially.

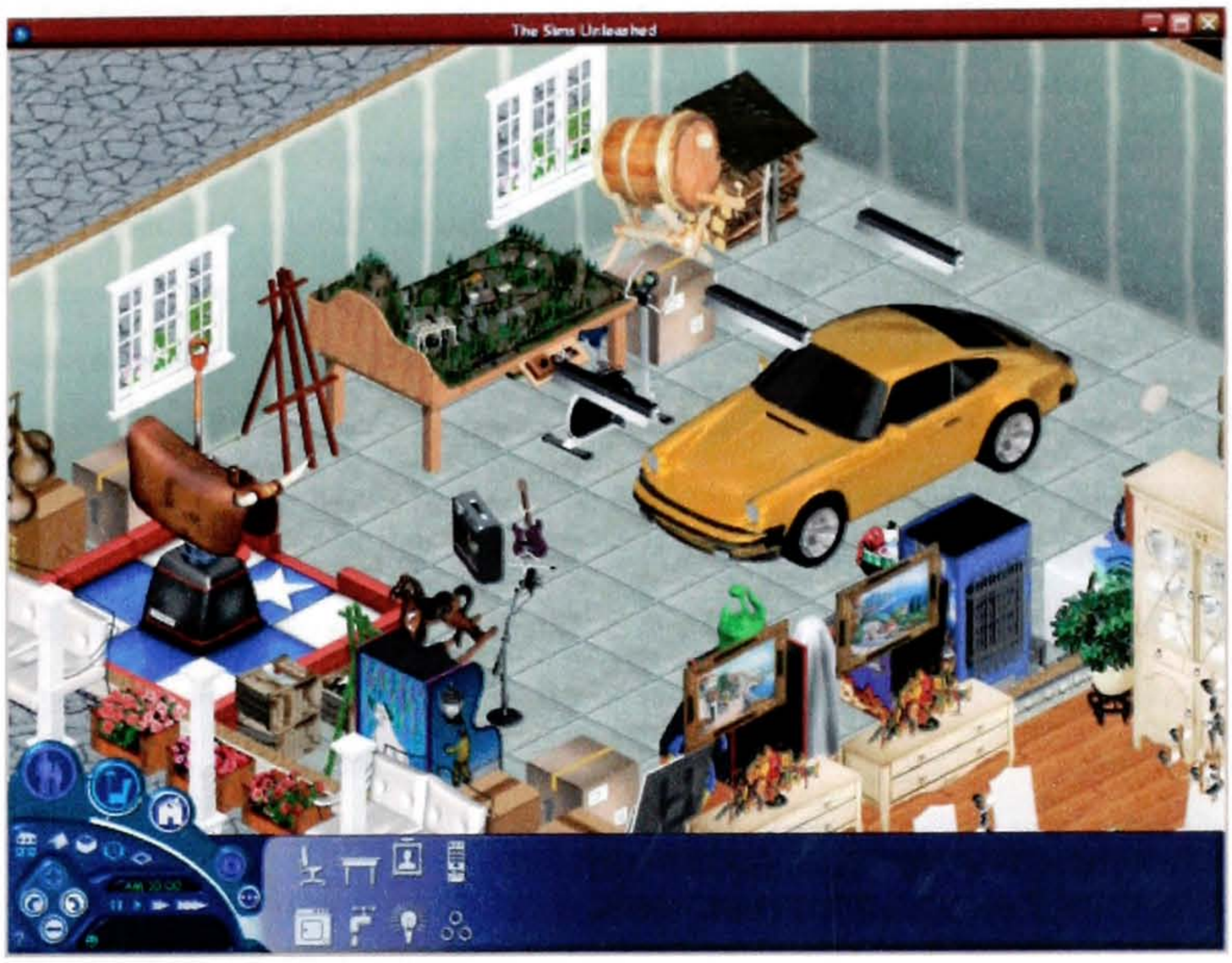


Figure 12 – As can be seen in this humorous simulation of an American garage, the garage allows for a flexible multi-use space that is hard to find elsewhere in the suburban environment.

call this space "Dross"). Studio Works recognizes this ambiguous space and takes control of it. In the "In Side Out Side House," they take a small suburban plot and build "multiple and simultaneous houses, all for the same family." Indeed, their finding is that "by way of a spatial maneuver, more space and more expanse is found on, and within the same piece of land." This is an essential maneuver if we are to create a sustainable suburban environment–a sustainable metropolis. Indeed, we can see the pressure for a more efficient use of the small suburban plot in various places in our culture. As we can see in the pictures above, suburban residents are attempting to work with what they've got, so to speak. The "Garage Band" is a fixed element of American culture. We use our garages, the most flexible space in most houses, for everything from additional family rooms to home offices to work-shops and hobby-rooms. Studio Works has begun to search for ways to assign more multiple-use spaces to the suburban plot. This better arranged use of space provides an appropriate precedent for an investigation on how to more effectively arrange the suburban residential environment.

SKETCH PROBLEM

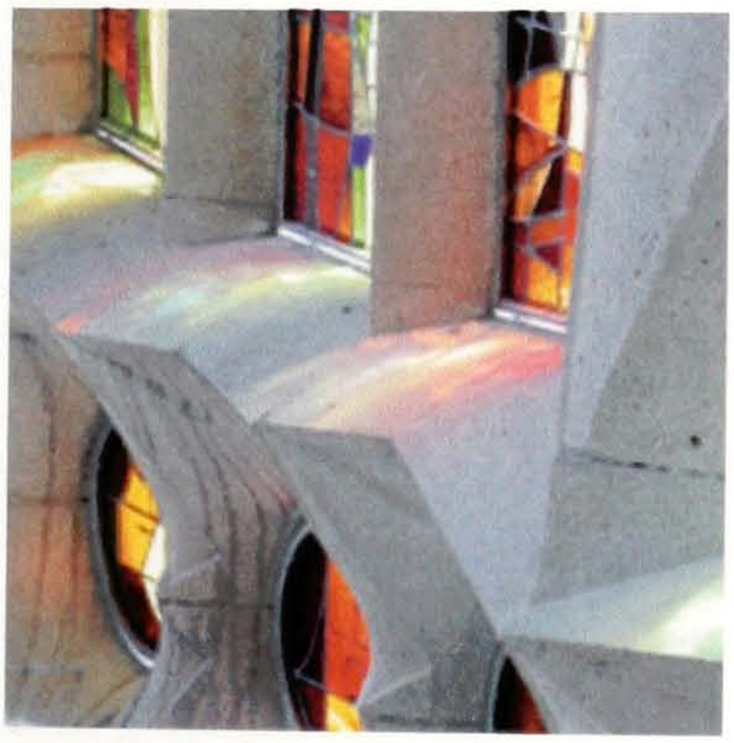
"THE WINDOW"

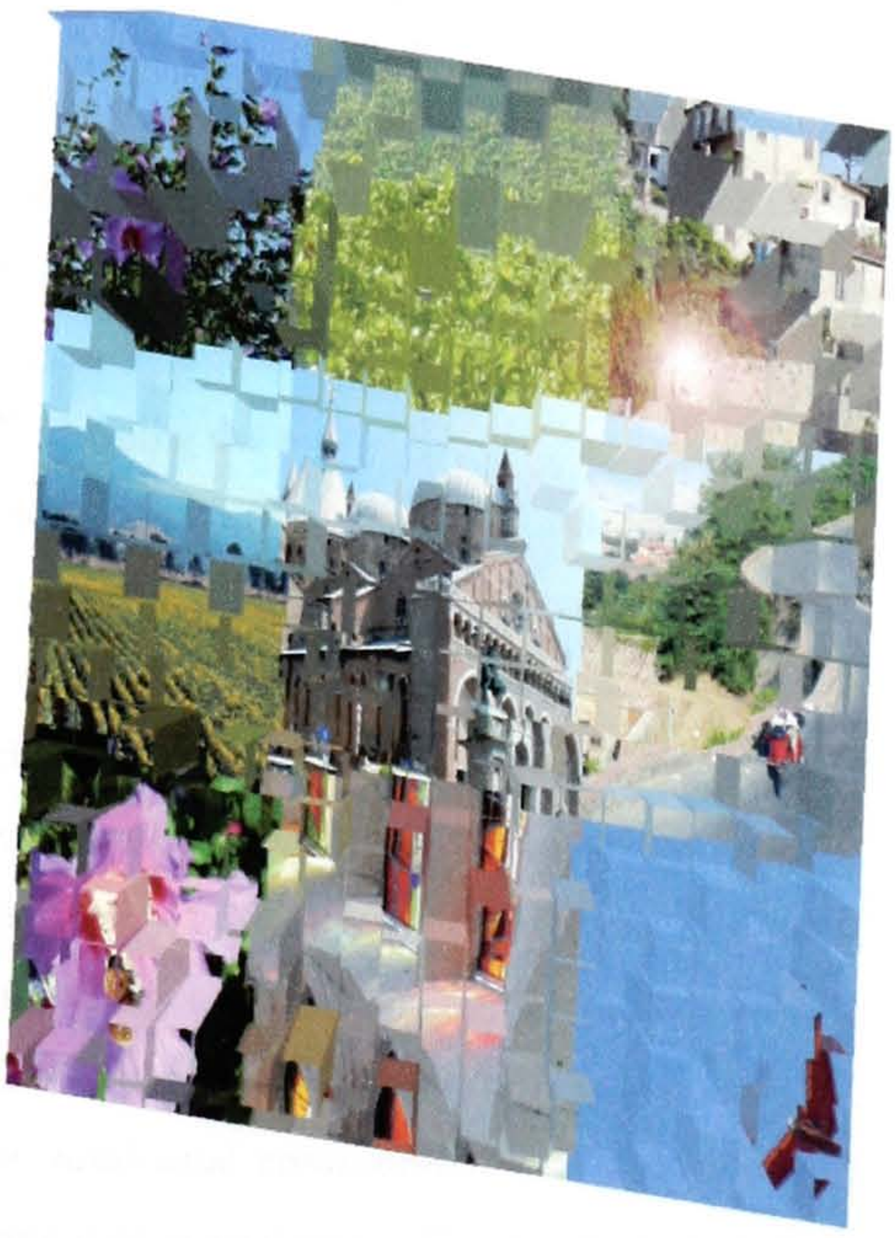
Windows have two types of effects. They have physical effects and psychological effects. The use of the window changes depending on who is using it and how that person happens to be using it at a specific time. How do we deal with this architecturally? The following are questions that must first be answered. How big should the window be? How should it be constructed? What materials should be used? How does a person adjust the window, or engage it? By examining these questions we see that windows should serve two purposes. They act as an edge and they act as an opening. What is the nature of the window? It opens and closes…it excludes some things and extracts others. It divides space…it is a psychological barrier between physical realms…but it also acts as a connection. We go to the window because we seek to experience some elements of the other side, and it reinforces our experience on our own side. Windows should serve two purposes…to act as an edge and as an opening.

This problem gives us the opportunity to design a better window. The objective is to expand the depth and manipulation that the window allows. This is, of course, to maximize its utility.

- Window as edge…curtain wall
- Window as opening…port hole

It's used as one or the other, not both. A new construction should be an abstraction of the two effects. Thicken the space where the transfer takes place; shift the planes where the image is placed so it can act as edge and opening at once.





PROGRAMMING
INTRODUCTION

The act of inhabitation in the environment provides the genesis of the built environment and of architectural form. As the most intense method by which people inhabit a city, the residential domicile is an ideal means in which to study the act of living within the built environment. This is the course of study that will lead to an understanding of the appropriate configurations of a well-built environment. A study, for example, of the personal characteristics of using a window in a suburban context should lead to conclusions about how to best configure the concept of window within an environment.

The residential unit acts, most basically, as shelter. It provides shelter from elements of nature like wind, rain or cold. But it also provides shelter from living things like wild animals or other people. The human being uses wood, stone, or mud to create something that is stronger and more powerful than he is. In this sense, the residential unit is a tool that he uses for his own protection. In other words, shelter is the physical manifestation of the human need for self-defense--or the preservation of life. This life consists of physiological activities such as eating or sleeping, social activities such as speaking, listening, writing, or thinking, and physical activities such as moving, seeing, hearing, feeling, smelling, and tasting.

Each of these basic activities has innumerable actions and situations associated with it. For example, the basic activity of "eating" can occur at the dining room table as a social activity, or alone in front of the television. It can occur inside or outside and can occur at any time of the day depending on the individual preferences of those performing the act.

The activities and actions that occur within a residence are as numerous as the number of people who perform them. Even the processes and rules of a particular activity or action vary greatly from person to person. It becomes apparent that the architect who programs a residential unit without a specific client in mind cannot fully provide for the particular actions that that particular resident might perform. And yet this is exactly what must be done if the architect is to administer to the needs of the expansive "suburban" middle class who prefer to live within the ubiquitous single-family residential unit.
However, it is the nature of the residential environment that precludes the architectural profession from taking part in its design. The distinctly American dispersal of people into individual residential structures, which house just a few as opposed to many, has led to the inability of architects to take part in the design of individual structures, which constitutes the majority of our

metropolitan city today. Upper income class residential projects or larger condominium housing projects have been the only outlets for residential architectural design. The design responsibility for the majority of the residential environment has shifted to whoever can supply the quantity of homes required by society while working within the limited margins of profit available within the housing industry. Builders and developers are the only professionals equipped to handle this task. As a result, professional architectural design is only an afterthought in suburban residential areas. The architect must learn to design for no client, or rather for a client who is unknown.

The architect without a client to design for can perhaps hypothesize about the nature of "sitting," for example, and not the location where his client "sits," but this leads to the design of a unit that must be modified by the inhabitant to suit his particular way of sitting. Somehow the architect must program and design the residential unit so that the structure can be modified by the inhabitant to suit his particular actions. Understanding that it is part of human nature for an inhabitant of a house to control an environment to suit his needs, the architect is cautioned against spending extra time and effort to design for particular moments that may or may not occur in the place that the architect intends (why design an alcove that the inhabitant might never use?). This energy could rather be consumed by understanding the basic relationships between the activities of living (using the lenses of physiological, physical, and social) and the site. These are the relationships that the inhabitant cannot easily modify. The location of a room for sleeping, for example, cannot easily be moved by the occupant away from the room for eating. Or, if for some reason, the architect thought that eating, in this day and age, can occur in any room and so designed all the rooms so that this might easily happen, the architect has consumed time and energy providing for an activity that the occupant (the contemporary occupant) wishes not to perform.

There seems to be both purposes for inhabitation and actions that result from them. The purposes seem to include the need for shelter from the outside, the need for a symbolic gesture of home, and the need for structures containing the biological functions of man, including the social, physiological, and physical above. The actions that result from these purposes are innumerable. A successful architectural program, however, should take into account the purposes of inhabitation and how they influence architectural objects at the most basic level of experience.

DESIRED SUBURBAN SPACES:

Ruralspace * Streetspace * Entrance-threshold * Circulation-mediator * Recreation space * Conversation Space * Inside-Outside Space * Central-hearth space * Life-support spaces * Media communication space * Creativity-production space * Rest spaces * Health-activity spaces

See the list of the architectural objects that are required within a suburban neighborhood at left. This list is considers the viewpoint of a typical modern, middle-class client wishing to move into a suburban location. The client is unnamed and unknown but typical of a metropolitan resident. He is of average means and embodies the desires of most Americans today that wish to move to a larger house with a larger lot. He is 30 years old with one child. He and his family are moving from Ferndale to Macomb Township. His wife will continue to work in Ferndale but she is considering eventually working at home. He will continue to work in Southfield enjoying a favorable 4-day workweek. His child will continue to attend a private school in Royal Oak. One of the family's favorite activities is visiting Belle Isle and they attend all Detroit Pistons home games in Auburn Hills.

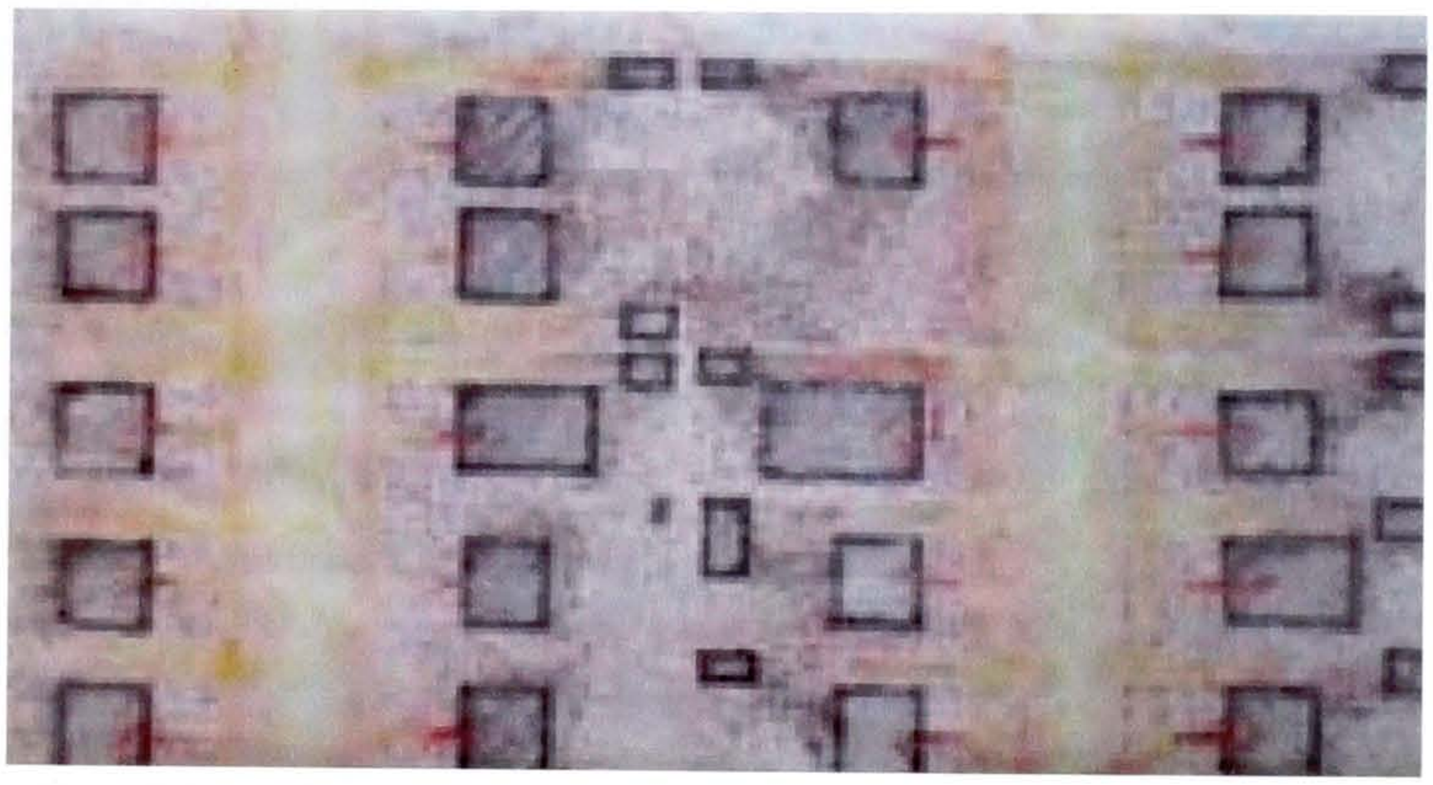


Figure 14 - Public territory in yellow, neighborhood in orange, family in brown, houses outlined in black.

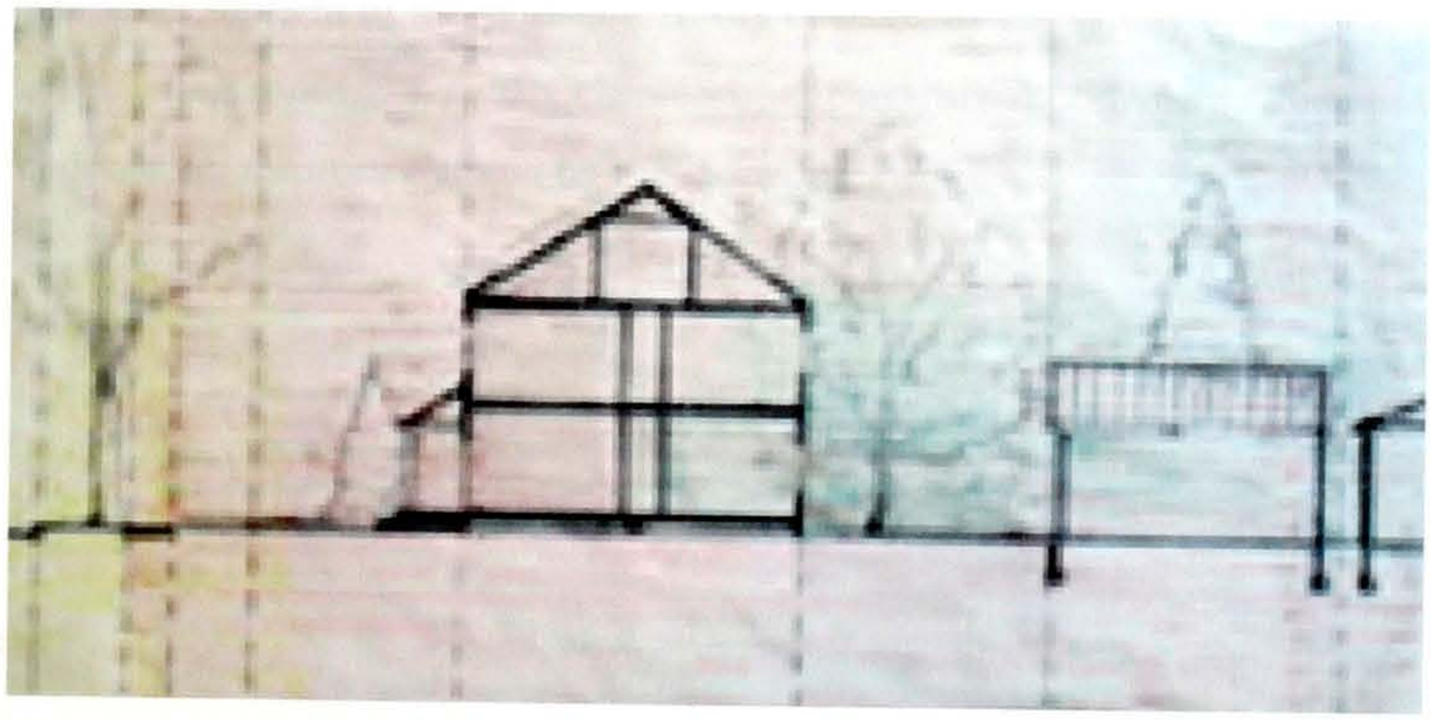


Figure 15 - The control of territory is independent of the degree of enclosure. Note how public territory (in yellow) has a very defined acceptable path for approaching the house. Also note that neighborhood acceptable territory moves across walls and into the enclosed space under ownership of the family (but under acceptable control of neighbors).

DESIRED SUBURBAN ACTIONS

Protection, shelter, rest, sleep, nature, outside, openness, sunlight, fresh air, food, growth, movement, relationships, communication, filtration, acceptance, sensation, activity, entertainment, work, play, fitness, education

DESIRED SUBURBAN TERRITORIES

Publicly claimed, neighborhood claimed, family claimed, individually claimed, unclaimed, shared.

THE INTERSECTION OF THE THREE

This is the framework in which the suburban single-family house must be designed. This is also the thesis project at its smallest scale. How do our contemporary societal actions (i.e. meeting with neighbors in the driveway) need to provoke a change in the architectural objects that serve us?

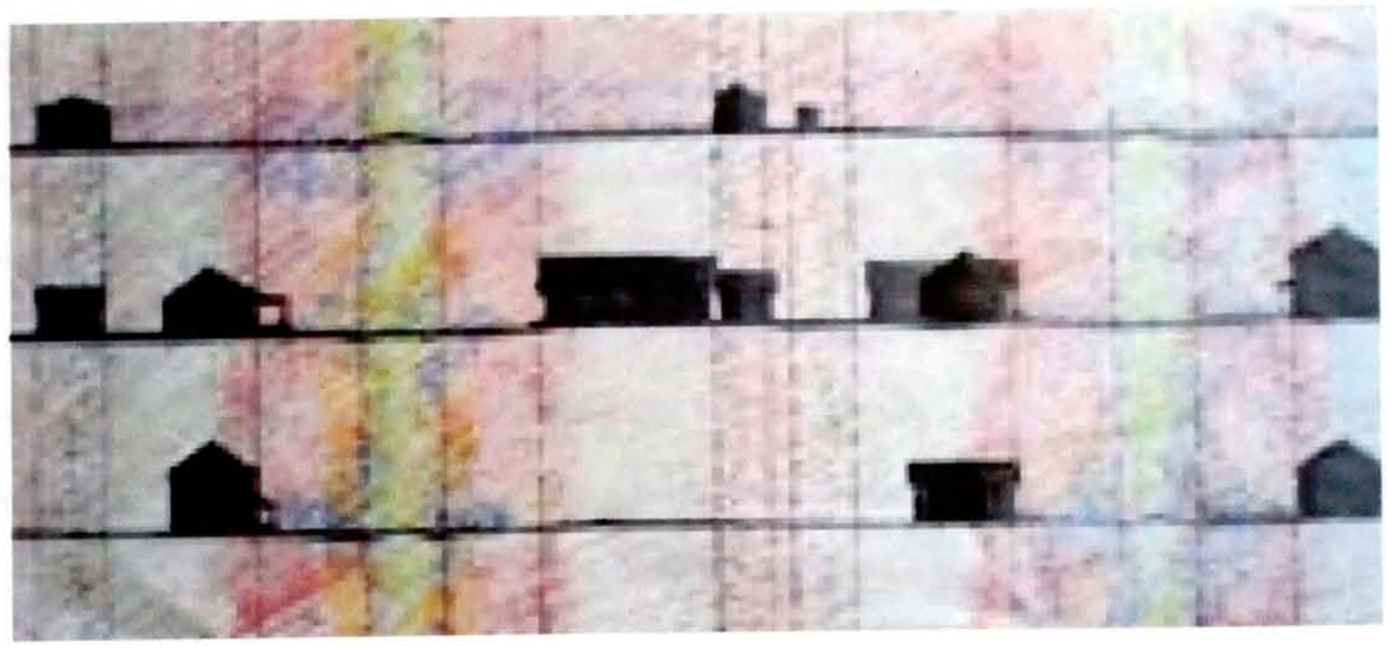


Figure 16 - In Section we can see the ambiguous territories of the suburban neighborhood.

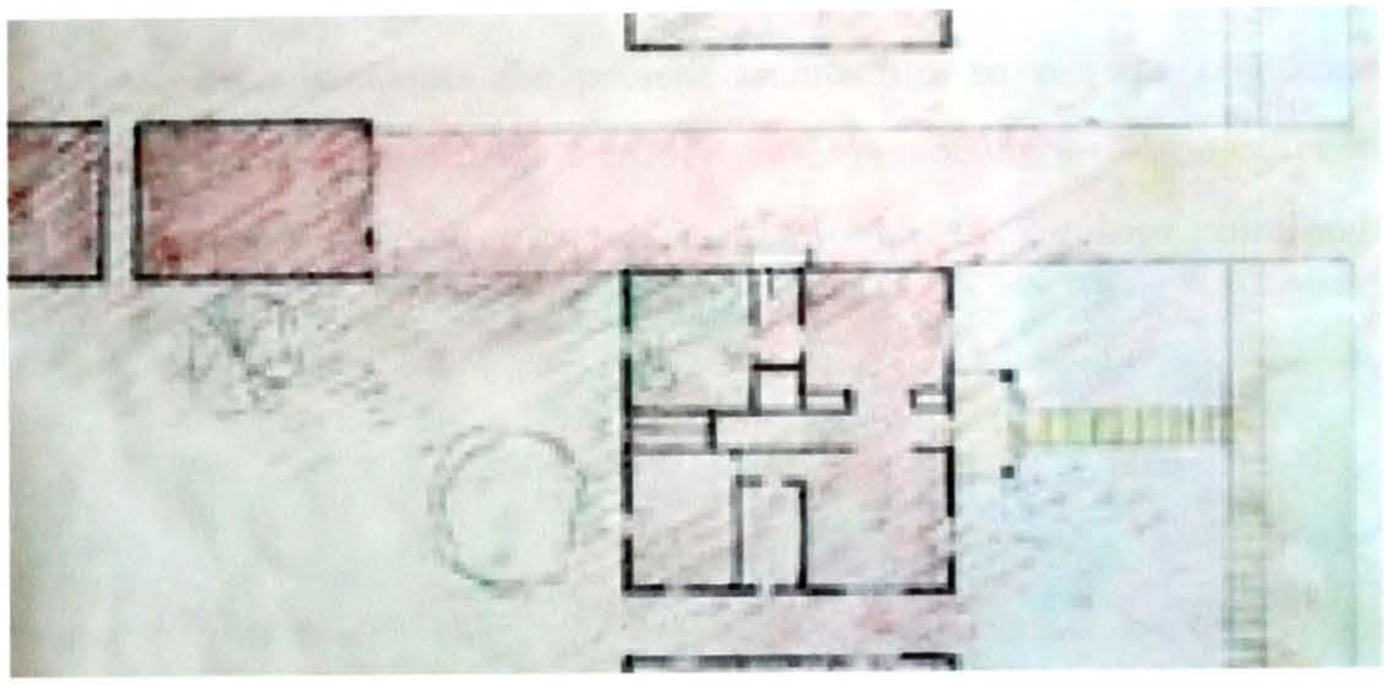


Figure 17 - A similar condition exists in plan.

Each architectural decision must refer to all three categories.

Example: sunlight in the yard in territory claimed by the family versus sunlight in the living room in territory claimed by the neighborhood versus sleep in the bedroom in territory claimed by the individual.

PROGRAMMING PRECEDENT

Architect: Studio Works

Robert Mangurian, Mary-Ann Ray

To quote the architects, "the Inside-Outside House occupies the entire lot, and is especially responsible for forming the architecture of the side, front, and back yards. "Within" this Inside-Outside House, the outside land or yard is considered to be a new inside. It is populated with helpful apparatus and furnitures that prompt occupation, and that help this outside become an inside--an oversized table to be under for shade, a corner cupboard, several sinks, perimeter lighting, chairs on feet that don't sink in the mud, and other things."

The architects in this case use architectural objects (like the table-pergola to stand under for shade) that take into account the human desire for openness and fresh air and adapts the present architecture to suit the contemporary societal desire to have outside territory under personal control--in other words to "live" outside. They go so far as to provide for outdoor plumbing and lighting.

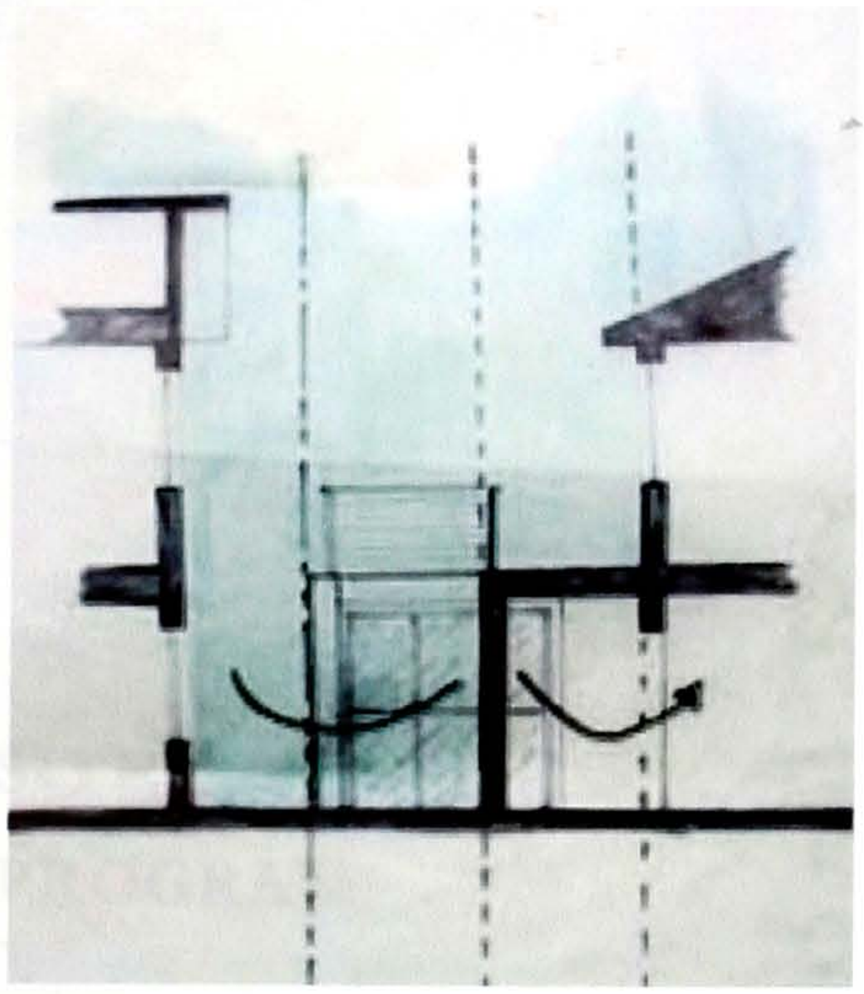


Figure 18 - An architectural decision to modify and make use of the space between houses. Needs for direct privacy are considered. But by way of an alternating wall, edges are created alongside what was previously unused space. These edges make use of the space by turning them into light wells that can also create a visual connection between plants outside and life inside.

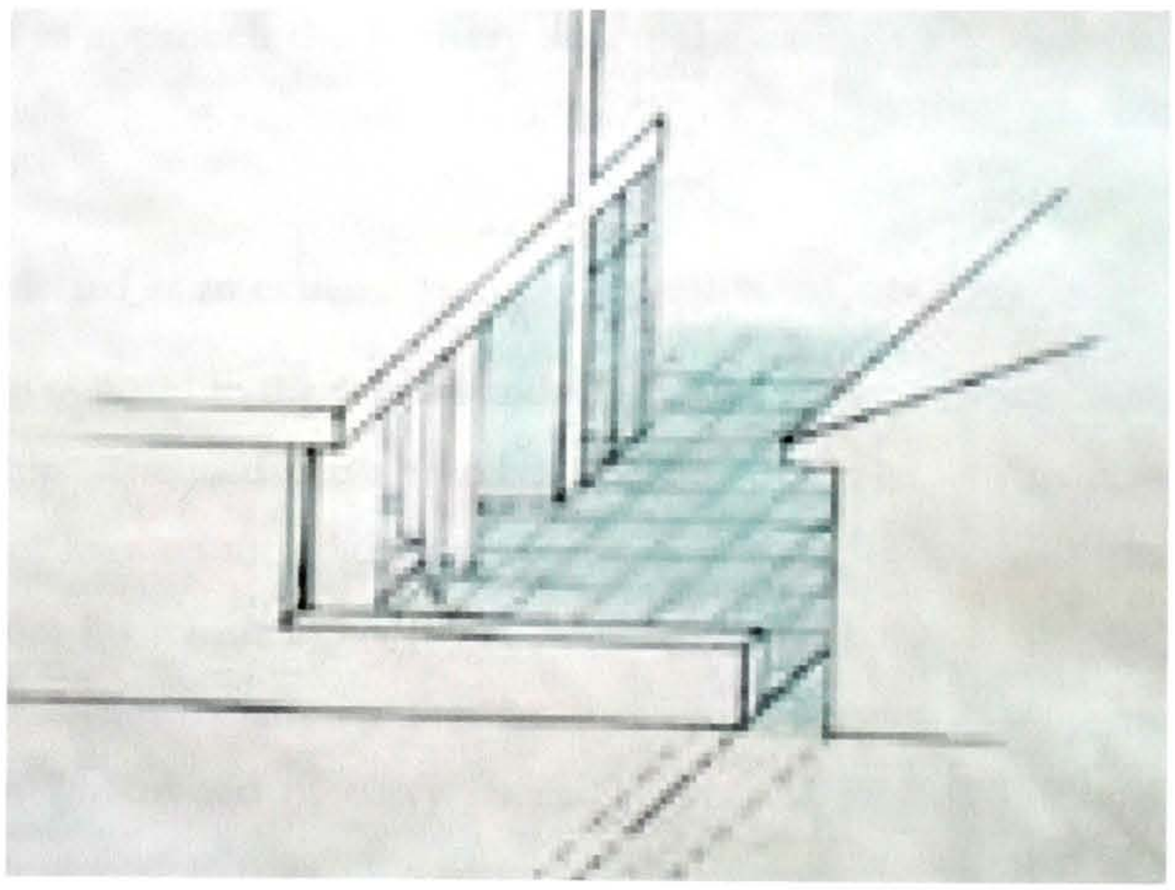


Figure 19 – In the environment of the neighborhood creates unused in-between spaces. (The space between the house and the spaces between the neighbors garage). Here, extra "space" is captured by using the exterior wall of the neighboring garage. This expands the territory under the control of the occupant of this house. Similar conditions can exist even when two similarly efficient houses are placed side by side by adjusting and alternating the uses of certain spaces.

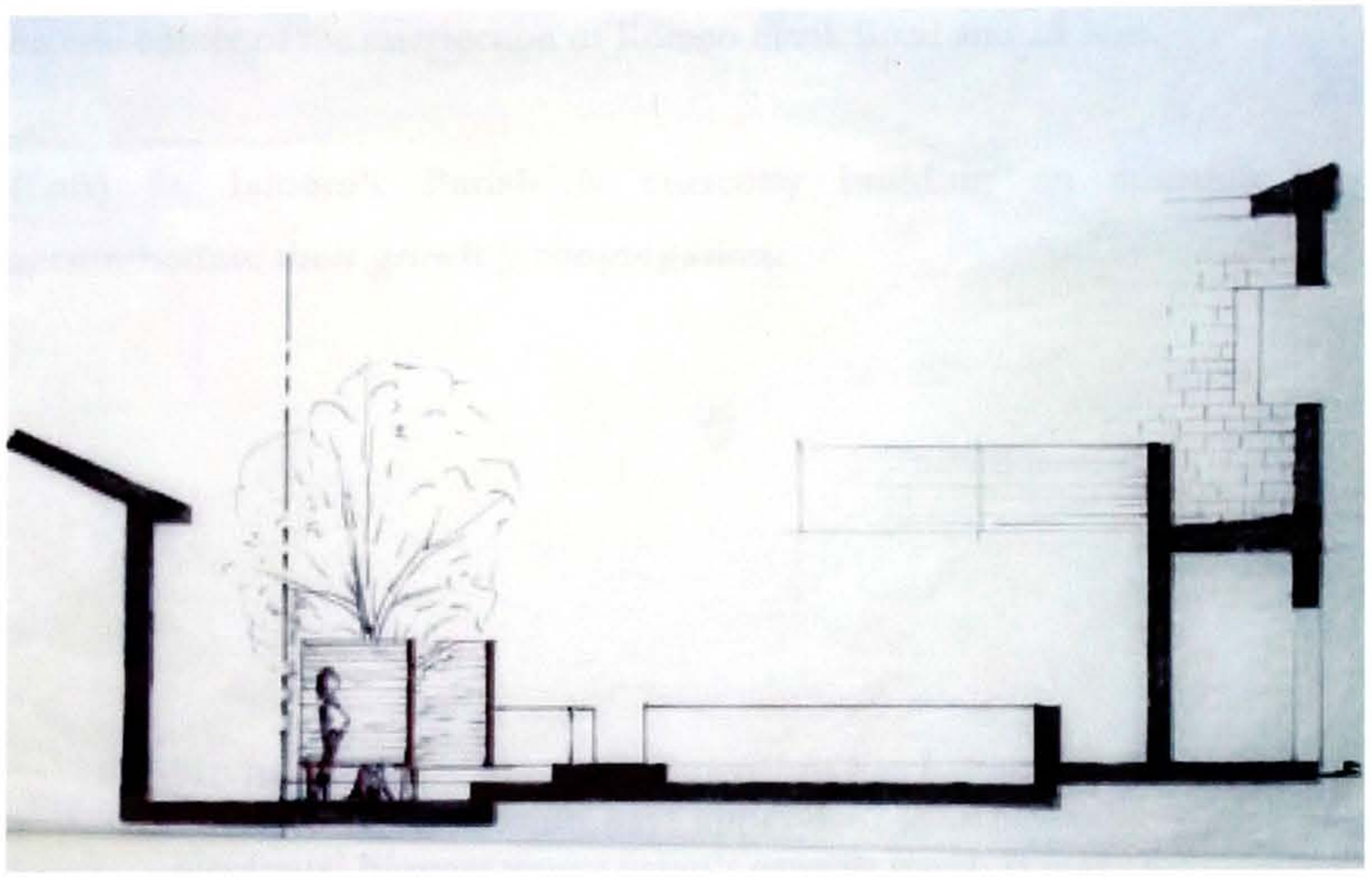


Figure 20 - The driveway bisects the yard creating an edge where the social meeting between the family and the neighborhood is likely to take place (approaching someone washing there car or when dropping off a friend). By increasing the length of this edge and bringing it into the territory of the house, the driveway can be occupied more often. By means of low walls (on which to sit on during a sunny day) occupants are encouraged to approach the territory and make use of what was one the backyard.

SITE DATA AND PROGRAM

The site was selected as an extreme example because it illustrates the desires of people moving outward to the suburbs today. It is an empty subdivision in Macomb Township. The roads have been laid, the utilities buried. A Macomb Township resident lives on the edge of the metropolitan city. His experience of the city includes his transit to his home from the freeway system through the primary and secondary arteries that he uses as landmarks guiding his direction. His neighborhood of curvy streets surrounded by farmland and trees is called Westwood Estates. No more than a couple of years old, it is bordered by Woodside Trails to the west, Evergreen Estates to the east, and Middle River Estates to the south. Not far from Cambridge Commons and Koss Farms, the subdivision is located in the middle of Macomb Township. The character of the houses is typically large and is composed of detached single-family homes on green lots. The houses are all new brick structures with steep roofs and attached garages. Their style is an eclectic mix of modern elements; the developers call them "colonial." The houses sit in the middle of the lots and every one has a deck or patio or children's play-set. Neighbors chat in their driveways as children ride their bikes through the wide streets. The commute to this neighborhood consists of landmarks such as the "Pit Stop" gas station and new CVS Pharmacy. St. Isidoro's Catholic Church sits

on one corner of the intersection of Romeo Plank Road and 23 Mile.

(Left) St. Isidoro's Parish is currently building an addition to accommodate their growing congregation.

Typical house size: 2,073-3,148 square feet.

Typical price: from $256,990-$327,990. Schools: MEAP scores 20 percent above state average.

Close to: I-94, M-59 and M-53.

Appeal: Good-looking, large family homes, well built at a medium price with nice finishing features, close to highways and shopping.

- From the Detroit News

- **"In just 12 years Macomb Township has ballooned from about 15,000 to 45,000 people, says supervisor John Brennan. But residents' biggest worry wasn't growth itself. It was the landscape the growth was creating."**

- **"First, with nearly 2,000 new houses a year, Brennan says, the view was "row after row of typical subdivisions."**

- **" Second, the town had no sense of identity."**

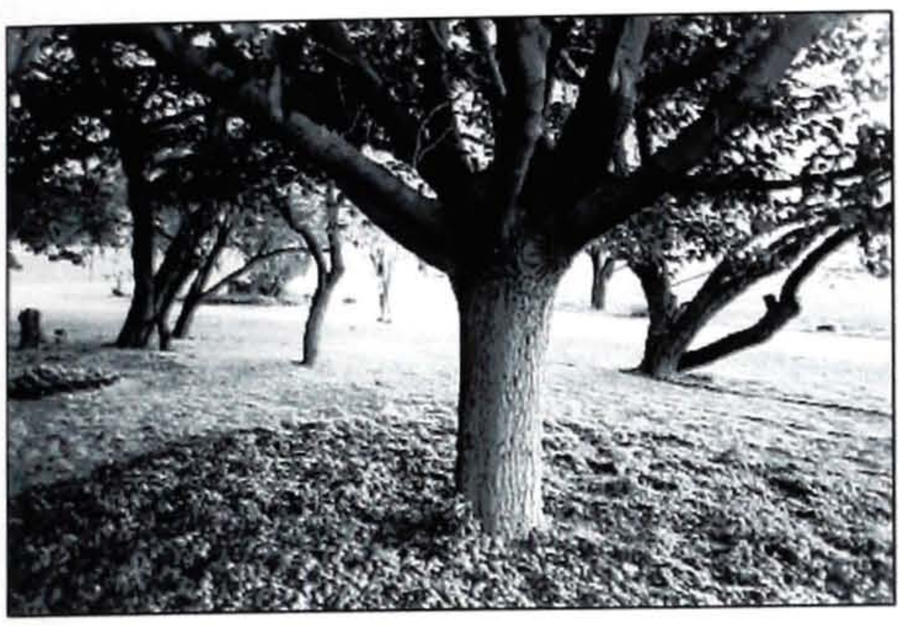
- **"When you tell people you're from Macomb Township," he says, "they don't have any idea what that is."**

- **"Yeah, tell folks about it in other fast-growing townships: Chesterfield, Clinton, Shelby, Canton, Van Buren, Orion, Independence, Novi, Brownstown, Ypsilanti, Pittsfield, Brighton and many more."**

- **"Your own front door may be cute as can be. But drive out past the subdivision entrance and you face a boring landscape, wretched traffic and distances that keep your kids stuck at home unless you drive them."**

- **"Planners say we can do better. Yes, we can grow our neighborhoods. While we're doing it, we plan them so the streets look homey and inviting, and the schools, shops and recreation we need are right nearby."**

- From Judy Rose – Detroit Free Press



A Suburban Subdivision:

Multiple, empty 70' x 120' parcels of land.

8,400 SF = 0.2 acres.

Typical lot coverage: 25% to 37%

Setbacks typically 30' front. ROW typically 50'.

Streets 34' wide concrete w/ rolled curbs.

Topography: leveled off perfectly flat. Old ditch/drain retained for practical purposes. A suburban river?

Access: Exclusively vehicular access. The wide curvy streets provide solid, safe surface to walk and play on.

Views: Currently the area has wonderful views of neighboring fields and farmhouses. But eventually, as houses will be filled in, views will consist only of the maple tree in the backyard, the old farmhouse across the street that's been converted into a cider mill, the Christmas lights on the house across the street, the cool looking SUV parked in the driveway next door, or the big sky that fills the empty grass-filled yards.

Site context: Woodside Trails to the west, Evergreen Estates to the east, and Middle River Estates to the south. Not far from Cambridge Commons and Koss Farms, the subdivision is located in the middle of Macomb Township on the edge of metropolitan Detroit.

Kevin Lynch's Image of the City contains five key items to consider when designing "place."[xx] It might be useful to consider the suburban territory with these key images in mind.

Edges: The end of the subdivision is the greatest edge in current suburban design. Efforts should be made to reduce the disconnection between Evergreen Estates, for example, and Middle River Estates. In general, subdivisions should not be created in a vacuum; they should be seen as annexations of the central concept of a residential environment, at least, and contribute to a coherent and connected city, if possible.

Paths: Paths can be determined by the routines of the residents. Common paths in the typical suburban environment are vehicular.

Nodes: The node of the typical suburban residential environment can be considered the house itself. The suburban house is an all-inclusive

environment. People seem to enjoy this…the suburban deck or patio is one of the first home-building projects new homeowners take on. Within the single-family residential environment the deck is the center of the world…the center of outdoor cookouts at the propane grill and campouts under the canopy of leafy maples. Is there a way in which these currently detached individual nodes, while retaining their individuality, can have some relationship to (whether by physical proximity or visual connection) other similar decks or patio's. Is there a balance between the individual and the collective that can allow for the desires of individuals and the desires of *neighbors*? Within the suburban environment, can the opportunity for neighborly interaction replace the *neighborhood* interaction that occurs in denser, more urban environments?

Districts: The districts of the un-planned suburban neighborhood usually grow out of routine necessity. The need for a grocery store within a 10-minute drive brings about the "market" for a grocery store. The strip mall has become the de facto method of providing the various essential services. A problem some have with this is the new requirement that we now "must" drive to get a gallon of milk. This can be considered a cost of suburban development. But the benefits of the car, often far exceed the benefits that a dense, New Urban, environment will provide by being able to, as Doug Kelbaugh says, walk at least sometimes.[xxi] The problem that deserves greater attention is the lack of visual appeal within the space we allot to the automobile. Innovation must occur in suburban design and this innovation need not include New Urbanism to provide a complete urban environment.

Landmarks: What are the landmarks of a suburban environment? Obviously, these landmarks do exist. As with all of Lynch's *images* of the environment, the landmarks serve an important role, urban or suburban. The landmarks serve as points of reference. These are points with which we understand where we are and what makes up our environment, both at a macro scale and a micro scale. It has been said that the suburban environment is characterized by temporality and change…changing storefronts and temporary environments by a mass culture that seeks to reinvent and remarket for consumption. The landmarks of the suburban environment are also characterized by this change. For some, the dizzying speed of the freeway and the lack of inherent landmarks along it lead to an unforgiving and unfriendly landscape. But landmarks occur on much smaller scales as well. By routine and preplanning we learn even the most challenging route through any

combination of the speedy interchanges and overpasses of the expressways. In a similar way, the (for some) relentlessly recurrent appearance of "monotonous" corner drugstores or gas stations can act as a numbing effect on our psyche. Fortunately, we all, in our everyday activities, use these stores and gas stations as landmarks. We know, for example, that our neighborhood is the third stoplight past the 2nd Speedway gas station around the corner from the new Walgreen along Hall Road. The monotonous character soon disappears as we discern the old Walgreen from the new one. In fact, a "7-11" can be a comforting "landmark" when you're thirsty for a slurpee!!

Suburban design must be thought of as a continuation of urban design, because many of the same principles apply.

QUANTITATIVE SUMMARY

(See Qualitative Analysis and Space Detail Sheets for descriptions.)

Reference # - Space name	*No.*	*Territory*	*Net SF*	*Tot. Net SF*
2. Garden-yard	2	family (6)		2500 SF
3. House-street	1	3 cars		1200 SF
Neighborhood-alley	1	Neighbors		1500 SF
Site:				5,200 SF min.
1. Entrance-threshold	3	-	-	-
5. Recreation space	1	Neighbor (6)		600 SF
6. Conversation spaces	3	Family (2)	80 SF	240 SF
8. Central-hearth space	1	Family (4)	300 SF	300 SF
10. Media communication space	1	Family (2)	300 SF	300 SF
11. Creativity-production space	1	Individual (1)	400 SF	400 SF
12. Rest spaces	4	Individual (1)	225 SF	900 SF
13. Health-activity spaces	1	Individual (2)	300 SF	300 SF
Building:				3040 SF
4. Circulation-mediator (10%)				304 SF
7. Inside-Outside space	2	Neighbor (3)	400 SF	800 SF
9. Life-support spaces	5	Individual (1)	100 SF	500 SF
Total Building Program w/garages	:			4,644 SF

Note: Several spaces can overlap. But the building must be two stories to reach max lot coverage requirements. The exact Footprint will depend on space layouts.

Architectural Object	Physiological			Sociological		
	Intentions	Impressions	Variability	Intentions	Impressions	Variability
Yard	Air, Light	Empty space	Low	Share w/ Neighbors	Personal Property	Medium
Driveway	Practical/ to get car closer to house	Hard, cold, dangerous	Low	Path to house	The place to walk, allowed to approach	Low
Entry	Threshold, Transition to inside	Small, uncomfortable	Low	Greeting	Inviting	Low
Porch/Deck	Mitigation (of environment)	Dependent on weather	Low	Relaxing, Socializing	Represents neighborly-ness	Medium
Kitchen	Consumption, energy	Important	Low	None	Center hub, message center	High
Living Room	Sitting, Reclining	Calm, warm	Low	Social, guests,	Communication, public	Medium
Dining Room	Sitting, Table	Clean	Low	Family, Collective	Open	Medium
Hallway	Visual, Structural	Dark, transitory	Low	Connection	Defensive	Low
Family Room	recreation	Inside, safe	Low	Social, activity, hobby	Inter-action,	Medium
Garage	Practical/ Access to car, hobby space	Cold, dark,	Low	Left over space,	Un-moderated, informal	High
Bathroom	Biological	Clean	Low	Hygiene	Necessary	Low
Office/work	Wage, money, occupation	Proficient	Low	Working, goals, exchange	Light, comfortable, breaks	High
Closet	None	None	Low	Storage, hiding objects	Unseen	Low
Utility Room	Biological Air conditioning, hot water	Hidden, chore, mechanical	Low			Low
Bedrooms	Biological- Sleep	Dark, quiet	Low	Individual, friends	Private	Medium

Architectural Object	Psychological		
	Intentions	Impressions	Variability
Yard	Recreation	Nature/ Garden	High
Driveway	Street	Ugly	High
Entry	Discrimination, adaptation	Safe	High
Porch/Deck	Control (of environment)	On the edge of two environments	High
Kitchen	"hearth," primitive need	Satisfaction, Warmth, Success	High
Living Room	Quiet	Formal	High
Dining Room	Providing	Generosity	High
Hallway	Separation	Interior core	High
Family Room	Play, entertainment	Informal	High
Garage	Not important	The outside inside	High
Bathroom	Primitive need	Unclean	High
Office/work	Production	Orderly, personal	High
Closet	Housekeeping, order	Within the walls	High
Utility Room	Manipulation (of environment), survival	Loud, laundry, furnace, water heater	High
Bedrooms	Primitive needs	Personal	High

SPACE DETAIL SHEETS

Space #1

Entrance-threshold

Experiential considerations: We first built houses for protection from the elements. The first action set forth by the program, then, should be "shelter." The experience of shelter can be described by the desire for "substantialness;" a barrier characterizes it. Shelter acts as a protection of the physical weakness of the human body. The entrance should communication the safety and substantialness of the house to the residents who seek its shelter. The entrance is also a threshold. It is a point of transition between two disparate environments. After the advent of the car the entrance changed from a ceremonious front porch to a diminutive side door or garage door. Considering this shift, perhaps the side door, or garage door should be updated to better represent to the residents the meaning of shelter and threshold.

Activities: Transitory, pivotal, way-finding, exclusion, reception, hanging up coats, place to keep muddy shoes

Spatial Relationships: the main entrance is the threshold between inside and outside but also a point of departure for any number of rooms in the house. From the entrance, the starting point, one must be able to locate where in the house one currently is and where one can go.

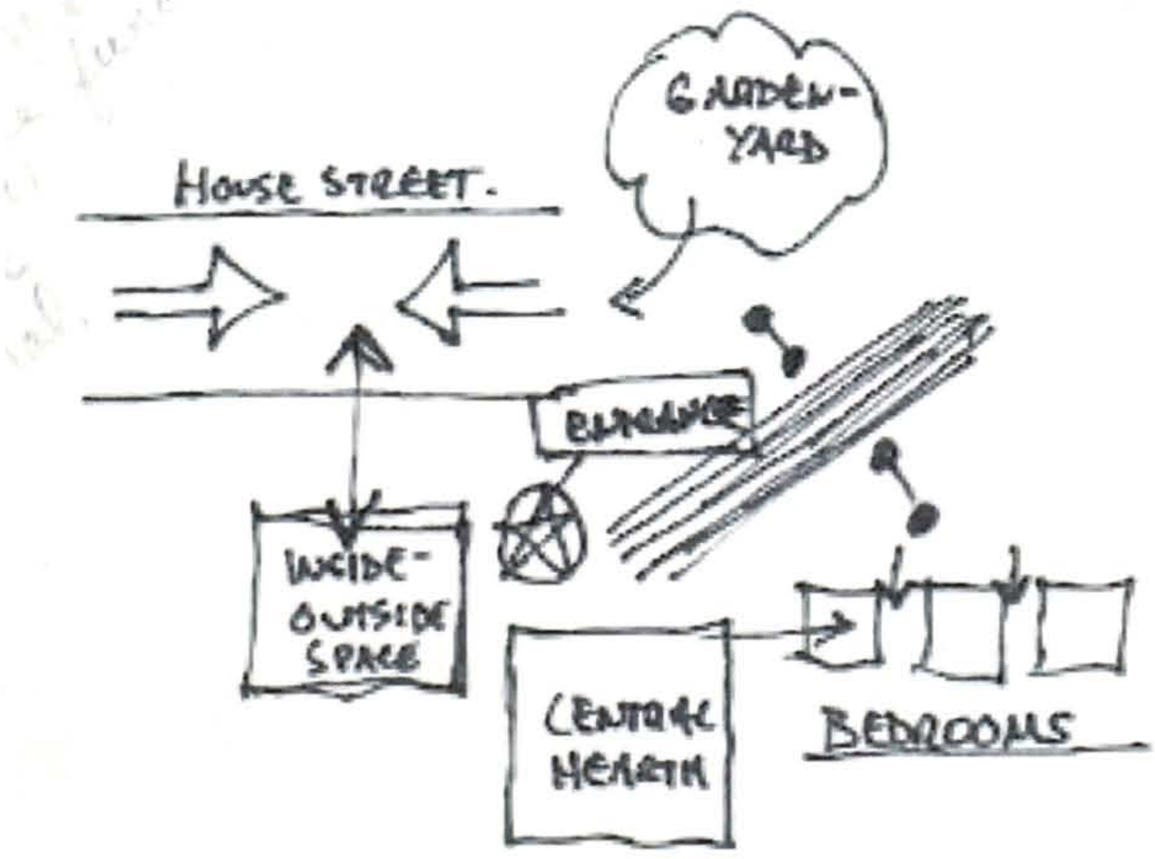


Figure 21

Area required: Wider than the door. Include enough space for 4 people to stand while hanging coats in the closet or chatting with friends as before or after they leave or enter the house. 5x10 = 50 sf x 3 = 150 sf

Space #2

Garden-yard

Experiential considerations: Although we seek protection from our homes, we are still creatures of nature. We were born outside and we continue to wish to be outside when shelter is not required or desired. The second action of the program should be a connection with "nature." This connection is characterized by openness. Nature is sunlight and fresh air. It is the recognition of the act of living – trees grow, rains bring flowers, bees swarm, fresh air delivers oxygen.

Activities: The garden-yard is an outdoor room. It is a space that has the potential to be often used and appreciated. Most subdivisions however make little use of the yard. To use the yard to its fullest potential is a goal of this project. Using the yard well can eliminate the desire for more than is needed by the residents. The exact size of the lot (and of the yard) will be determined by market demographics.

Spatial Relationships: the garden-yard should be accessible to the garage and driveway – in many ways extensions of the yard themselves.

Area required: This project will work within the demographic of a 0.2-acre lot. The size of the garden-yard will be determined by the footprint of the building. It will be well used, in any case. 2,500 sf min.

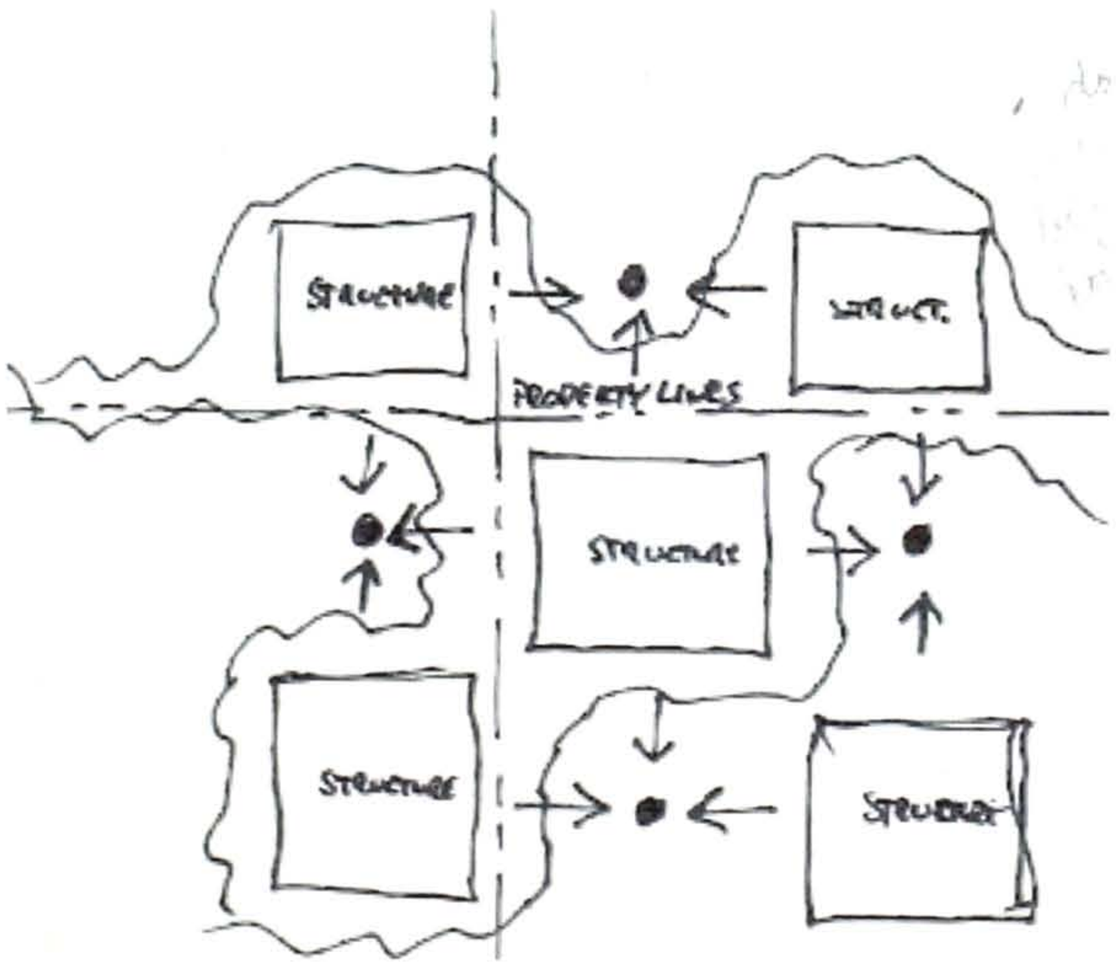


Figure 22

Space #3

House-street

Experiential considerations: It is the driveway that connects our homes to the world. In Macomb Township the sidewalk will only get you as far as your neighbors houses. Most guests arrive in the driveway. We park our cars there too. The driveway represents our controlled public environment. We allow people to approach on it (but not on the grass); we feel our cars are safe if parked there (but not if parked on the street 10 yards away). The driveway provides a convenient platform to wash our cars or play basketball in the summer. In full view of the neighborhood, when occupying our driveways we are most easily approached by our neighbors. In short, we have pulled what used to be a street into our lots and have occupied it. But the driveway can be cold and unsightly. Used simultaneously by the family cars and the family members, it can be a dangerous space. The driveway should be updated to better reflect our more intense use of it.

Activities: driving, parking, playing, washing the car, using the grill, chatting with neighbors, fixing the lawnmower

Spatial Relationships: The driveway is a street that we have pulled close to our house. We want to be able to look down the street and have easy access to it. Furthermore, we desire access to it. It should be accessible both to the inside outside space of the garage and to the recreational space. The driveway has an opportunity to compete with the back yard or garden-yard as the facilitator of outdoor experience.

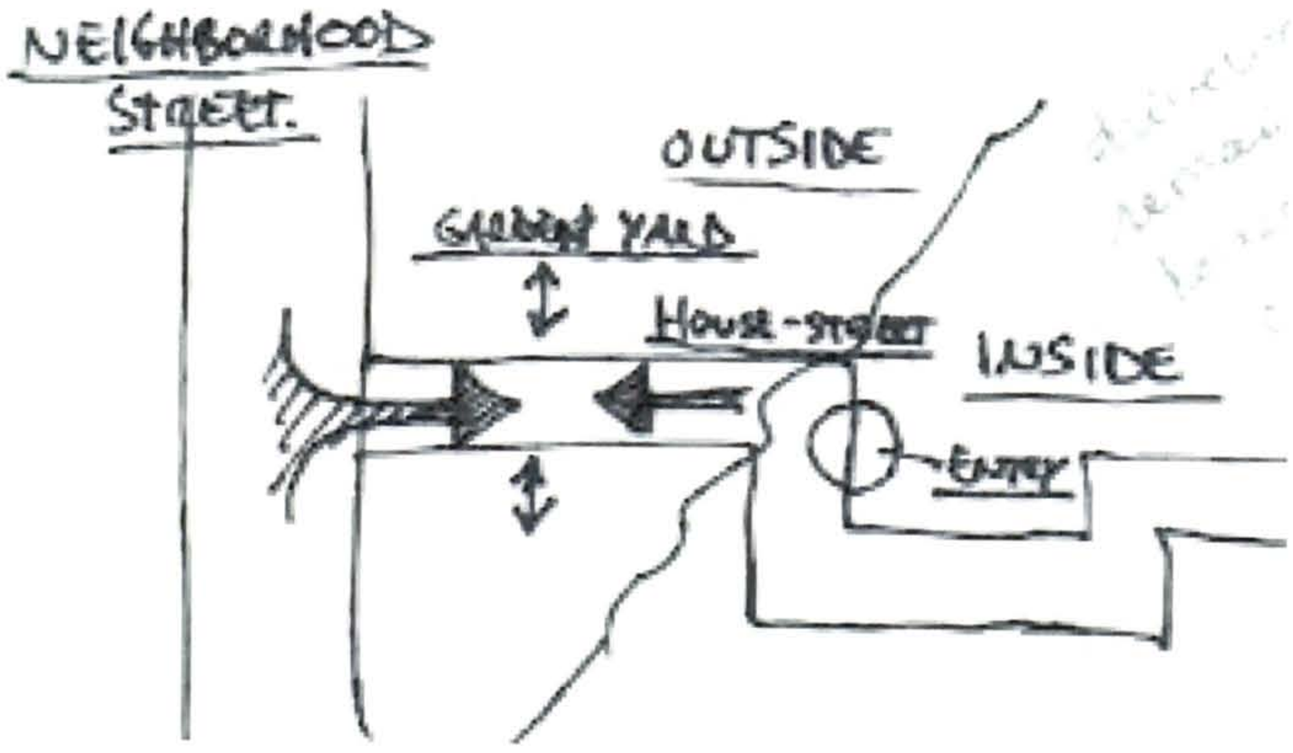


Figure 23

Area required: at least wide enough for two cars (20'). A turnaround where cars can also park would be beneficial. (18') A large cold mass of concrete, however, should be minimized. Should provide access by both people and cars simultaneously and without danger. 1200 SF.

Space #4

Circulation-mediator

Experiential considerations: circulation is an afterthought in today's houses. Often avoided by "open floor plans" it is seen as purely transitory space, the opportunity for it to act as a mediator between rooms is overlooked. The hallway both connects and separates. Its experience can be one that acts to prepare the movement from one room to another, increasing the effectiveness of the spatial experience of each room. Careful attention should be paid to proportion, lighting, and materials.

Activities: walking, seeing, hearing, feeling, accessing, way-finding

Spatial Relationships: the hallway must sometimes be a core that is accessible to several different rooms at once. Safety is of primary concern but as the core transportation network in the house, there are opportunities for it to take on additional roles such as communication and separation.

Area required: normally enough space for one person to pass through. Typical widths are 2'-8 in open plan, 3' between walls, and 3'-6" when adjacent to tables and chairs.

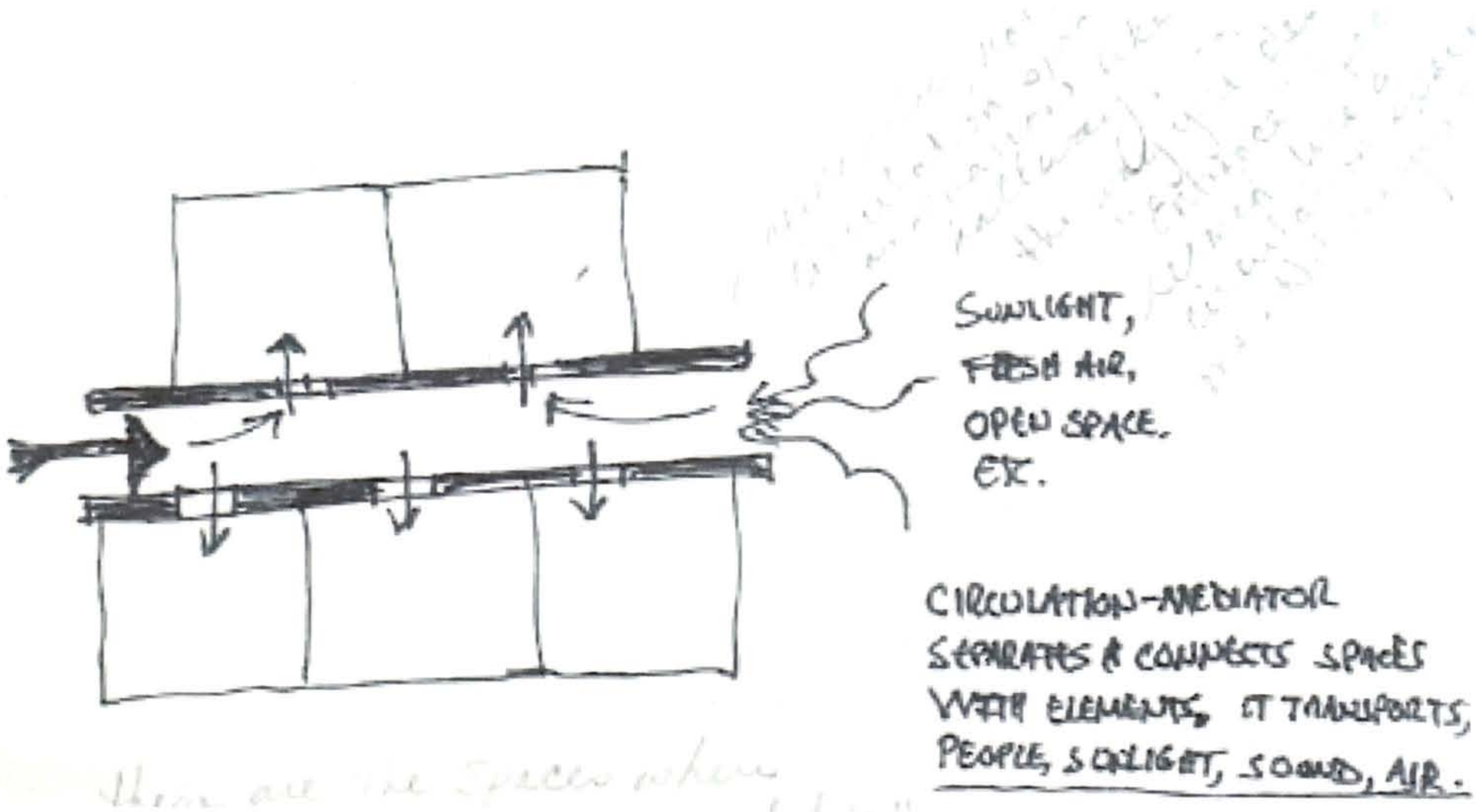


Figure 24

Space #5

Recreation spaces

Experiential considerations: The modern residence is a place for physical sensation. To live is to experience the world, the environment; to provide sustenance—both physical and mental—for the body. The single-family suburban residence is an environment to live (not simply one part of an environment). We have pizza delivered before a party. We do our homework where it's quiet. We toss the football in the backyard. We look out windows and feel breezes. The suburban single-family house is an all-inclusive environment. It is a resort from the rest of the city.

Activities: relaxing, playing, reading, listening to music, hobbies

Spatial Relationships: could be desirable to locate in proximity to other social environments like conversation space or health-activity space. Recreation space should be located near the garden-yard space. Easy transition between these spaces should be provided.

Area required: Area should include fixed spaces for relaxing, reading, or listening to music and adjustable spaces that can be used to play games or work on hobbies. Often several members of the family use the room at once. It should be large enough to allow two simultaneous activities, some fixed and some adjustable. Allow a room large enough for 2 recliners, one sofa, a corner window to read by, an open area on the floor big enough for 4 people and a folding table, and enough distance between the open area and the corner reading area. 20'x30' = 600 SF

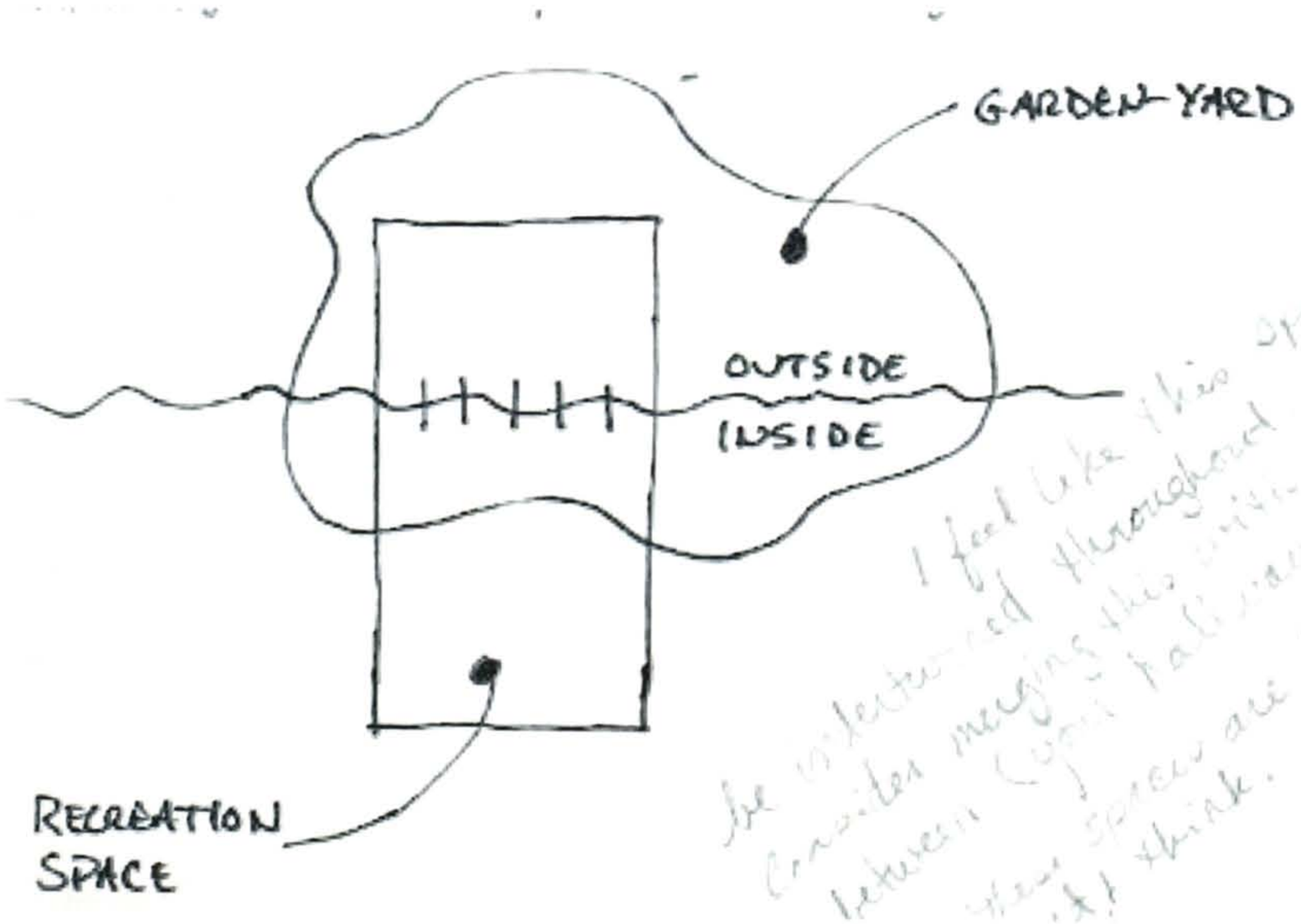


Figure 25

Space #6

Conversation spaces

Experiential considerations: the residence is a physical actualization of human relationships. The residence enables communication between friends. It enables the growth of families. It excludes undesired relationships and enables desired ones.

Activities: talking, sitting, viewing objects of conversation

Spatial Relationships: smaller scale, corners or niches, near windows to view outside, within clear view and adjacent to more activity centered spaces to allow for transition, place one near entrance, place one near family space, and place one near individual space.

Area required: several spaces enough for 2, 3, or 5 people. Average size 8x10 = 80sf x 3 = 240sf.

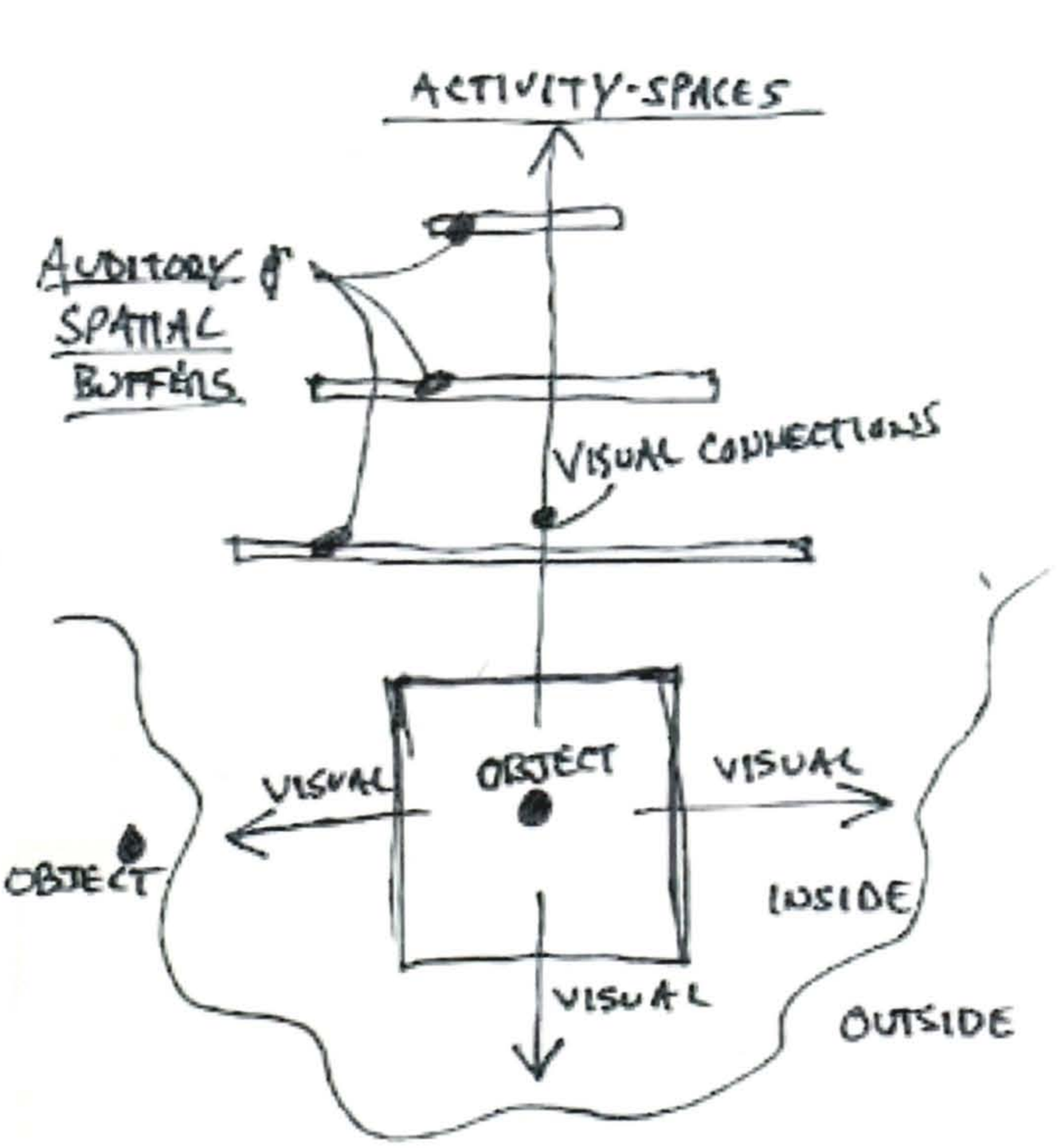


Figure 26

Space #7

Inside-outside space

Experiential considerations: Often times a space is required that is flexible enough to allow for groups and activities that require more space. Many suburban houses, today, have converted their garages into inhabitable rooms. This allows for activities such as garage bands or workshops. It also represents a more informal environment. The desire for a clean house is oftentimes contrary to the needs of the residents. In the garage one can live without taking off ones shoes, so to speak.

Activities: garage, sun porch

Spatial Relationships: inside-outside spaces act as buffers between inside and out. Also, they allow for the experience of two conditions at once (for example, can hear and smell the rain while being under the protection of the roof).

Area required: if it is a garage, it must provide for at least 2 cars, boxes of storage, and room for a lawnmower if no shed exists. If it is a sunroom, it should open to the yard. Should have enough room to feel "open and airy." Not bigger than the activity space. 2 x 400 SF = 800 SF

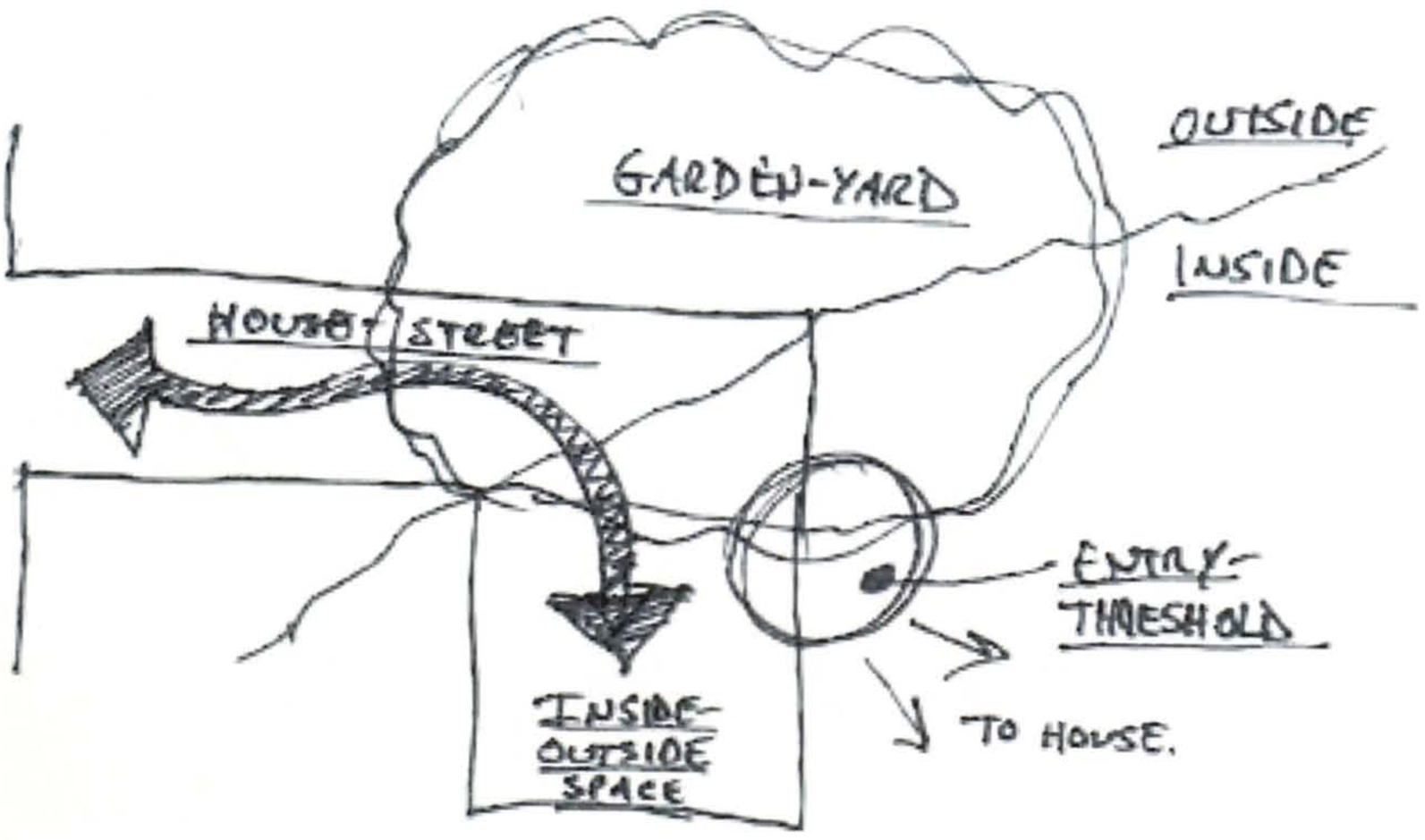


Figure 27

Space #8

Central-hearth space

Experiential considerations: To eat food is a primitive desire. One of the most basic, dependable, and ritualistic events that occur in houses is the desire to consume food. Today, in this country, most of us are not burdened by hunger. The kitchen always contains food that is cold, fresh and ready now. It is no wonder why the kitchen should be the center of the modern household. It is a subconscious decision.

Activities: clearing house for family communication, many activities that can occur in other parts of the house can occur in the kitchen.

Spatial Relationships: central, open, clean

Area required: allow for variety of activities. Message center, food pantry, circulation, table and chairs for eating, talking, playing games, - access to windows. Provide enough room for all family members to interact. 300 SF + room for counters and appliances.

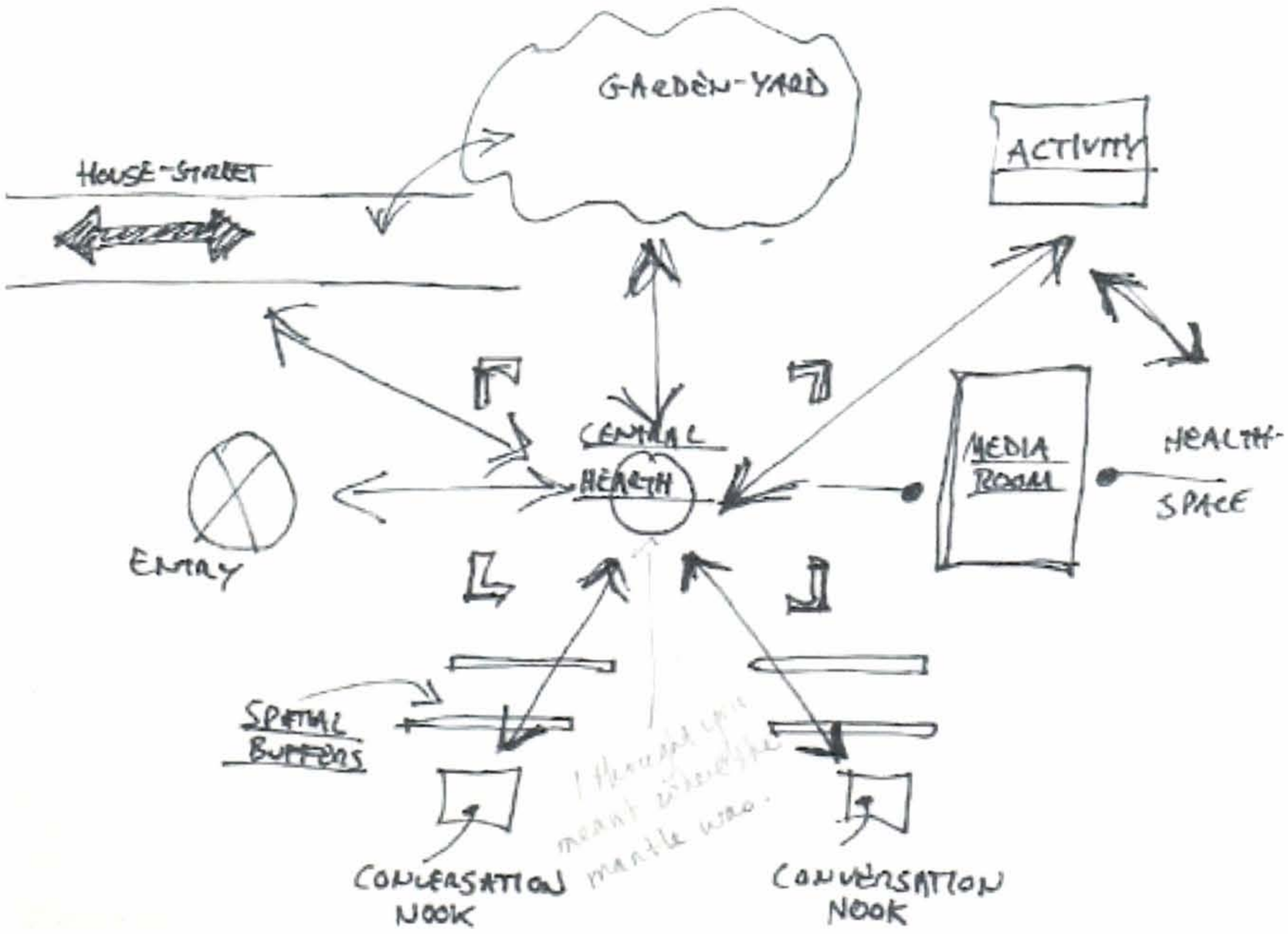


Figure 28

Space #9

Life-support spaces

Experiential considerations: often unseen and sometimes taboo. These spaces support our bodies. They give us warmth and provide space for the circuits and wires that support our connections with the outside world. They harness the power of the earth and modify it to suit our needs. Water, electricity, heat, and communications equipment.

Activities: heating, cooling, electrical/network equipment, nerve central for house, also laundry and bathrooms

Spatial Relationships: should be unseen but not unused. The main concern is utility. Ample room must be supplied for future equipment that doesn't currently exist. Easy access to equipment will help facilitate repairs.

Area required: 3 bathrooms @ 8'x14' = 336sf, 1 utility room @ 8'x10', 1 laundry room @ 8'x10' = 500sf.

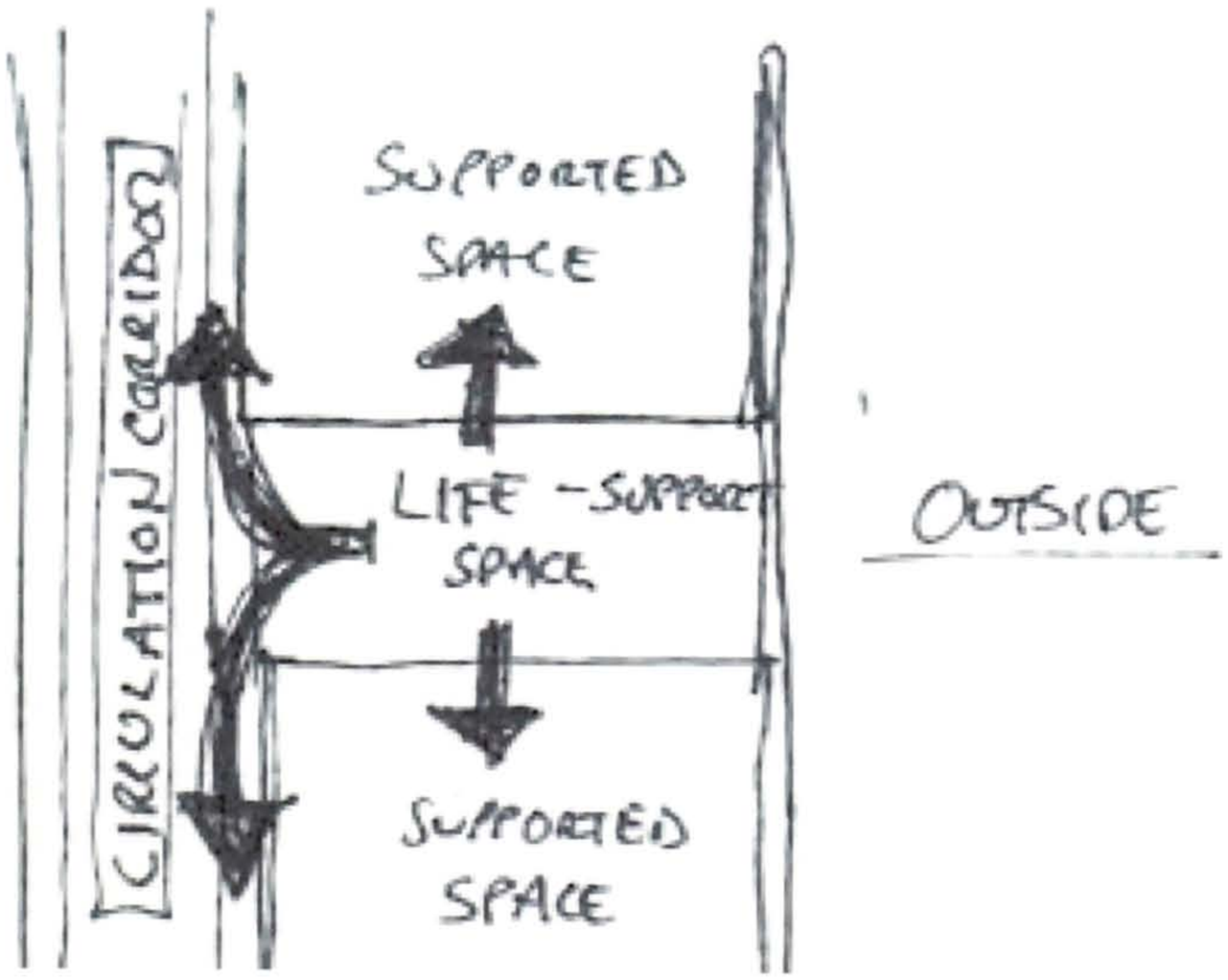


Figure 29

Space #10

Media communication space

Experiential considerations: decentralized communications are expanding at an increasing rate. Even the most rural of areas now has the capability to view satellite news 24 hours a day. Furthermore, this news is instantaneous and constantly updated. The popular view of the unsophisticated, small town/rural farmer is outdated. Mass media has had the effect of trivializing the effects of geography. We all now share a common convention about the events and nature of our world. This effectively puts the suburban single-family house in Macomb Township in a neighborhood that consists of the entire nation.

Activities: connection/identification with the world, surfing the world-wide-web, downloading mp3s and mpegs, satellite news, video conferencing

Spatial Relationships: room should be comfortable and centrally located, away from bright lights; the screen is the focus, here.

Area required: a desk for the computer, a sufficient distance to view a television screen, well designed lighting and acoustics. 15'x20' = 300 sf.

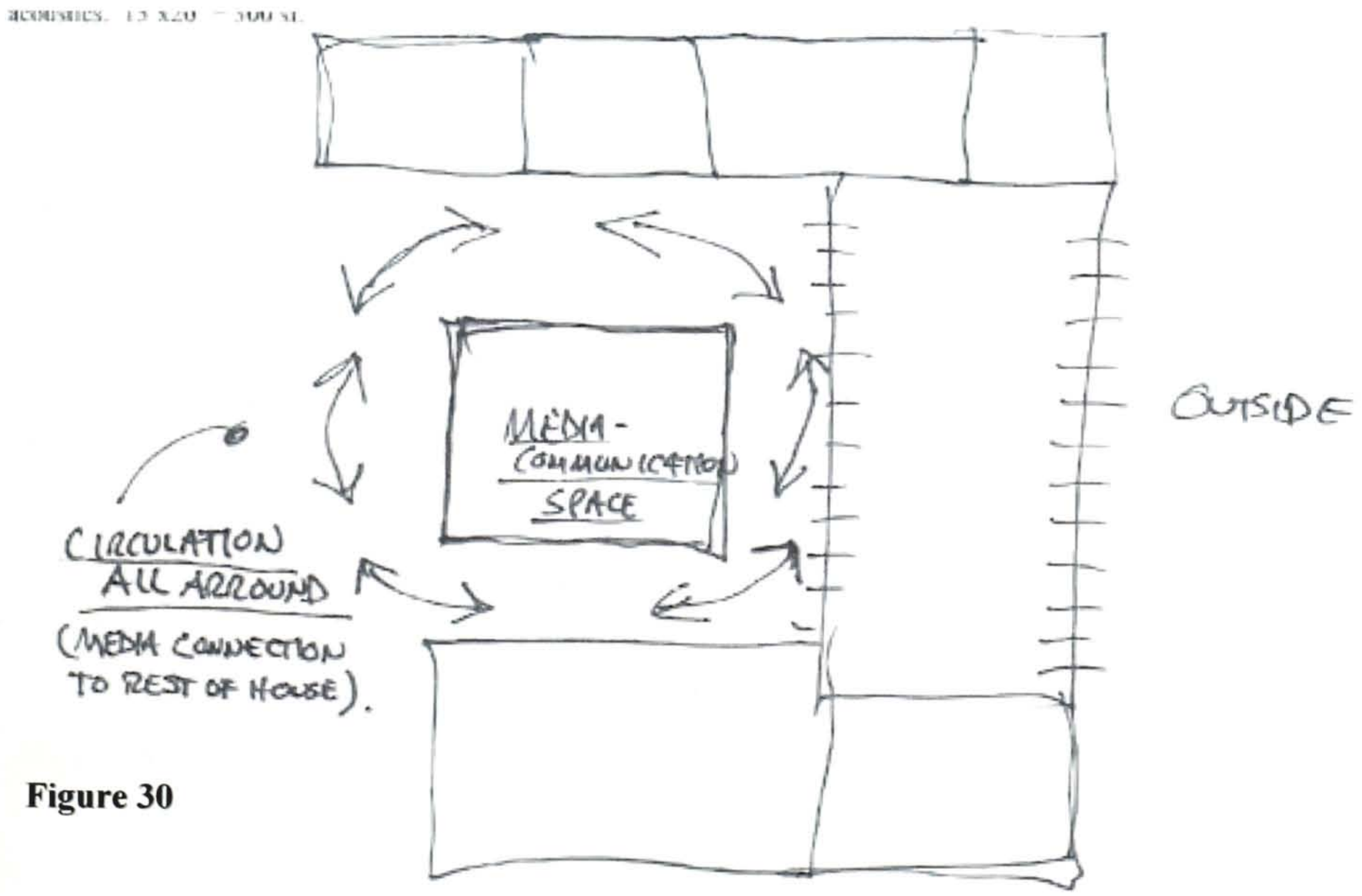


Figure 30

Space #11

Creativity-production space

Experiential considerations: The typical family that moves to Macomb Township will not be moving from a central city like Detroit. More likely, they will be moving from a smaller house in the "urban core" surrounding the central city. One of the reasons for this is the size of the new house and the amenities a new structure can provide. Of little concern to them is the location of the house relative to the city. This is clearly evident of the nature of our decentralized world.

It naturally follows that our occupations will be similarly decentralized. The economy of our country is maturing. As our standard of living has increased, our education has increased. An increase in the cost of wages has occurred relative to other nations. Moreover, our economy is transitioning from one centering on the production of goods to one centered on the production of creative, professional services, such as accounting and education. These services are information based. (See Richard Florida: Rise of the Creative Class)[xxii] As this occurs we will progress towards needing fewer and fewer centralized business districts. Much of these services can be provided from home offices. This space, then, is an entirely new kind of space for a home. It is one that should become standard in the decentralized suburban environment.

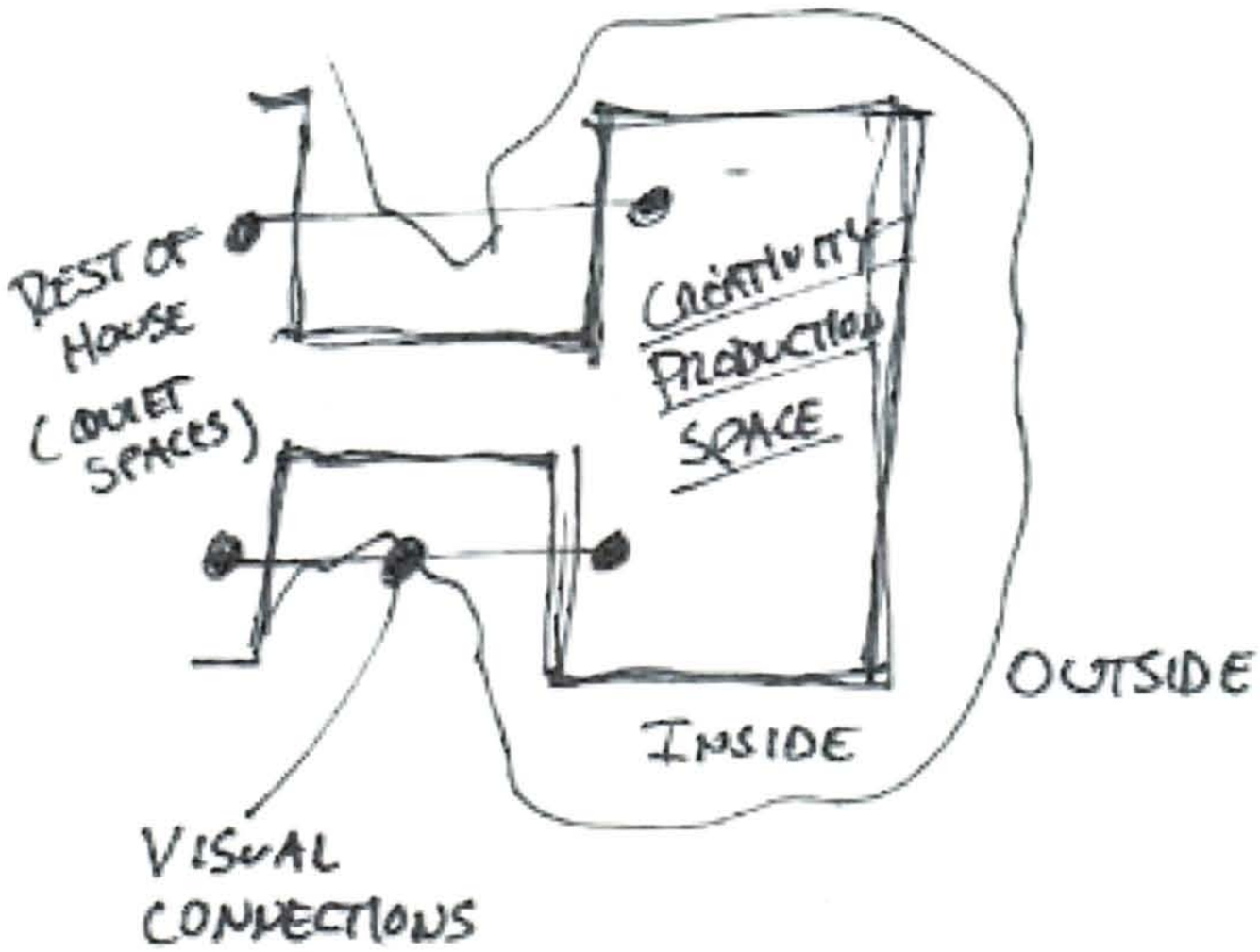


Figure 31

Activities: information gathering, studying, reading, thinking,

Spatial Relationships: quiet, remote, bright,

Area required: creativity space, space to relax, work space w/ computer,

Space #12

Rest spaces

Experiential considerations: Strong connection to human circadian rhythms. Connection to primitive need for rest, sleep, quiet, darkness. Should be highly customizable, however, to account for individual differences.

Activities: sleep, activities depending on individual preference

Spatial Relationships: separated from social settings, quiet, but strong connection with nature-yard, sunlight, fresh air, counteracts hyperactivity of media communications space.

Area required: room for bed, closets, table & chair, various sizes to meet age specific requirements of each resident. 1st bedroom 10'x10' = 100 sf. 2nd bedroom 12'x14' = 168 sf. 3rd bedroom 15'x18' = 270 sf. Master Bedroom 15'x20' = 300 sf. = bedrooms = 838 sf.

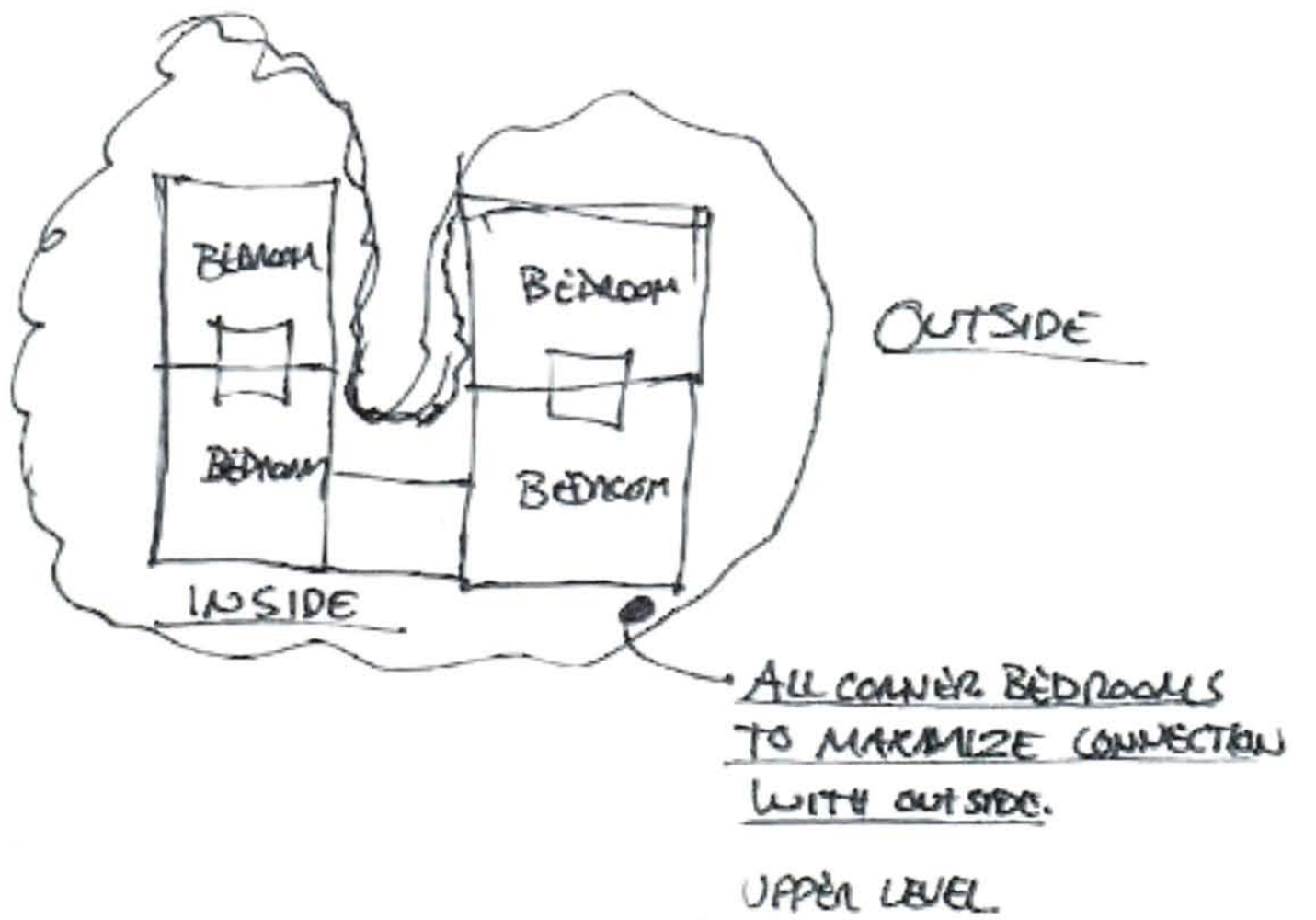


Figure 32

Space #13

Health-activity space

Experiential considerations: desire to be outside, connection with nature, but protected by house. Should provide enough space for a variety of fitness needs

Activities: exercise, treadmill, bicycle, free weights

Spatial Relationships: near activity focused rooms & near garden-yard. Incorporate adjustable windows to open space to outside.

Area required: 15'x20' = 300 sf.

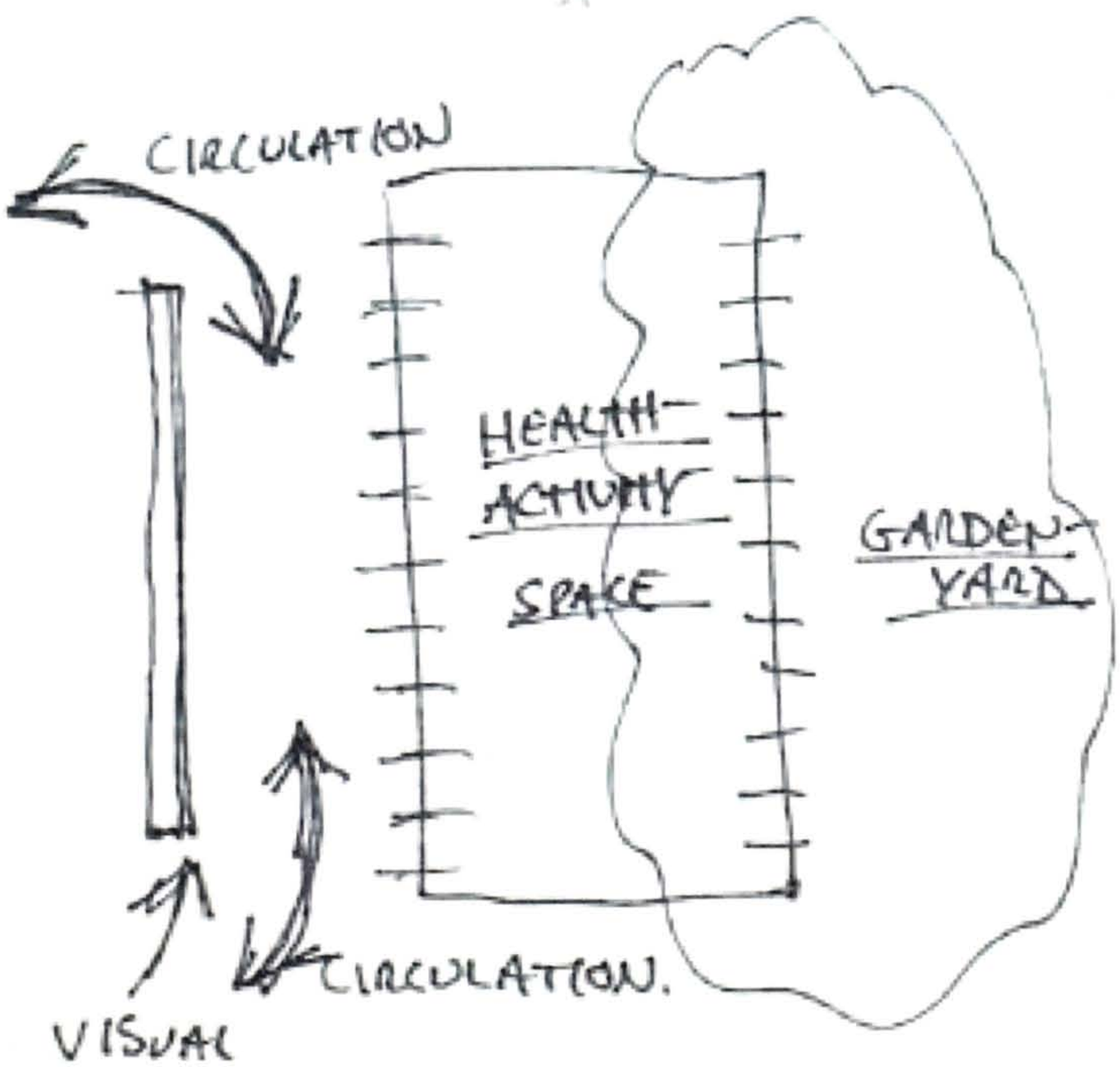


Figure 33

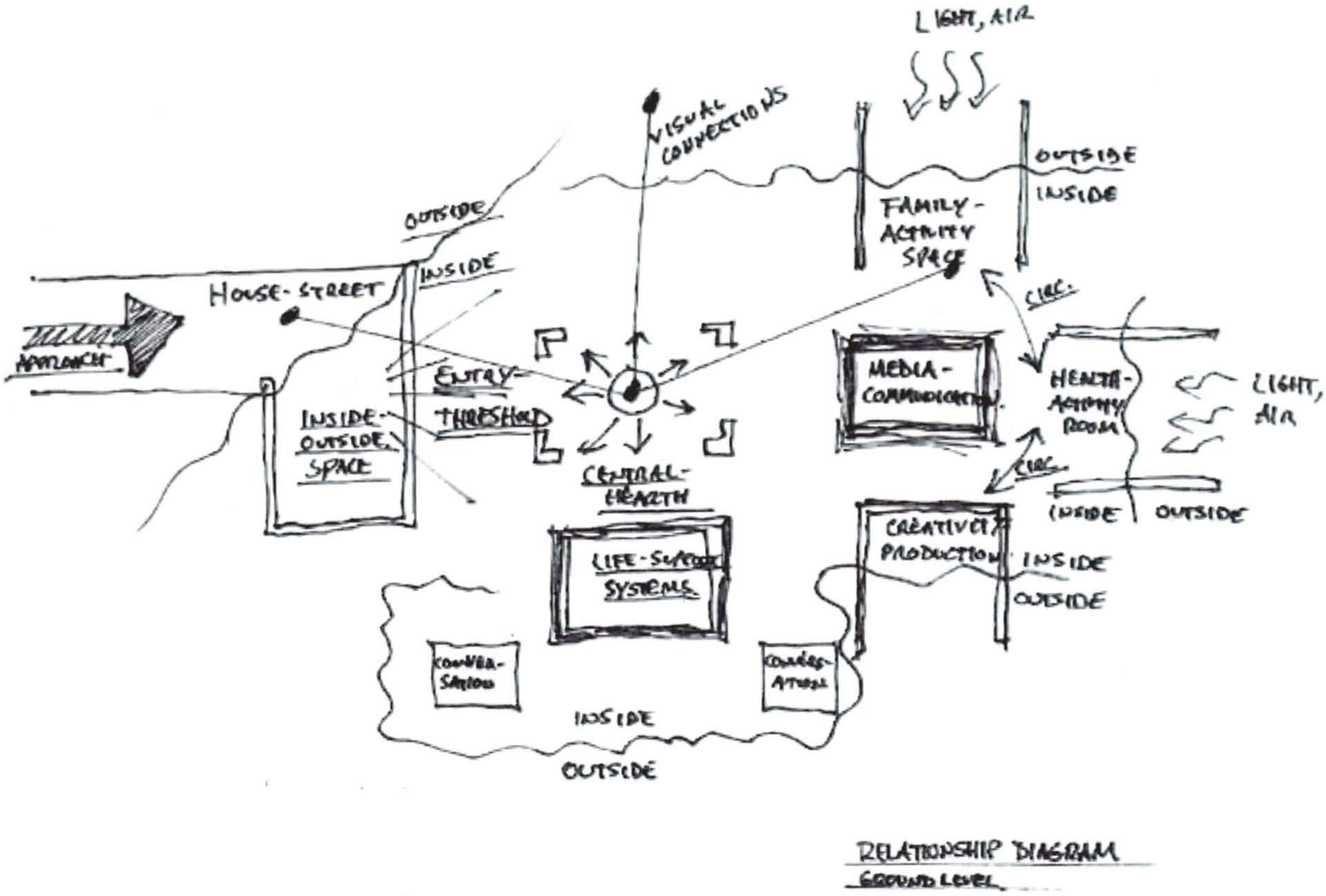


Figure 34 - Overall Spatial Relationships Diagram

Figure 35 – Early neighborhood conceptual site plan – orange represents a social/street territory, while green represents a garden/residential territory. Both are given equal importance. The houses frame a variety of spaces along the edge between each condition.

SCHEMATIC DESIGN INTRODUCTION:

From the beginning of this project my thinking has been that more attention should be paid to designing in environments other than dense urban types of "city." My view of a city is that it is a system, naturally derived, that attempts to provide for the needs of people. Thus, a city need not be dense and urban. There is nothing inherently better about one form of city over another. This is because, today, the forces that once formed the city (industrialization and commerce) have transformed themselves into different types of forces (commerce and industrialization are no longer dependent on a central location to exist).

Much of this has to do with the effects of the automobile, mass media, and the Internet. Today these new forces are driving the development of a new kind of city, the metropolis. The metropolis, which doesn't refer to any size of city,

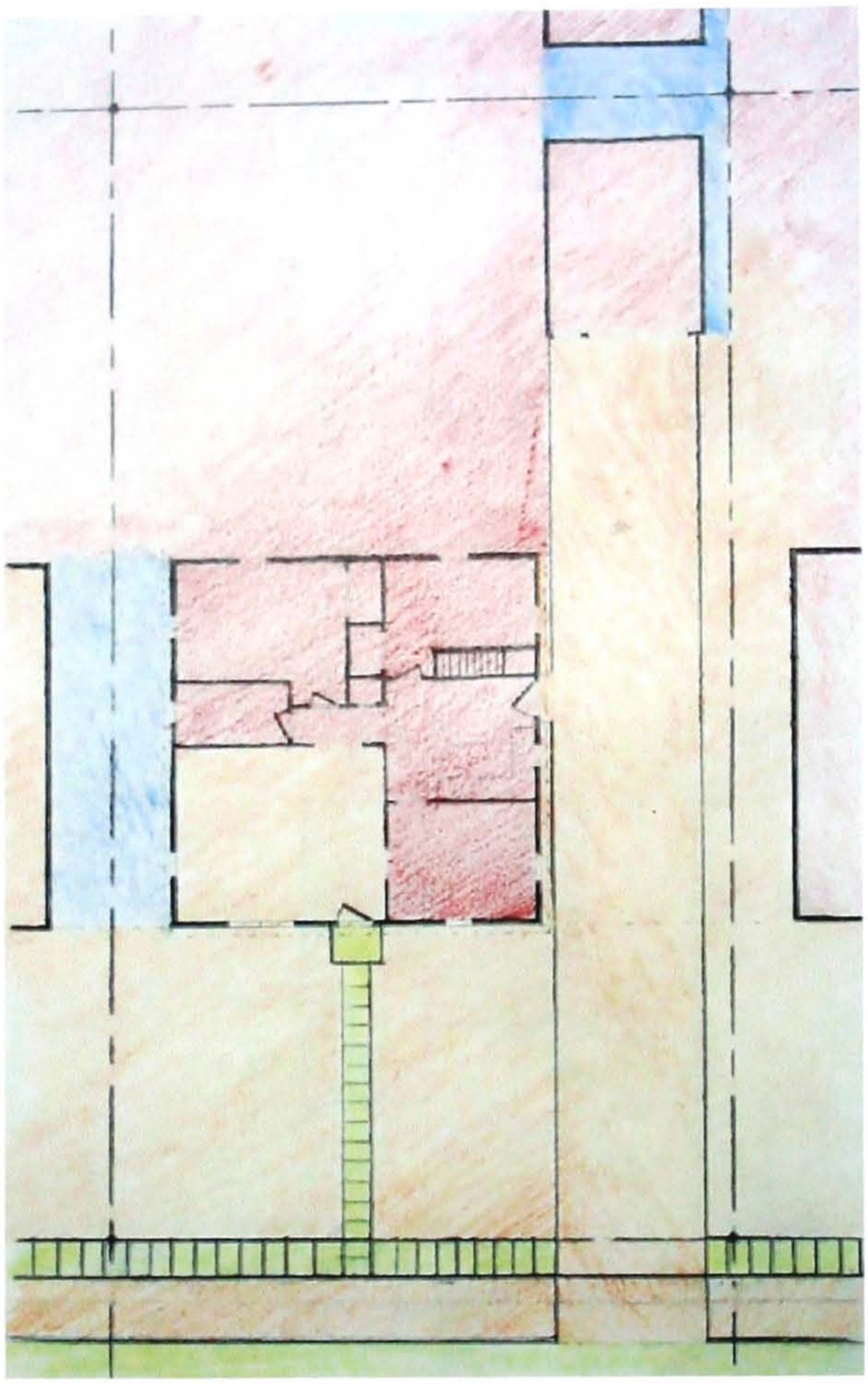


Figure 36 - A typical Prewar Bungalow in Ferndale. Public Transportation: Street Car. Yellow represents accepted and approachable public territory. Orange represents the territory that out of the tradition of the bungalow resort style and the garden city suburban movement is intended to provide a "greenspace" for the single-family house where man and nature can live harmoniously. It is visually occupied by the neighborhood, but not completely appropriated into the domain of the single-family bungalow. Red represents the family spaces that are not approachable by the general neighborhood unless upon invitation. Blue represents an awkward space that is unseen and unused by either the household or the public, visually or physically.

refers rather to a city in which personal choices reflect the density, location, and configuration of the built environment. The role of the central city has changed. It is no longer a center of industrialization. Likewise, the role of the suburb has changed it is now an environment that provides As the traditionally largest component part of both the old city and the new city in this country, the single-family residential environment, specifically, is the environment where attention should be paid.

To design within this new environment a distinction must be made between the old and the new. The old, single-family, environment can be observed, at least here in the Detroit area, in the central city and the urban core of "suburbs" surrounding it. These residential environments were created when factories needed people to live close by and the primary mode of transportation was with the interurban rail lines. Their human scale is a factor that has developed from these original forces. In the major cities on the East Coast there is often an added urban core of townhouses and multifamily dwellings, but make no mistake that the urban and suburban landscape in this country has been primarily based on the single-family dwelling. Today, our economy is shifting from one that is production based and people centered to one that is service based and technology centered. Our service-based economy (both professional and personal services) no longer relies on a factory where great numbers of people must come to work.

visually occupied by the neighborhood, but not completely appropriated into the domain of the single-family bungalow. Red represents the family spaces that are not approachable by the general neighborhood unless upon invitation. Blue is an awkward space that is unseen and unused by either the household or the public, visually or physically.

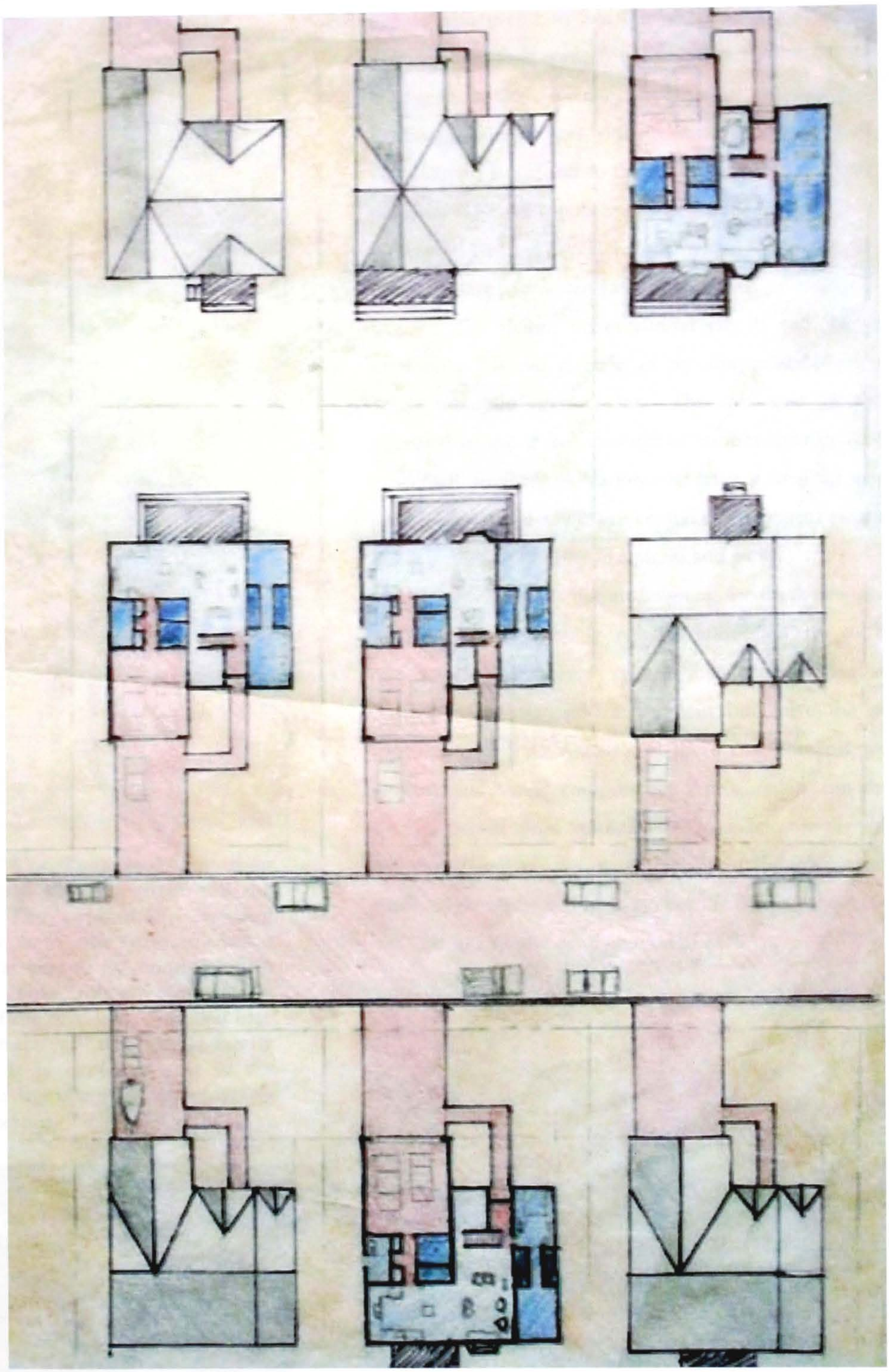


Figure 37 – A typical contemporary suburb. With a two car garage, 4 bedrooms, and 2-1/2 baths.

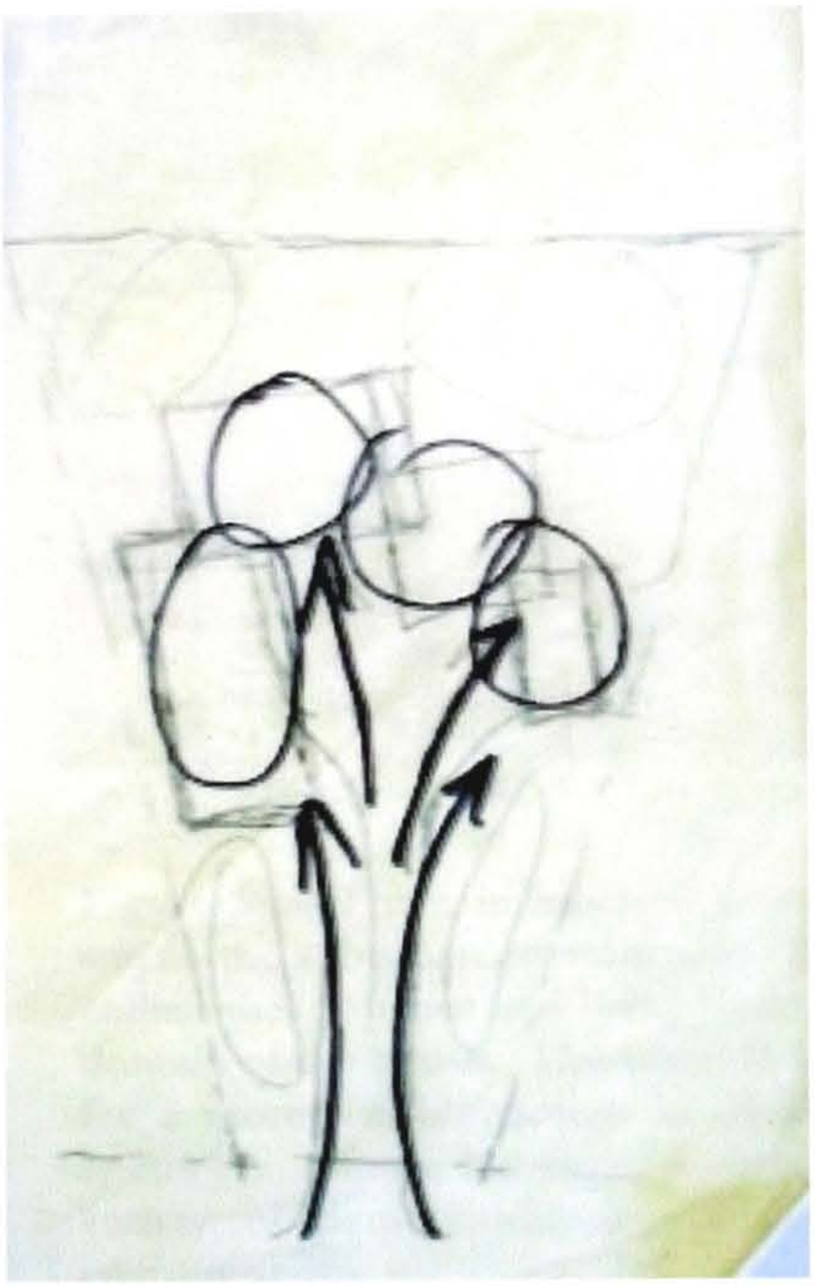
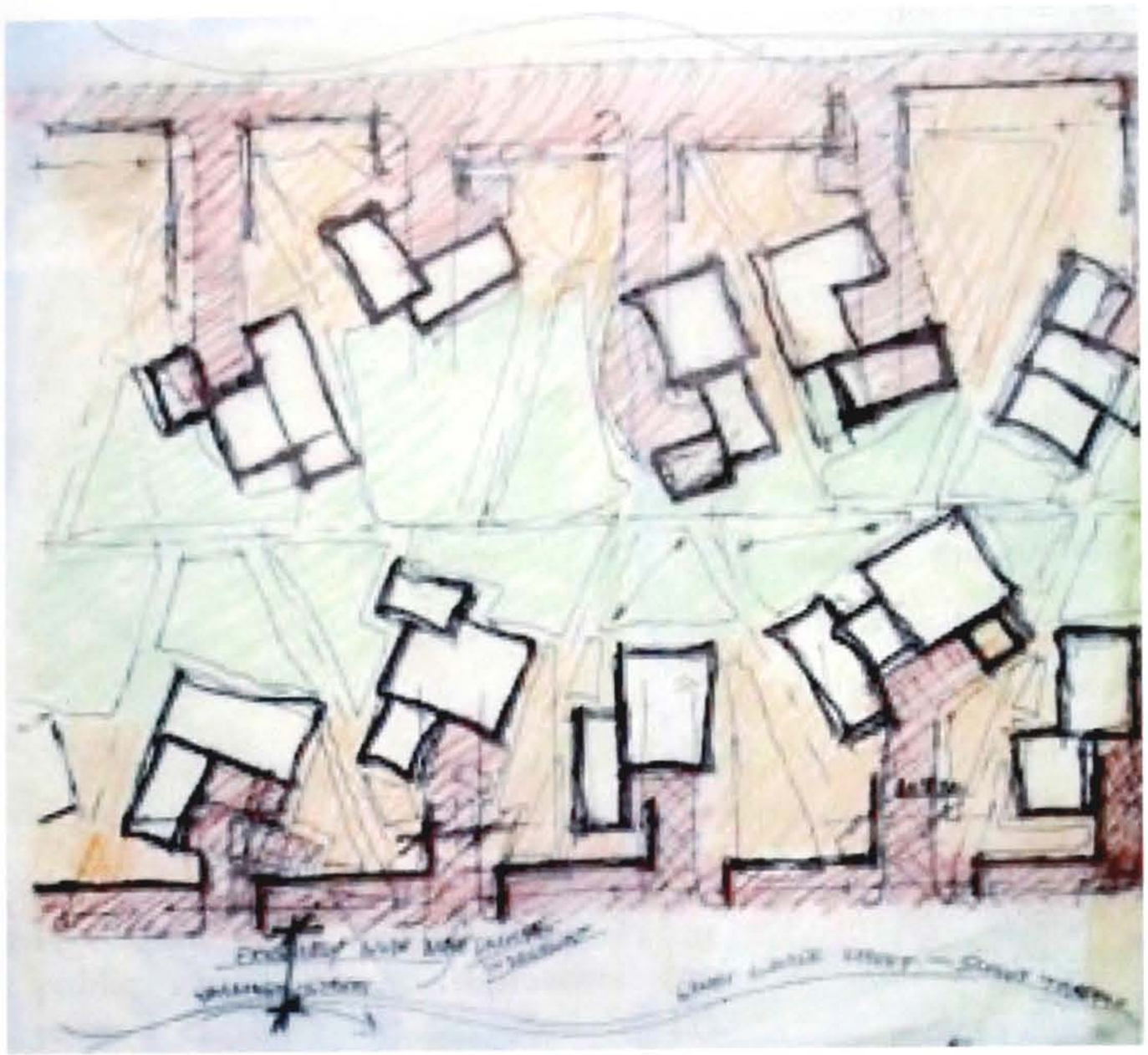


Figure 38 - Suggested suburban relationship with the street and the car. The suburban housing elements stem out from a central artery that acts as the connection to the city. Thus, this street-space, by means of the driveway, is pulled into the domain of the single-family house. It is occupied. It is the home for the car and subsequently to "civilization."

To design in the new city one must understand the needs and desires of the people who prefer to live there. These are 1) to live on property clearly defined to be their own, 2) to live where the physical environment consists of arrangements that facilitate modern transportation needs, 3) to have a more harmonious connection with the landscape, if not nature directly, 4) to have the ability to live closer to their place of work, or even 5) to work at home if possible. The metropolitan design relies on transportation. Thus the role of the central city has changed from "a spot where people must live to work" to "a spot where people can gather."

The dense, urban central city is still the identity center of the metropolis. It can provide an equally preferable environment to the non-dense suburban environment. This new role for the central city can be observed by the recent creation of multi-million dollar stadiums for baseball, basketball, football, or hockey that have sprung up in nearly EVERY major city. Also nearly every major central city has spent great amounts of money on public gathering facilities like plazas and parks.

My first attempt at designing for these new needs led me to look at an existing single-family neighborhood and try to transfer these spatial dimensions into a new system that would retain the scale and spatial dimensions of the old environment but solve the problems of the new environment. The synthesis of these environments would form the design solution and would compose the configuration, not the size or location, of new residential single-family lots. This is because the size of single-family lots will vary based on the demographics of the inhabitants. Some lots will be small, while others will be large, but the design requirements of the metropolis will lead to a similar configuration of both.



Orange – Collected space of the front yard.

Green – Collected space of the back yard.

Red – The street-space of the

Figure 39 - There is inherent wasted (un-appropriated) space within the suburban environment. The image above attempts to collect these spaces and bring them into the visual and physical domain of the house. The variable spatial dimensions also allow for a more flexible design in keeping with the contemporary needs for a more heterogeneous environments that allow for a variety of demographic populations to occupy a suburban environment.

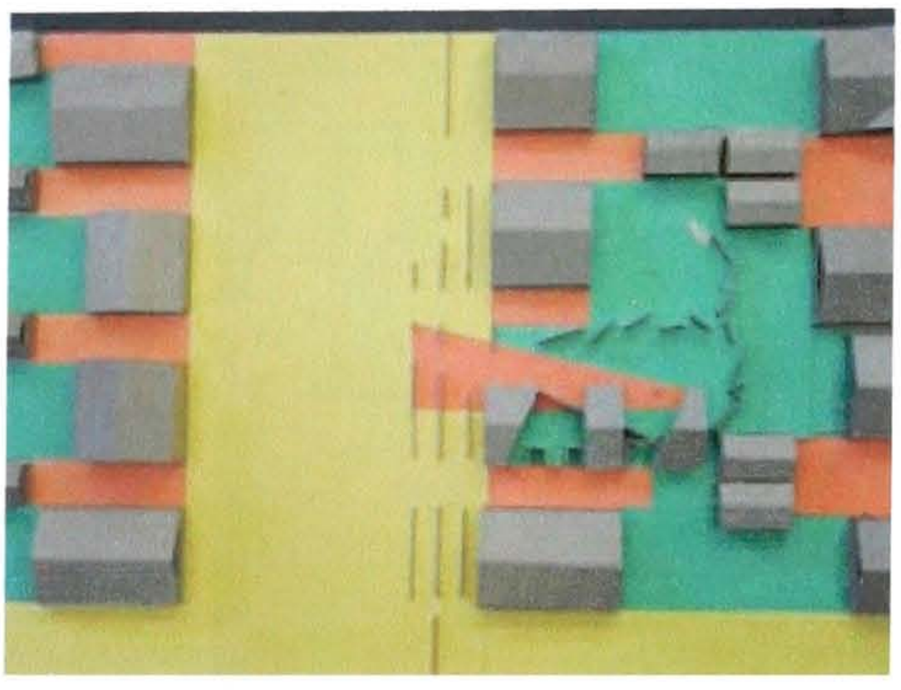


Figure 40 - The Ferndale neighborhood is diagrammed. Yellow represents the public street, orange represents that portion of the street occupied by the house, and green represents the rural-space.

Figure 40: This is a schematic example in which a single-family unit can better occupy a suburban lot. The house, here, keeps the existing setbacks. To better appropriate the edge of its site, the house provides a wall that alternates on the lot line so that windows may be placed within the resulting recesses. This allows for the unit to remain private from its direct neighbor while taking better advantage of this wall as a means to gain access to fresh air, sunlight, and maybe garden plantings at the base. The front yard, previously unoccupied and under-utilized is now more approachable by the occupants of the single-family house as well as local neighbors. This community street-space is not intended to be a "community gathering space." It is only meant for the local occurrence of neighbors being able to now chat with one another along the edge-wall. Theses walls provide an edge, which the urban designer, Kevin Lynch believes is necessary for people to appropriate a public space.[xxiii]

Also, the street-space, in orange approaches the center of the lot whereupon it is occupied by the house as an outdoor patio, thus allowing for a more public interaction between the space of the house and the space of the public. But walls are placed to carefully screen the household's yard from the street-space.

Figure 41 – Low walls along the street can act to create an edge making the street more approachable.

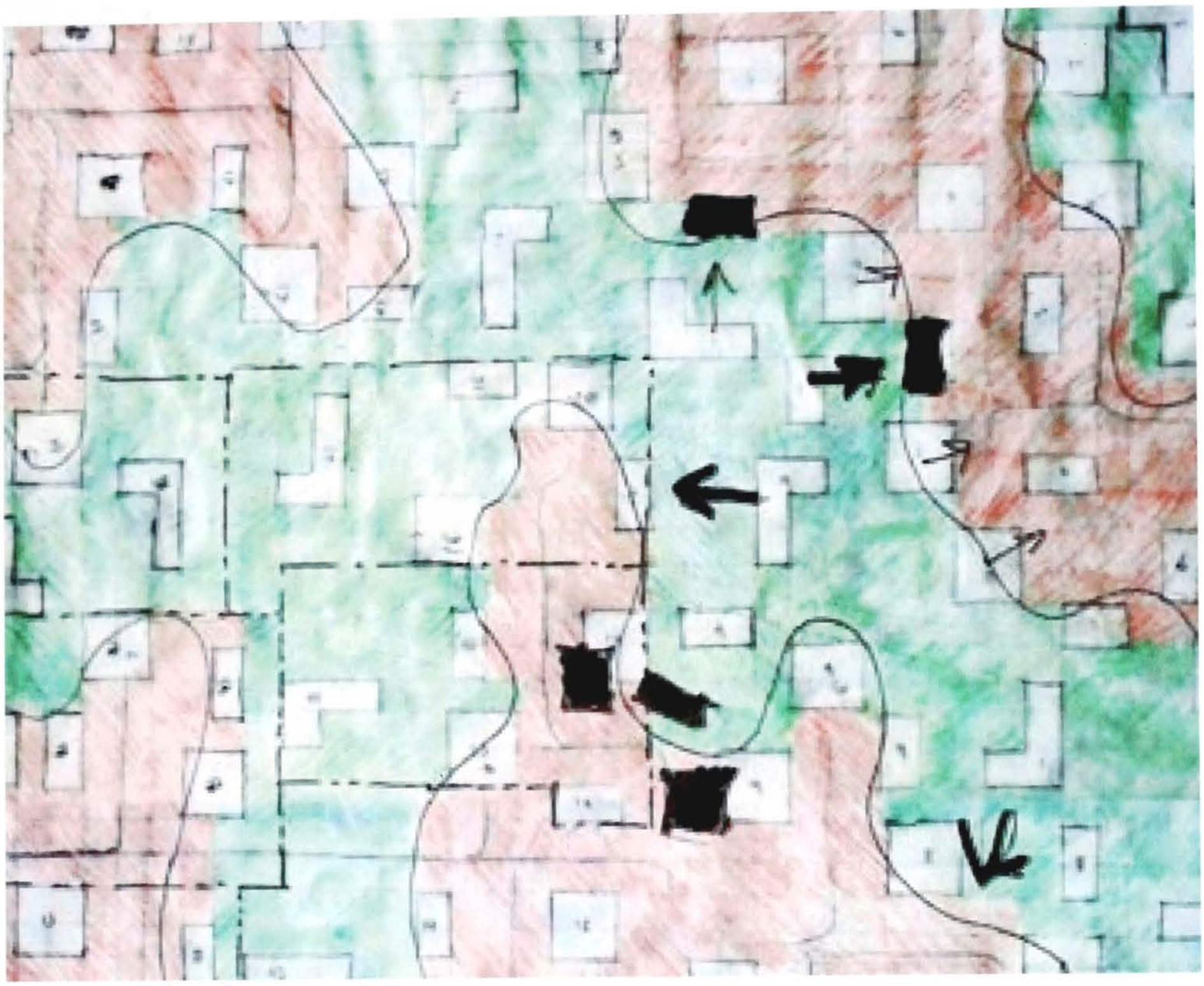
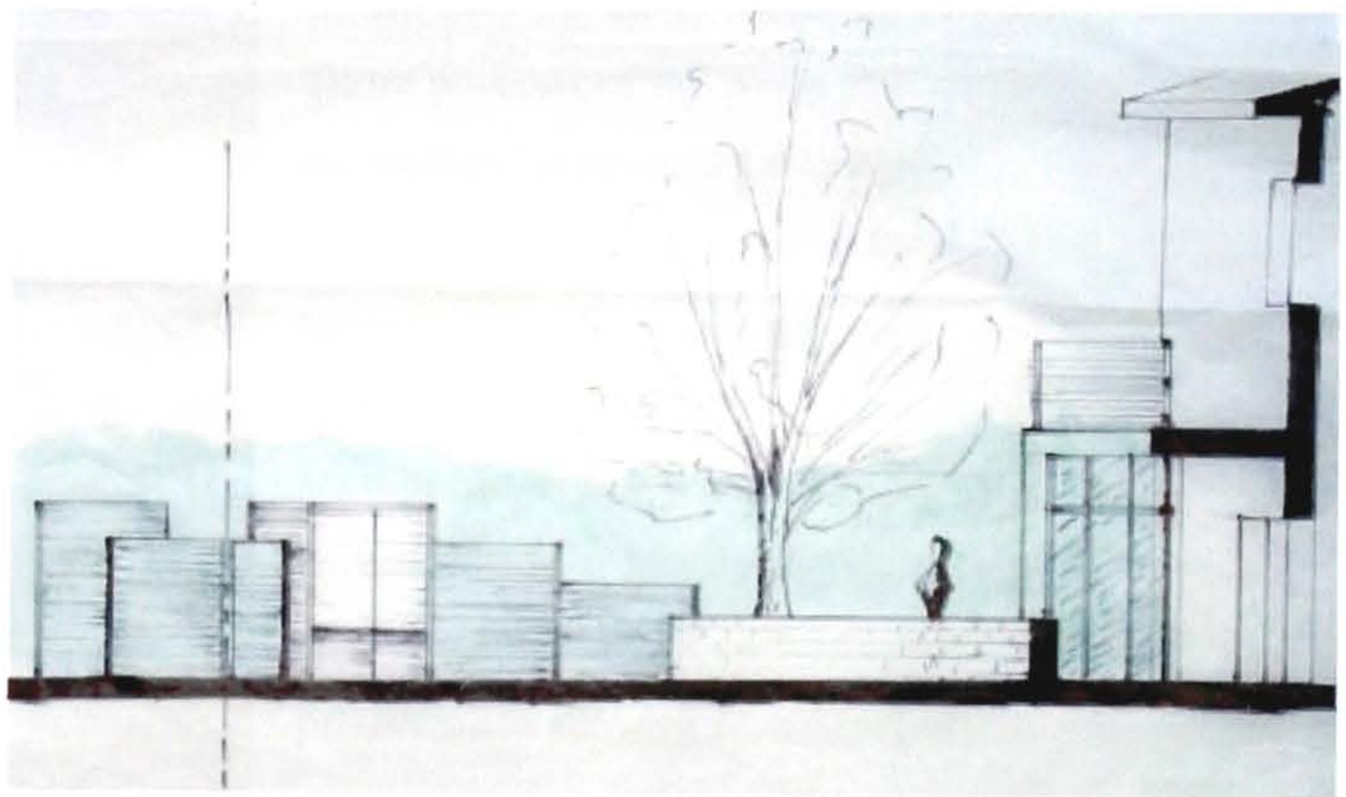


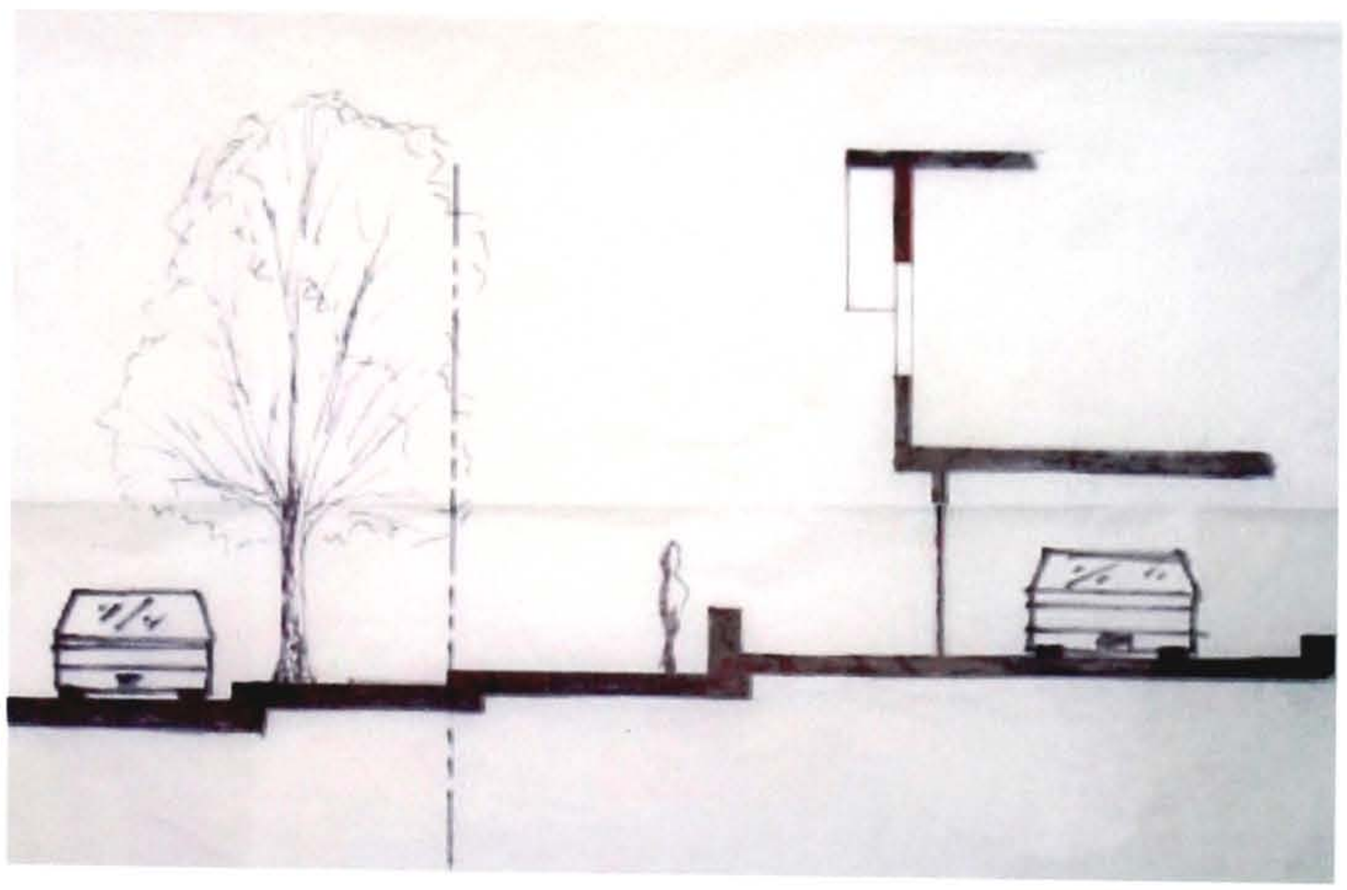
Figure 42 – A dispersal of housing elements occupy and frame the landscape at the edge between the social territory (orange) and the residential territory (green).

There is a unique way in which the rural environment acts to provide privacy and seclusion for its occupants. It is by distance. However, this distance cannot occur in an urban or suburban environment. But this does not mean that other aspects of the rural cannot be better transferred to the built environment. For example, the rural environment is characterized by the edges between controlled territory and uncontrolled territory. Homesteads are placed within the fields, lawns clearly marking the end of the homestead and the beginning of the field. There is a certain natural quality to the rural environment that makes it characterizable as "soft or quiet" rather than "hard or loud." One could describe the environment as a dialectic between man and machine, between controlled and uncontrolled (not necessarily between nature and order, since nature, too, can be either controlled or uncontrolled—and not to mention the inherent order in all "natural" things). But the lack of control—a lack of human intervention, a lack of human interchange—in the natural environment creates a quiet space. The existence of this certain solitude in the fields of the Midwest led the Chicago architect Louis Sullivan to insist that, "the great minds may go to the great cities but they are not

(generally speaking) born and bred in the great cities. In the formation of a great mind, a simple mind, a master mind, solitude is prerequisite; for such a mind is nurtured in contemplation, and strengthened in it. In the quiet, in the silence, alone with itself and Nature…"[xxiv] Frank Lloyd Wright once went so far as to say that the *Machine Age* (as opposed to an agrarian age) in which we now live could provide us with an opportunity to live a more *natural and free* life. He said, "…we may yet see the Machine Age as the age of a true democracy, wherein human life is based squarely on and in the beauty and fruitfulness of the ground: life lived in the full enjoyment of the earthline of human life—the line of freedom for man, whereby man's horizon may be immeasurably extended by the machine…"[xxv] However, there is also a traditional German saying that "the *Town* air will set you free." Within the context of contemporary America, it is obvious that there is a need for both the more interactive, exciting machine age of the city and the more

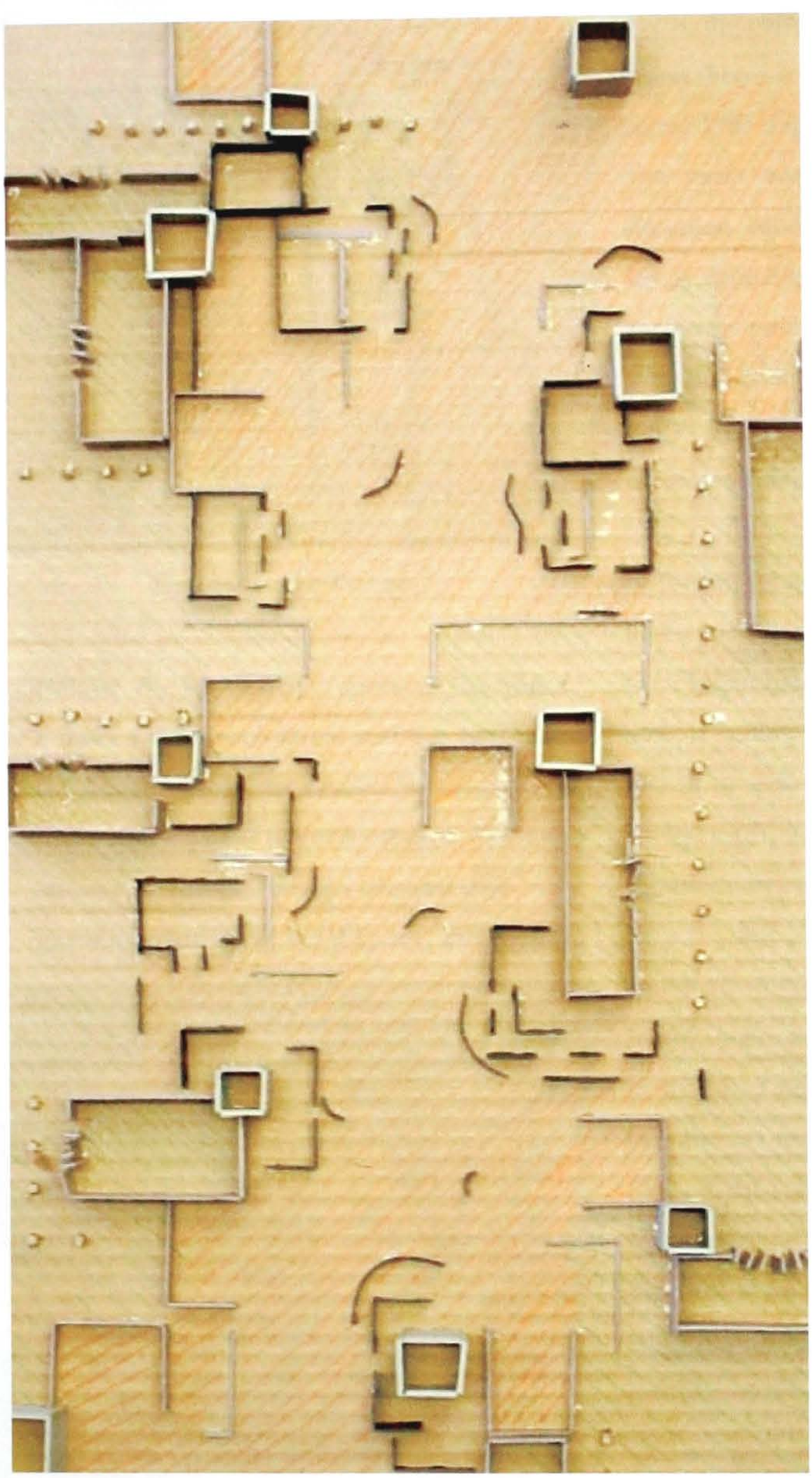


Above right: architectural elements placed within the greenspace to better appropriate the natural landscape into the domain of the house.



Right: A more fluid interaction between the streetspace and the domain of the house. The house extends into the streetspace. Edge walls allow for a controlled interaction between individuals by providing a comfortable edge upon which to meet or sit.

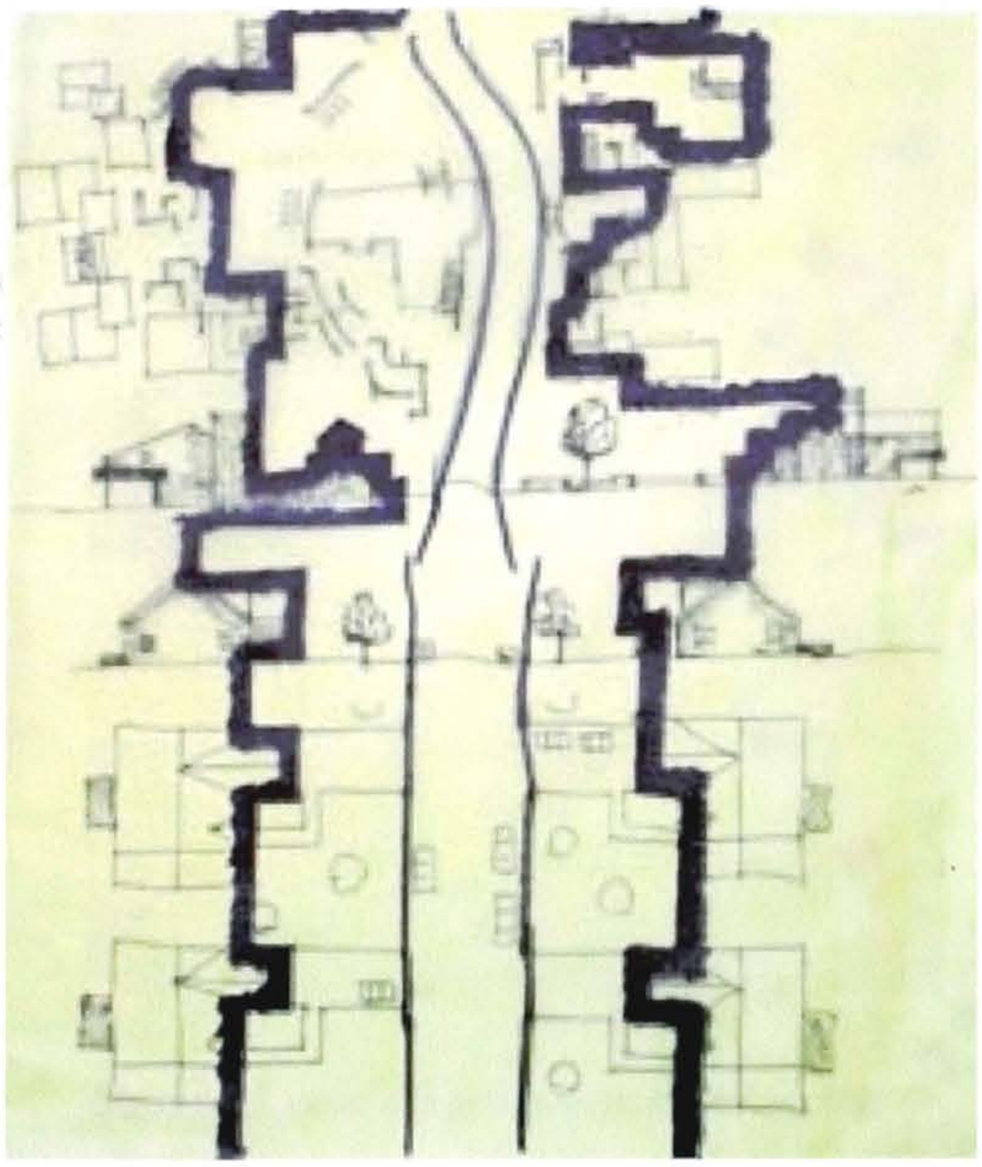
contemplative or quiet agrarian age of the rural environment. This is not unlike an environment Wright conceptualized decades ago with his "Broadacre City" concept. Below Left: a clear depiction of both the street-space and the rural-space. A step-back pattern was decided to allow for a flexibility of the locations of individual elements. But upon closer inspection, it seems that the adherence even to this system of stepping back defeats the original intention of having more flexible environment.



Three elements to the single-family house are beginning to emerge, each with its own characteristic that responds to its closest, most appropriate landscape. The central core element acts as a transition point within the house between those elements that belong to the street-space and those that belong to the rural-space. Those portions of the house that extend into the street-space are entitled "social groupings." Those portions of the house that extend into the rural-space are entitled "residential groupings."

My second attempt at designing for these needs addresses the same design requirements but assumes no specific lot sizes or preexisting pattern at all. This solution attempts to create a new way in which the houses of the decentralized low-density single-family residential environment relate to each other, retaining individuality and privacy while allowing for community identity.

Proposed Edges



Typical Edge Today

Below: the black lines represent the edges between the street-space and the space for the house. From the careful location of these houses next to each other, a garden-space is created. Finally, beyond this garden-space is the rural space, into which the residential groupings have visual access.

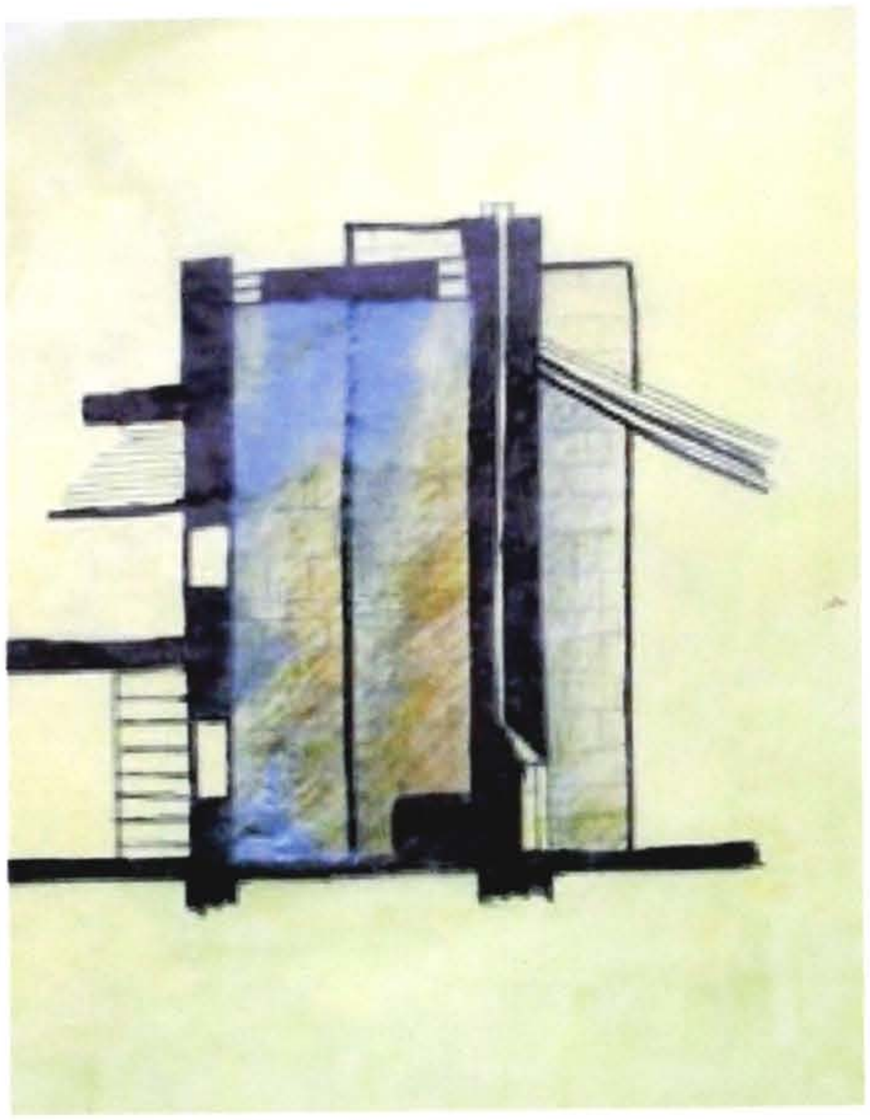
The pattern of single-family structure has been with us since the beginning. It started with colonial settlements where lots of land and little need for defensive walls encouraged the single-family structure. It was strengthened by the philosophy of Jeffersonian agrarianism (which promoted the morality of self-sufficiency and independence on the landscape). It later followed the industrial revolution into the central city (when the pattern resulted in a dense network of small houses with small yards and rear alleys). Then, after the 1920s, the pattern moved with the people back out of the central cities, first on trains then on cars, as an affluent society and the development of freeways allowed the detached house to grow larger and occupy more land.

The most common aspect of the modern residential metropolis is the suburban subdivision. About 70% of the residential metropolis is single-family detached residential. One could say this is because of traditional FHA encouragement by means of mortgage deductibility. Possible motives for this were that 1) its good for economy and 2) its good for the government property taxes. But it is also a good investment for the people as well. High ownership translates into people having a stake in the development of the country.

This choice to move away from the central city is, perhaps, a result of historical connotations placed on the idea of a self-sufficient house in the landscape but it is essentially representative of society's preference for a quasi-rural landscape. This type of landscape fulfills our innate human desire to live within "nature" as well as within a clan or community. But at the same time few of us seek to live entirely away from the community and convenience that urban environments provide. The suburban nature of our metropolis is representative of this desire to have the best of both worlds.

But despite the high demand for suburban living, there are inherent problems with this pattern of residential subdivision. First of all, the landscape is only superficially used by its occupants. The "natural" space of the front yard is used only visually. This natural space is used only as a buffer between one and his neighbors rather than a truly human connection to the landscape. Second, the subdivision lacks a sense of community in itself. This is not to say that community doesn't exist in the suburbs (it does) and this is not to say that the yard is not used in the suburbs (it is). I only suggest that the suburban environment can better appropriate its landscape to better provide for what it was intended to provide.

So my design strategy is essentially about…



Above: A core diagram representing the protection function of a core space. This is a good location for a central fireplace or stove.

A new framework for the neighborhood and for the single-family house.

1) This new framework attempts to reinforce the garden aspects of the rural environment without losing the community aspects of the urban environment.

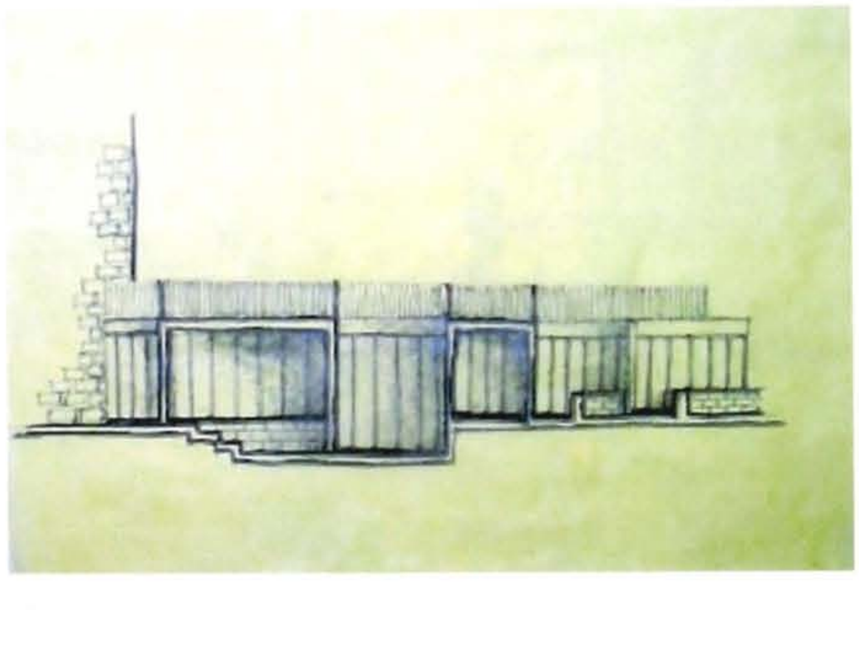
Then, 2) it seeks to place the single-family attached or detached house within this suburban landscape within the contexts of our modern culture (explained earlier).

This is done by re-arranging the components of the house to better reflect our modern cultural desires. These components are then placed within the landscape in ways that better appropriate the landscape.

There are three parts to this concept.

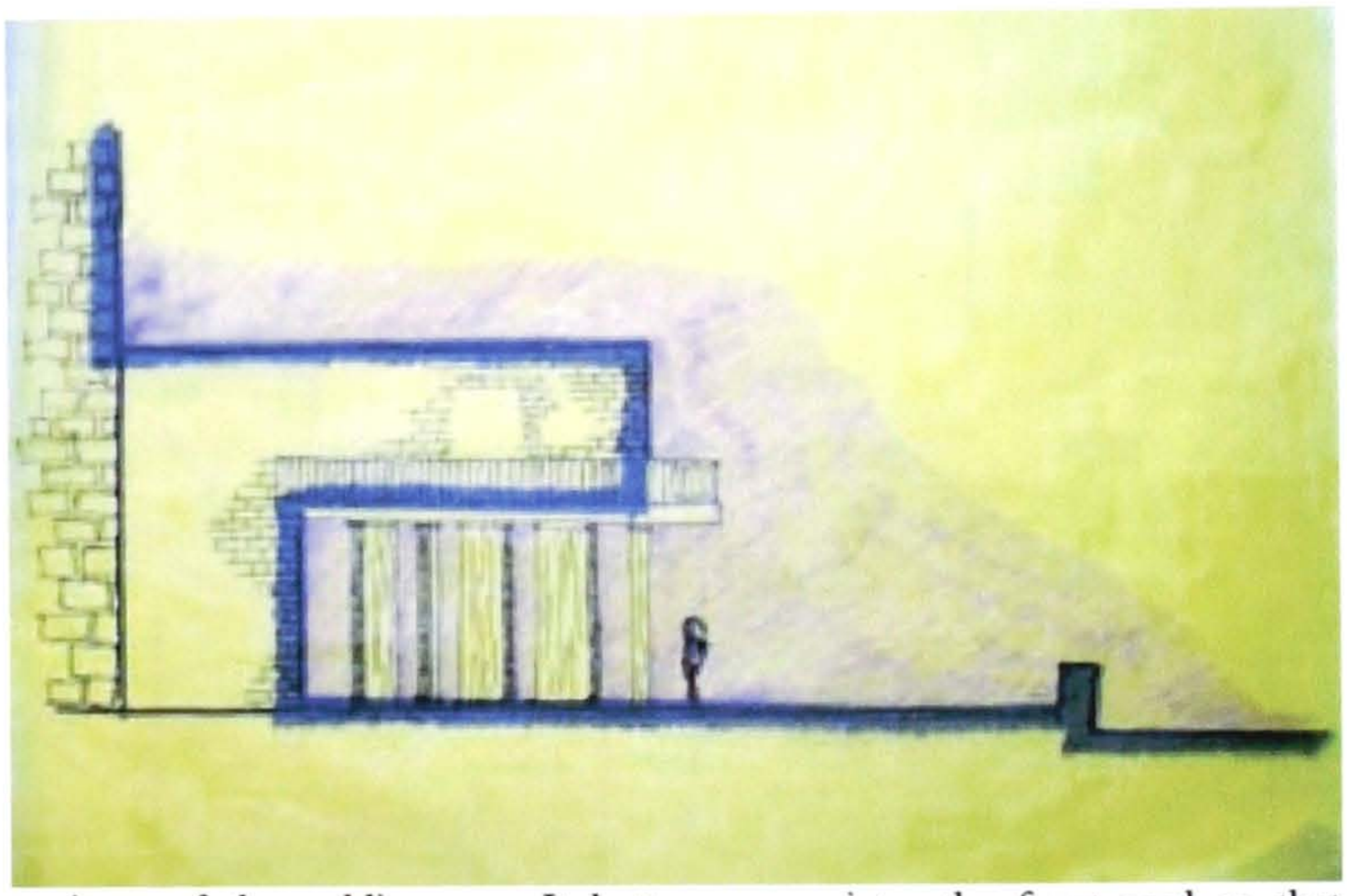
1. The central core (to the left), which respects the needs of the individual. It considers the personal innate aspects of human existence: food, fire, shelter, and represents the defense of these elements. The central core is symbolic of home and of shelter. It is dispersed throughout the landscape. The core is accessible by all other groupings of the housing unit.

2. The social component (below left), which disperses into the social



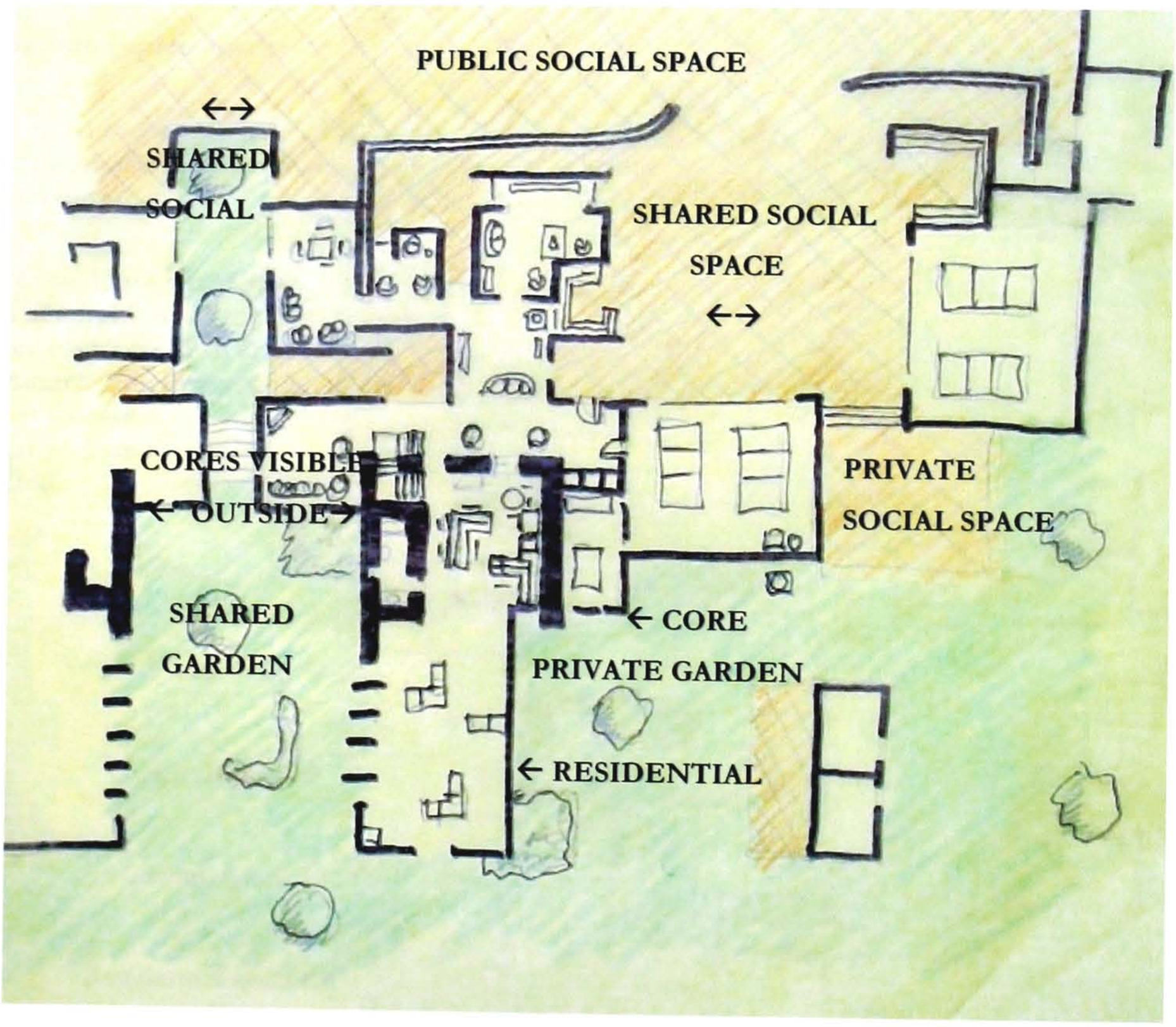
Above: The social spaces should be a more human scale and should frame the social spaces of the street.

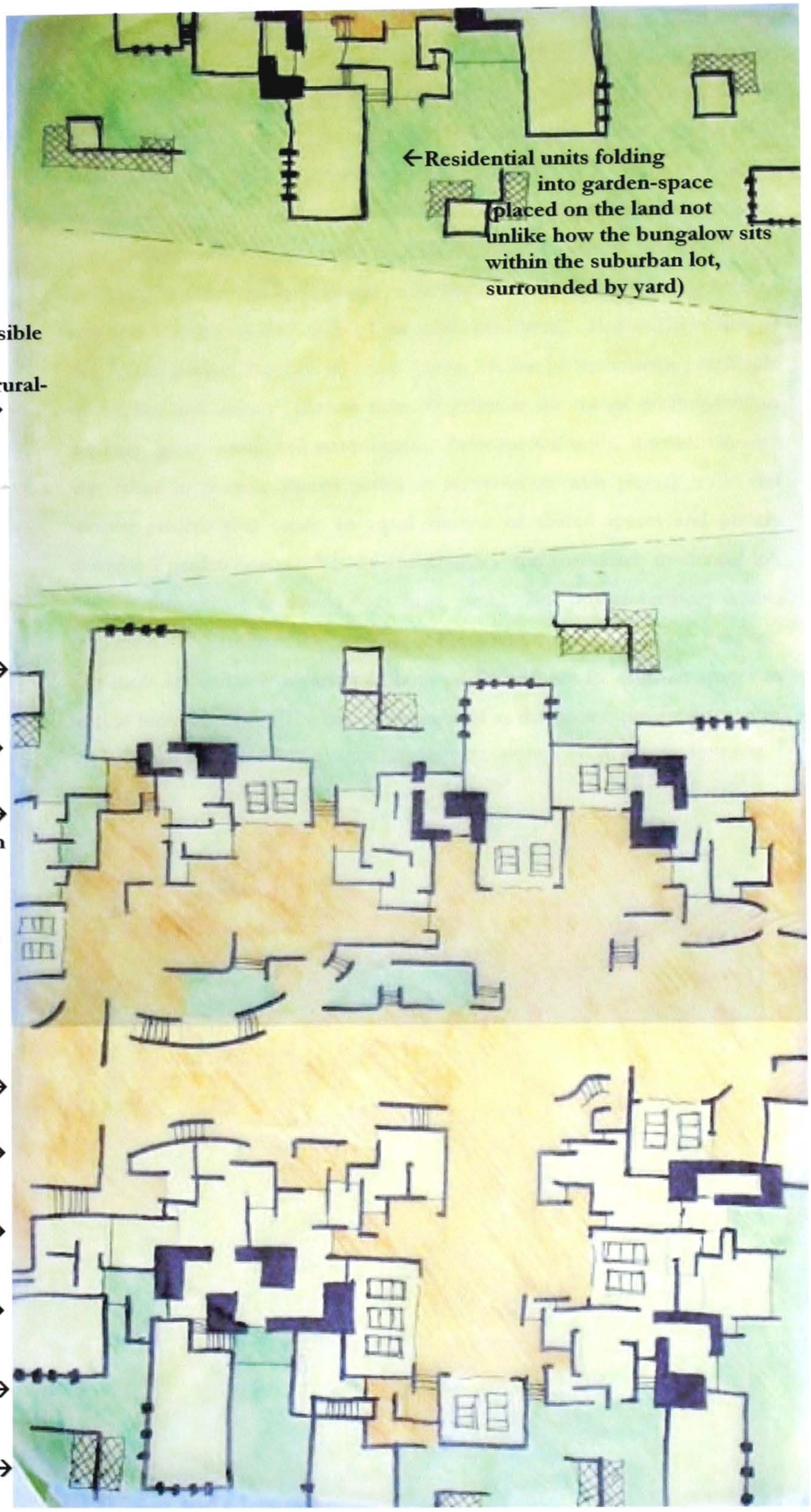
Left: The residential units should fold into the landscape mediating



territory of the public way. It better appropriates the front yard so that interaction can easily happen with neighbors. Social components from each housing unit frame parts of the public way creating places that reinvent the aspects of a front porch. The social groupings work together within the landscape creating a semi-public shared territory while at the same time acting as a buffer that indicates where public ends and private begins.

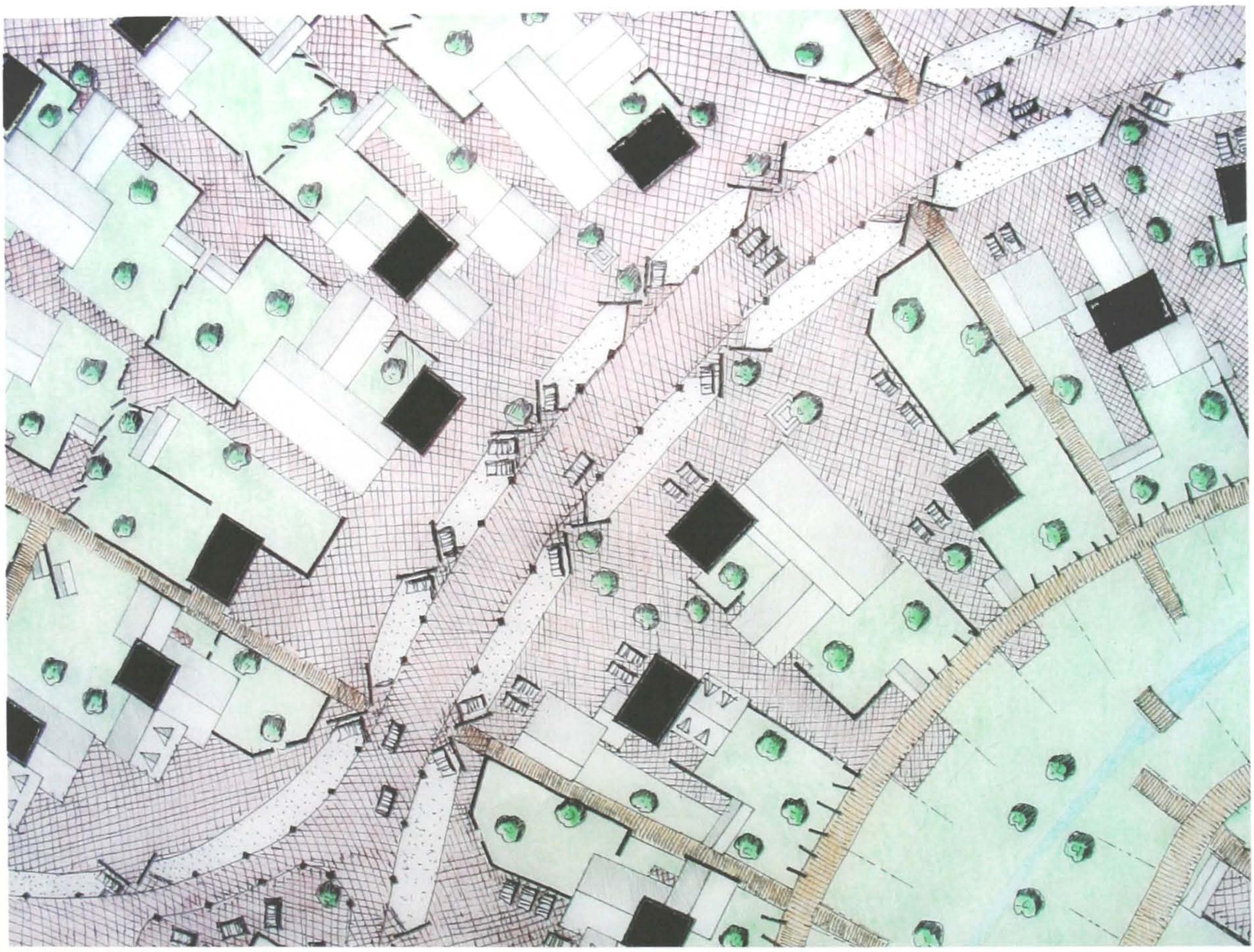
3. The residential grouping (bottom right previous page), seeks to establish a balanced relationship between the human desire for nature and the human need for shelter from nature. This component folds into the rural portions of the landscape. Its wall is solid, but of an adjustable nature that allows the occupant to enclose the interior or open it up to the outside when desired. The materiality should be wood or brick. The windows should be generous but carefully located. Its form is compact but rectangular allowing it to protect its occupants from the outside but also allowing for interaction with the outside. The form is not unlike our modern bungalow or ranch, which has evolved from Wrights Prairie Style.




Garden-space →
←Residential units folding into garden-space (placed on the land not unlike how the bungalow sits within the suburban lot, surrounded by yard)
Rural-space should prevent excessive human interchange. It should be accessible to each housing unit visually. Paths should be provided to allow for guided rural-space exploration. →
Garden-space →
Residential units into garden-space →
Central cores located evenly throughout neighborhood for maximum privacy and separation →
Social units dispersed into street-space, the social units of neighbors frame neighborly space (don't need an entire plaza for community wide interaction (that occurs in city centers, etc.)—this is just a space where neighbors can chat if desired. →
Street-space →
Social units →
Central cores →
Garden space →
Residential units →

DESIGN PROPOSAL:

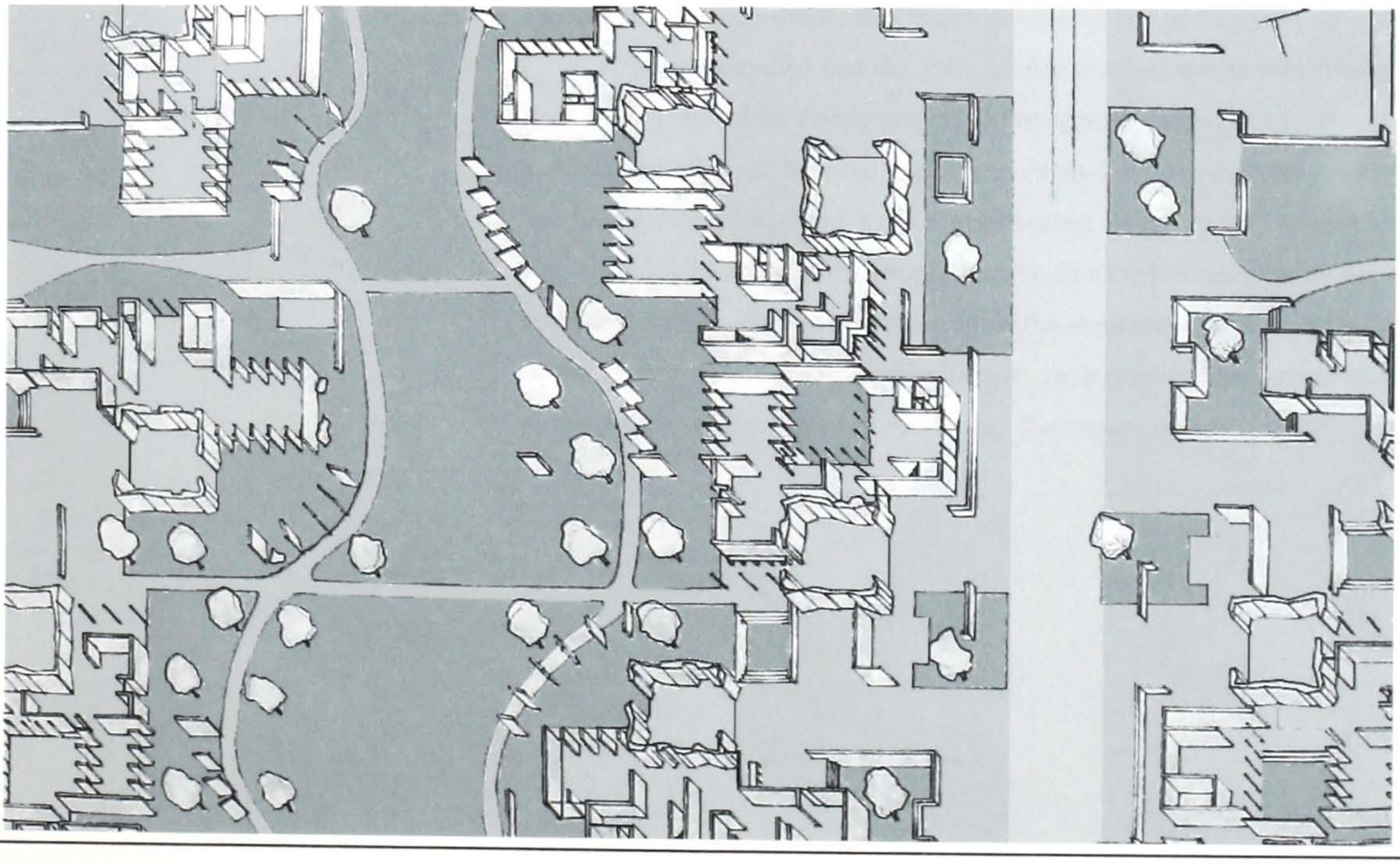
Below is an early site plan of the concept of having a core unit surrounded by support structures that each has a better relationship to the territory that surrounds it (i.e. social territory vs. private territory, etc.). The street, as an occupy-able entity, extends to the houses while that portion of the street used for cars narrows to the minimum area required for two cars to pass each other. Because the green-space is equally as important as the street-space, a right of way was created on each side of the residential units. Not unlike a row of beachfront homes, this type of setup fosters the use of territories on each side of the housing units. This was done to promote the use of every suburban territory, green-space and street-space. Between the units, themselves, care was taken to provide shared patios in combination with privacy walls and sunken gardens that create an equal amount of shared spaces and private closed-off garden spaces. Variety and choice is the goal. Each residential lot, here, is thought of as having four front yards. But private territory is also important. It surrounds the portions of the house that are nearest to the core. But there are certainly a variety of both public and private outdoor spaces as well as indoor spaces. The core is thought of as the center, private portion of

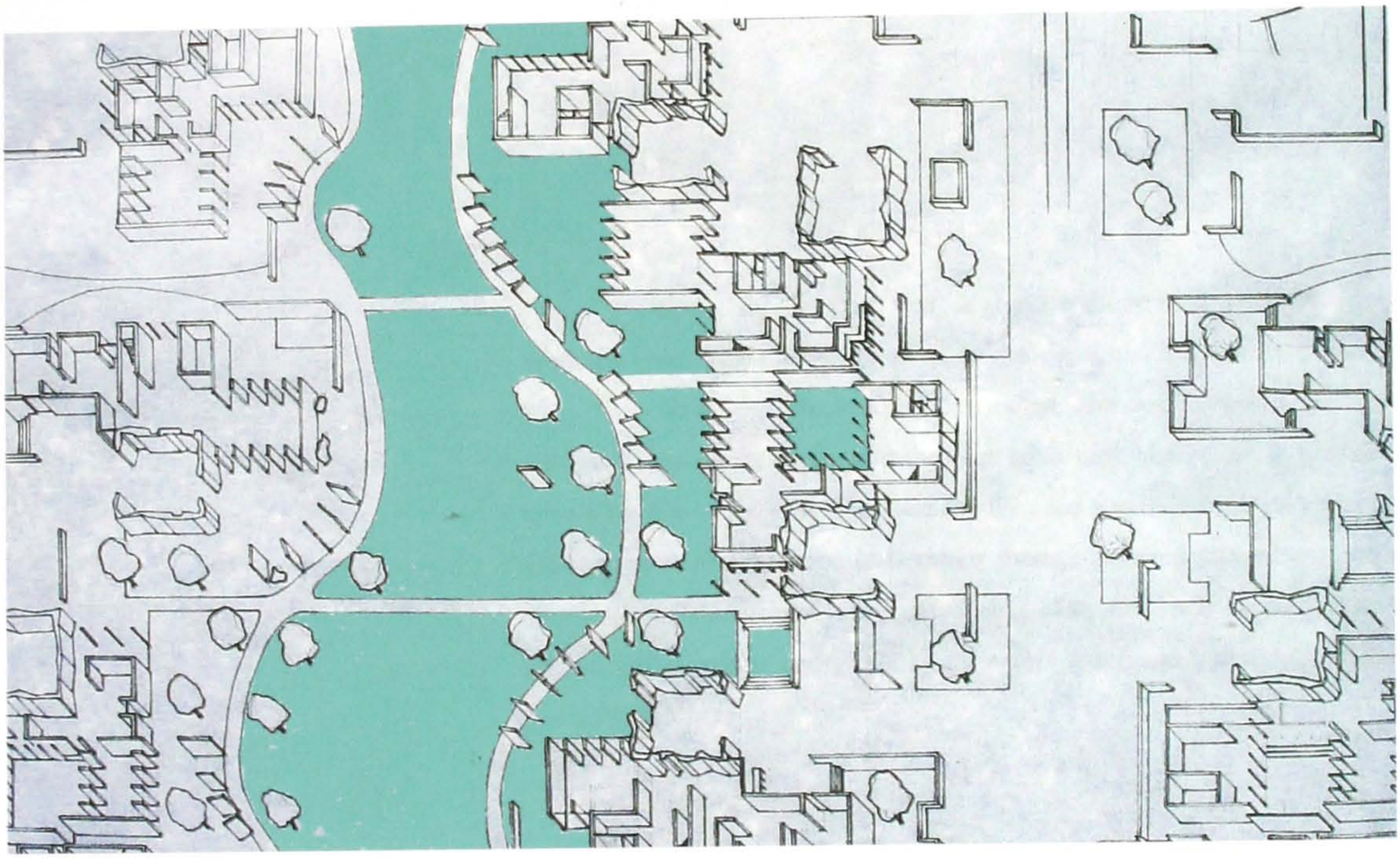


the lot. It is alternated to allow for a variety of optional locations that best suit the desires of the occupant who chooses that certain configuration (for example, some may want a bigger patio nearer to the street because they like to invite the neighbors over for a cookout, others may not want any at all).

In the axonometric drawing at the bottom of this page, the various zones of the proposed suburban neighborhood are coded in a monochromatic scheme. This method of representation attempts to show that the surrounding landscape can be more efficiently used by the housing units, thus framing exterior spaces that have a more direct relationship between the program in that particular part of the house and the use of the zone that it directly relates to. The darker colors represent the green-spaces that vary in privacy level and activity level. The mid-range tones represent the occupied areas in between the green-space and the street-space. The mid-range tones are elements of the landscape directly and actively inhabited. The lighter vertical band of gray to the right represents the street, which is narrower than a typical suburban one.

Notice how the occupied street expands to the house, allowing for a better-designed social street-space. The street, and driveway, connects the suburban residence to the world. Conceptually, the street, driveway, and sidewalk are the active, public, and social elements of the suburban neighborhood. This is where you wash the car…this is where you stand and talk with neighbors. The social element of the street balances out the natural element of the green-space, the suburban yard. Both are equally important. Both must be designed because both can be occupied.

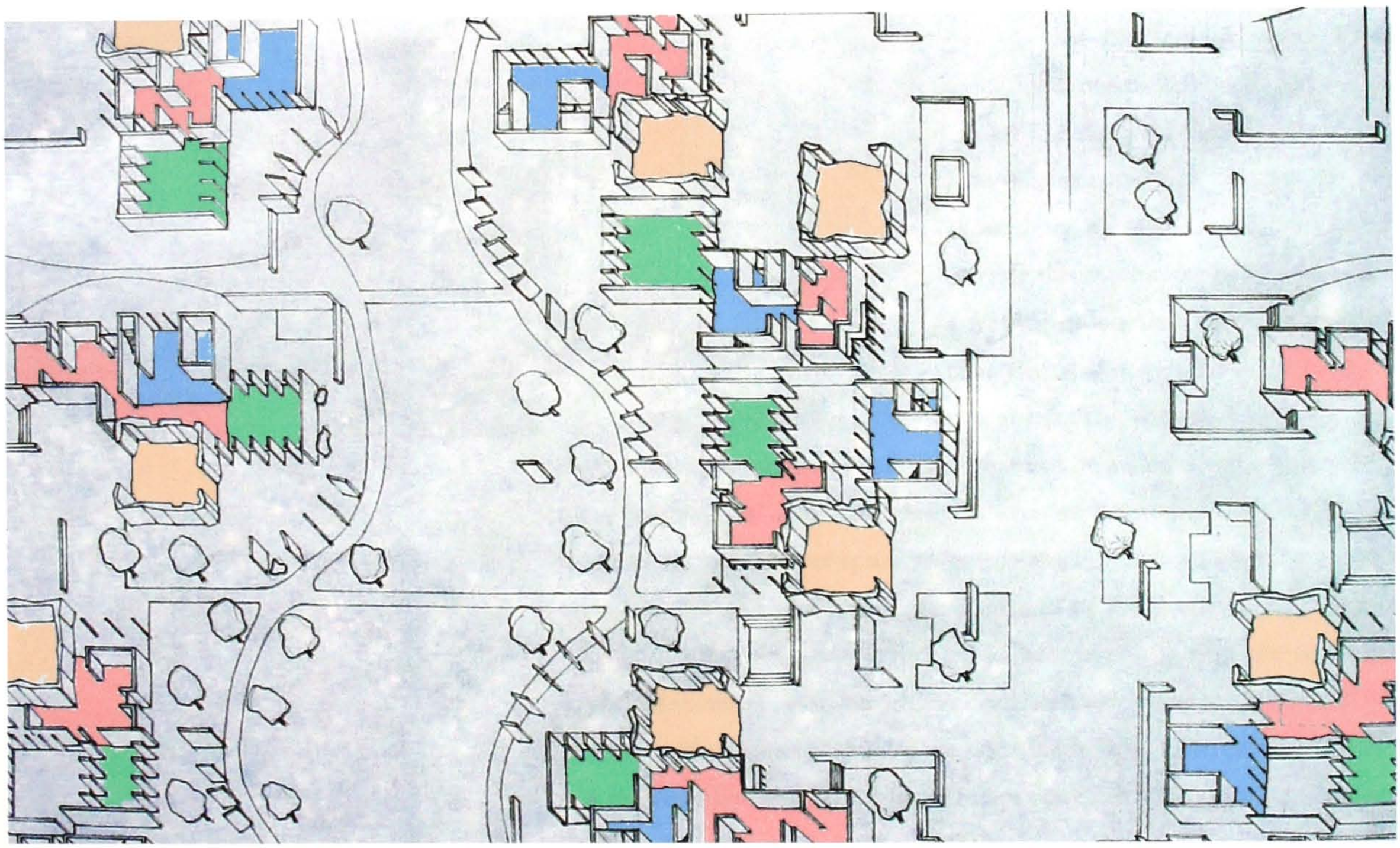




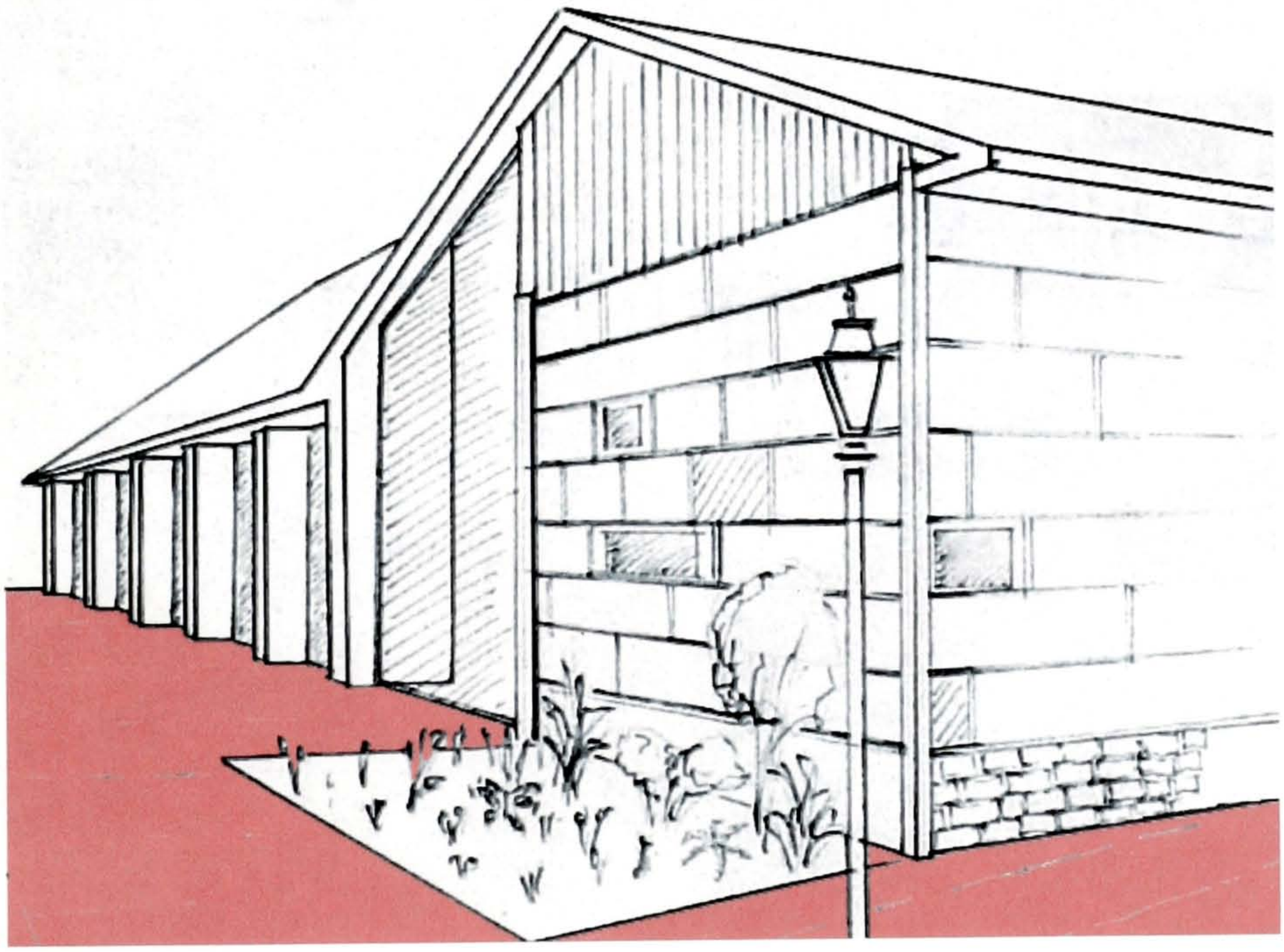
One of the goals of the project was to better distribute the residential units within the suburban environment. The main goal was to provide that quasi-rural experience of wide-open spaces, but to provide this within a contextual, fluid, neighborhood. Breaking up the residential suburban house into a system of core elements with smaller but more frequently placed support elements allowed for an environment that better distributed the open spaces around it.

It was intended that the most private portions of the suburban house, the "cores", should be evenly dispersed throughout the landscape allowing for a maximum of space between each one. From this core the social "units" of the house extend out and have a relationship with "social" units of other residences. The social units should have a direct relationship with the street and the driveway, the social spaces, while the residential support units of each house should extend into the green-space, appropriating the natural elements to the domain of the suburban residence. (See image on next page).

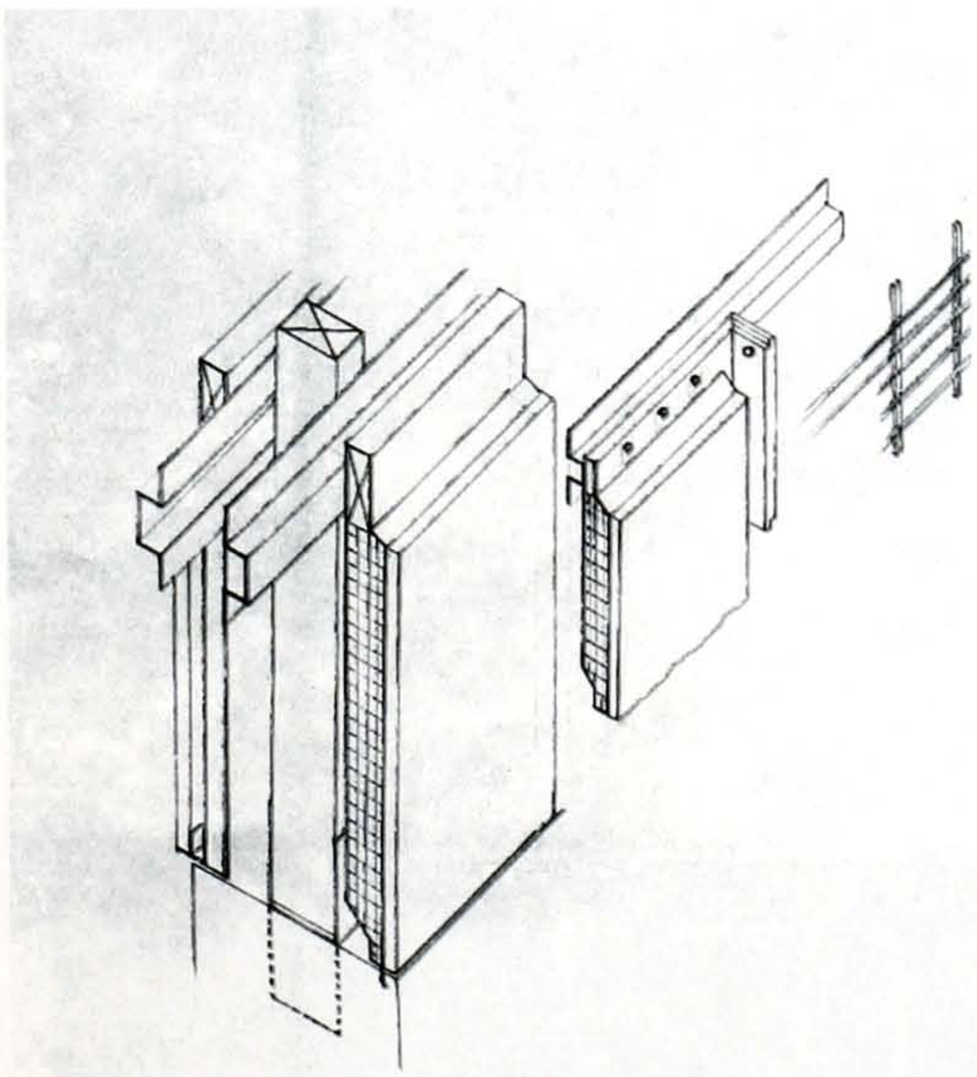
Below, the green-space is rendered green; the street-space is rendered gold. The "street-space" is to the right and the "green-space" to the left. The inside-outside spaces are orange, the social spaces are red, the residential spaces are green, and the core spaces are blue. Notice how the core spaces are alternated and dispersed to allow for a variation of placement and a maximization of the space in-between them. Between the various supports structures of the houses are landscaping elements such as low edge-walls, sunken patios, patios connected to the street-space and patios tucked into the green-space.



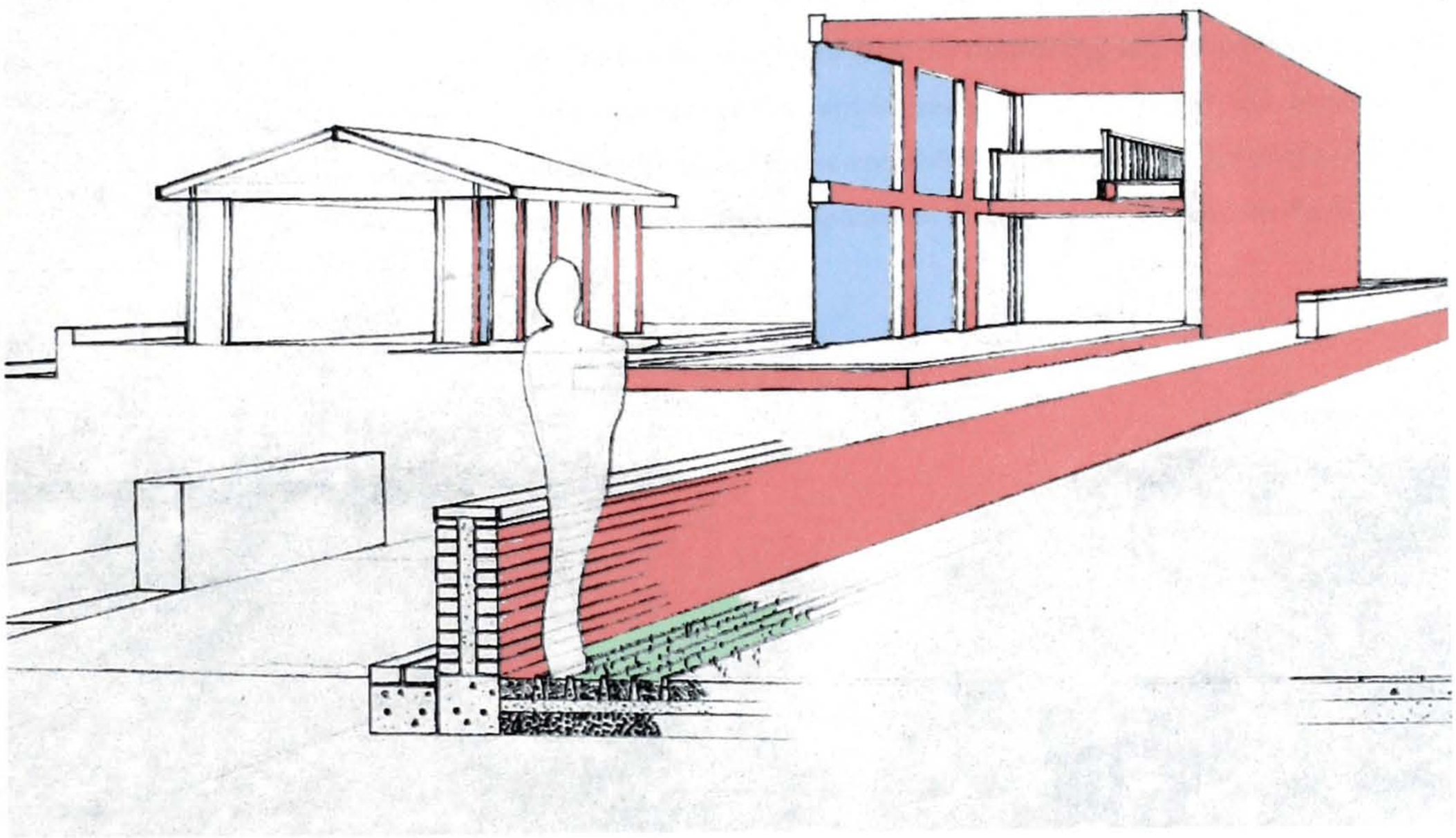
One of the key themes in this project was the idea that the suburban decision should be open to anyone who chooses it. It should be a valid alternative to denser, more urban environments. It should be sustainable in this way: that the neighborhood and individual houses can grow, change, and adapt over time, both to the current needs of the occupants, and to the needs of those occupants over the course of their life. Also, the environment must allow for a variety of living spaces that are directly related to the living styles of those who build. The occupant must be allowed to determine the layout of his or her own property. All of this leads to the conclusion that the houses must be built so that they can be added to over time. Each must still be designed but each cannot be designed individually. Some core elements of the houses must be allowed to be speculatively designed to provide this more complex environment at a feasible economic scale. This leads to a plan that might look something like the one at left. The occupant must be able to choose from a selection of core units that can be added to when needed. But these core units must be designed to accommodate the surrounding landscaping zones (street-space vs. greens-space). So, instead of buying plans for a house, as is typical today, the occupants of this proposed neighborhood would buy a lot configuration that can be built in phases when the need arises. In the above image, one can see the neighborhood in this un-completed state. The lot configurations at the top are not entirely built. The only thing existing is a pre-manufactured core unit. The lot configurations are more completed towards the bottom of the image. The key is that each lot configuration is designed so that, ***at any point in the process*** of development of the neighborhood, each lot has the various relationships it needs to be able to provide the full neighborhood environment.



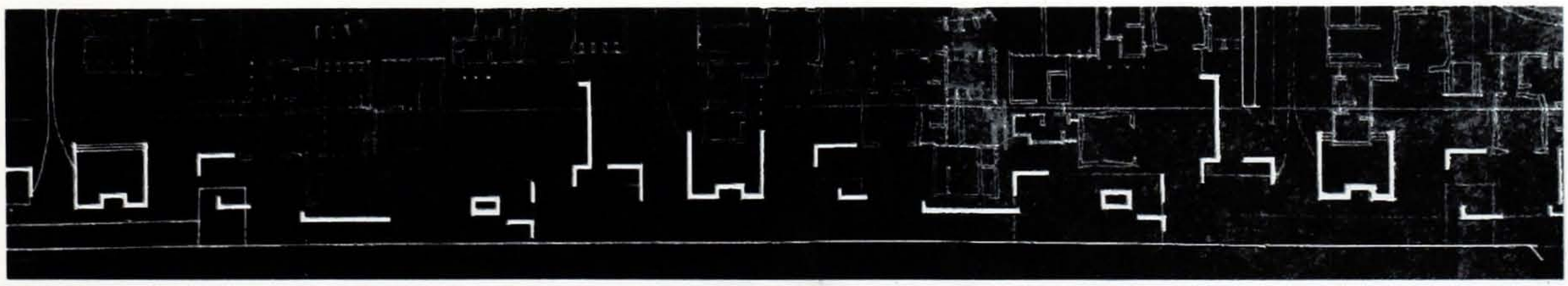
At left is a larger view of the proposed wall system that will allow one to "design by selection." A number of fabricated panel units can be designed with nearly any desired material. Furthermore, these units can be designed in a way that provides the opportunity for a functional wall. Some units may be designed, for example, so that they contain spaces for storage.



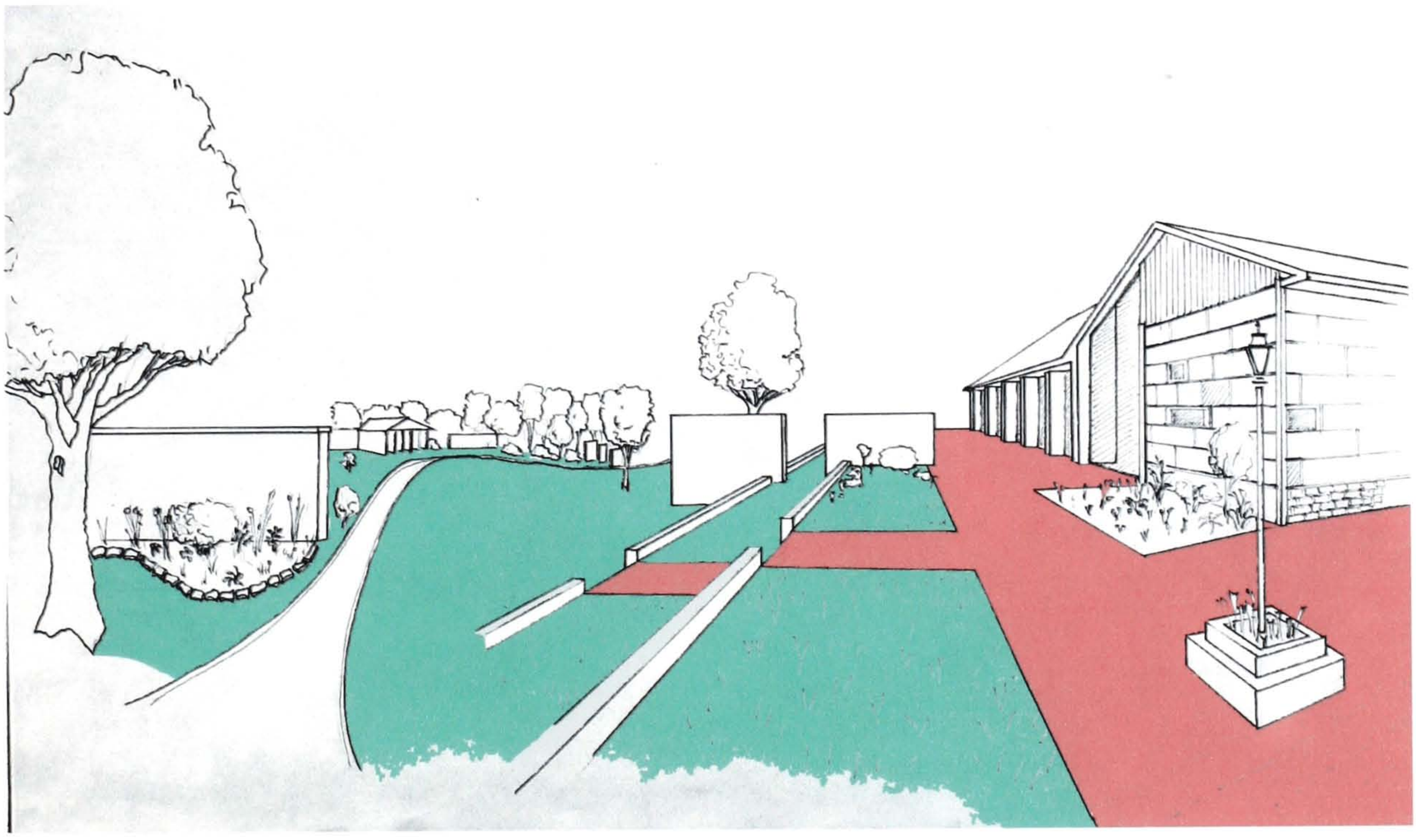
The image to the left depicts a proposed prefabricated wall panel system. The panels, of which a variety can be designed to suit every materiality, size, and function imaginable, are intended to be located and placed on a housing structure in the same way one might decide to hang new drapes. Obviously the process is a little more intensive than that, but the idea is flexibility and choice. It is an opportunity for the homeowner to have a more direct connection between the landscape and himself by being allowed to make the decisions that affect him personally, such as by being able to select a certain materiality, location, and function of the units that he buys. In the end, the opportunity exists, here, for the wall panels to be selected by the homeowner and located on the site according to the homeowner's desires, thus strengthening the connection between the occupant and the landscape.



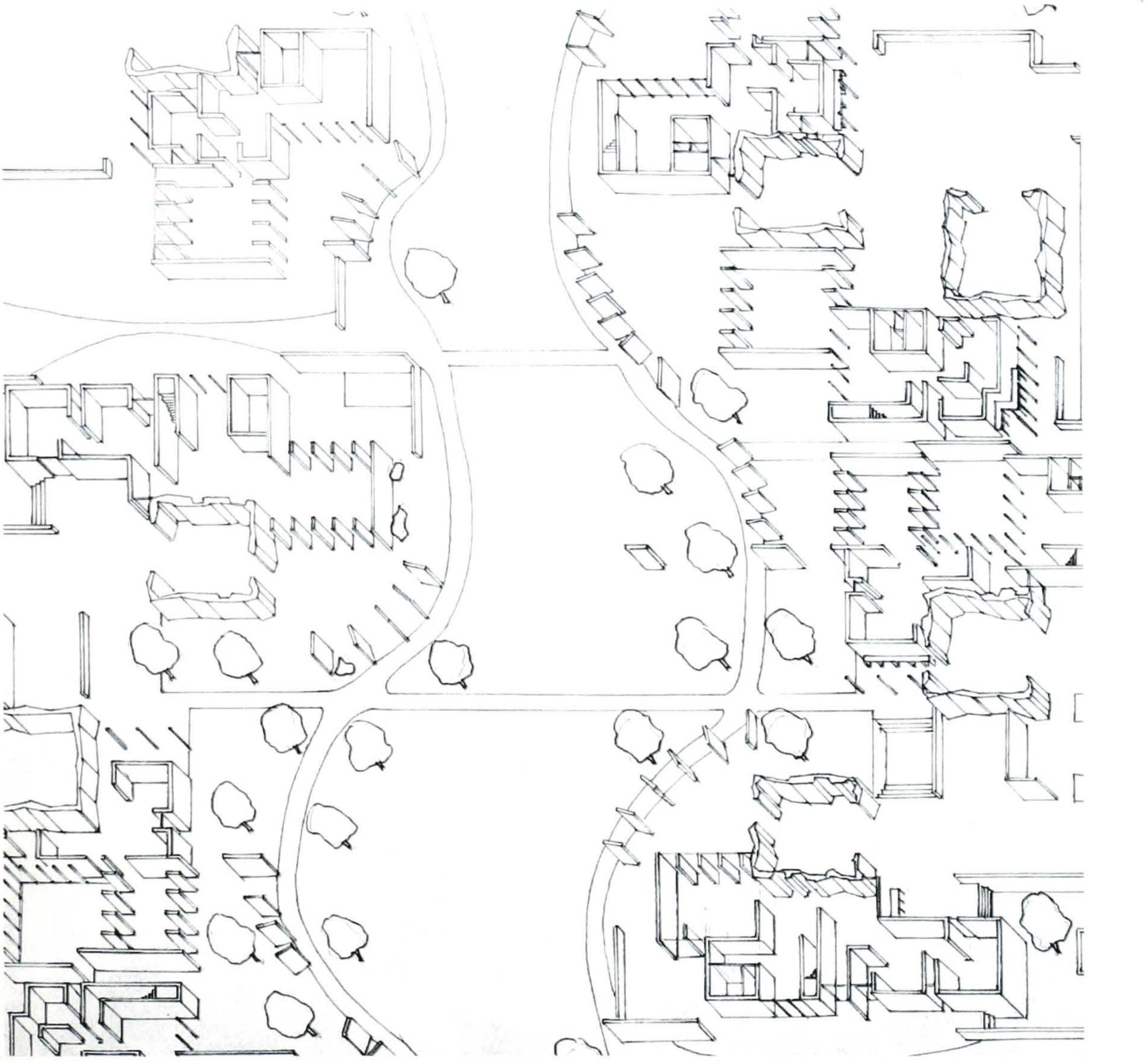
The street space is an essential element of the suburban neighborhood. It is the collective portion of the suburban neighborhood. In most contemporary suburban neighborhoods there is an ambiguous quality to the street. Attempts should be made to minimize this uncertainty of control and access. The communicative quality, however, need only exist for neighborhood interaction on a small scale. Attention should be given to *neighborly* interaction rather than entire neighborhood interaction. Community is no longer dependent on the neighborhood geography. As the city has expanded because of technology, the community has expanded concurrently. The front yards are, for the most part, neither used by the house dwellers or the neighborhood residents. A new design should reduce this ambiguous quality and create structures that allow for more comfortable occupation of the driveway, sidewalk, and street.



Below: A view into the expanse of "green-space" created by alternating the location of housing units. Parts of this green-space belong to the domain of the house while other parts are consolidated and used to extend the open space that is able to be accessed by the house, at least visually. This, of course, is to amplify that sense of "space" that the suburban decision was intended to provide. The end of the yard, here in the open parts of the green-space, does not end at the neighbors yard. By connecting and extending this green-river of land, the end of the yard in this proposal extends to the horizon line. But ownership of the house-controlled portions of the green-space is clear to all and privacy walls help guide and direct views and access to the landscape.



Below: An axonometric that illustrates the landscape design features that make use of the spaces in between the suburban houses. There are a variety of spaces of both natural green-space and social shared spaces. Each of these occurs at a variety of privacy levels, and each space has a specific function. The housing units of the neighborhood interact and depend on each other to provide this variety of spaces. This inherent variety and careful integration of landscape into the house allows this suburban territory to better reflect the needs and desires of those who move outward to seek these less dense environments. It attempts to provide the best of both worlds: a natural landscape and social support structures that don't alienate the human occupant.



QUESTIONS:

How is this different than a garden city?

Garden Cities promoted a rational separation of uses. Garden cities were designed to be much like small towns—they were designed to include individual areas of public landscaping that were separated from the "untouched" park-like landscape. This project moves beyond the idea of a "small town surrounded by greenbelts" into an idea of decentralized pockets of urban ruralism where the greenbelt is incorporated into the domain of the single-family territory. It is not unlike what Peter Rowe calls, a "modern pastoralism."

How is this different than New Urbanism?

New urbanism seeks to provide a human scaled environment that seeks to function much like a small town. I am suggesting a human scaled environment that promotes neighborhood interaction at a small scale. There is an understanding that community and social functions will continue to happen away from the neighborhood at movie theaters, restaurants, churches, downtowns, regional parks, etc…New Urbanism is a valid alternative for some parts of the metropolis, but this project doesn't seek to be "urban." It seeks to further the suburban aspects of decentralization and freedom of movement. In the end our choice of where we live in the metropolis, today, involves the decision of which aesthetic we prefer, urban or suburban.

BIBLIOGRAPHY

Habraken, N. J. The Structure of the Ordinary. The MIT Press. Cambridge, MA. 1998.

"The Structure of the Ordinary" is a detailed analysis of the elements that make up the human being's built environment. His thesis is that the understanding of the particular structures of the environment is essential to our modern society. It is because of their ordinariness that has led us in the past not to question them—the architects job in the past was to deal with the grand institutional environments like churches or palaces. The people themselves built the environments in which they inhabited. In modern society, however, architects must deal with the human environments of inhabitation as well. Architecture is now concerned with more and more with the structures that build this environment. The environment can be described by three different conditions: Form (which engages the built environment as part of all physical matter), place (which reflects territorial behavior), and understanding (which is the social inhabitation of the environment).

Heimsath, Clovis AIA. Behavioral Architecture. McGraw Hill. 1977.

Talks about what the architect can do to take into account human behavior in terms of human needs and wants. Discusses general patterns and schemes of architecture addressing/reflecting individual and group activities i.e. how long does it take to walk to school?, what effect do social relationships have on neighborhood layout, how are spaces shared/borrowed.

Lerup, Lars. After the City. The MIT Press. Cambridge, MA. 2000.

As the title implies, "After the City" suggests a radical change in the nature of our cities. Lerup examines the metropolis of Huston. Special attention is given to the aesthetic impressions of the city. The psychological generation of these impressions, however, is the subject of the book. The metropolis, the new city, is characterized by movement (the pace of which has increased because of personal mobility). This "undermines the age old concepts of permanence and identity in favor of transformation and event." The metropolis is explained by "stims" and "dross." In the new metropolis we move through dross (the worthless stuff) to get to stims or the stimulations. Lerup's discussion of the new city is convincing (observing metro Detroit leads to similar conclusions). Lerup ties in well with the ideas of Richard Neutra and Studio Works, whose precedent analysis is included in this paper and examines the nature of the human being moving/acting/living within its environment.

Neutra, Richard. Mystery and Realities of the Site. Morgan & Morgan. Scarsdale, NY. 1951.

Neutra writes about the act of inhabiting on a site. What are the essential qualities that we look for in a site. Is the site private? Does it have a view? Neutra goes one step further and states that what we are concerned with are "human responses, organic and social necessities, which can be gratified on or through this site."

Rowe, Peter. Making a Middle Landscape. The MIT Press. Cambridge, MA. 1991.

Focuses specifically on the suburban landscape which is distinguished from the urban landscape. The suburban landscape is defined as seeking to take advantage of the natural garden-like elements in the rural landscape and the social interactive elements of the city. As it is now the suburb by combining two disparate forms of architecture satisfies neither condition and is thus in need of repair. The middle landscape seeks to satisfy both conditions.

Rybczynski, Witold. City Life. Simon & Schuster. New York. 1995.

Provides a useful non-critical history of urban living (discusses the blurring between suburb and city). Summarizes Kevin Lynch's three ways to look at city planning They are cosmic, practical, and organic. Rybczynski discusses the growth of North America and the factors leading up to the metropolis that we live in today. Discuses the cultural implications of the specifically American way of life and compares it with the state of culture in Europe. Essentially, he illustrates the existent urbanity of the metropolis…the urbanity of both city life *and* "suburban" life. He sums up his book well when he speaks of the future of our cities…**"Mistakes will be made, as they have been in the past, technological change will continue to surprise us, and ambitions will frequently outstrip reality—and vice versa. But the expectations will continue to be, as they always were, urban."**

Tyng, Alexandra. Beginnings: Louis I. Kahn's Philosophy of Architecture. Wiley-Interscience. New York. 1984.

Patterns and social structures emerging from human needs and wants. Rationalizing and distributing not just the physical space required for life but adding a psychological realm based on scientific observations. Resources, for example, include shade, seclusion, light, and civic space. Useful topics include servant and served spaces in the Exeter library. And his spatial hierarchies based on social needs in the Salk Insititue.

NOTES:

[i] Pete Waldmeirm, The Detroit News. *"Closing Gail's Leaves Detroit With a Hole in its Downtown Mix."* 10.24.03

[ii] Tracy Davis, Ann Arbor News. *"Plan Would Preserve Thousands of Acres"* 10.12.03

[iii] David Goodman, Chicago Tribune. *"Michigan Initiative Seeks 'Cool Cities'"* 10.10.03

[iv] Richard Florida, "*The Rise of the Creative Class"* Basic Books. New York. 2003.

[v] Money magazine publishes a yearly list of top cities ranking everything from housing costs and weather to "pleasureful leisure activities," and "low crime rates." http://money.cnn.com/best/bplive/.

[vi] Rybczynski. *"City Life"* Simon & Schuster. New York. 1995.

[vii] Walther. *"Philadelphia History"* http://www.ushistory.org/philadelphia/philadelphia.html

[viii] Rybczynski. *"City Life"* Simon & Schuster. New York. 1995.

[ix] Lynch *"Good City Form"* MIT Press. 1984

[x] . Lerup. Page. 27 *"After the City."* The MIT Press. Cambridge, MA. 2000.

[xi] Garrison Keillor. *"Leaving Home."* Viking Penguin, 1987

[xii] Lerup. Page 49 *"After the City."* The MIT Press. Cambridge, MA. 2000.

[xiii] Lerup. Page. 49 *"After the City."* The MIT Press. Cambridge, MA. 2000.

[xiv] Habraken. Page 135. *"The Structure of the Ordinary."* The MIT Press. 1998.

[xv] Habraken. Page 37. *"The Structure of the Ordinary."* The MIT Press. 1998.

[xvi] Habraken. Page 129 *"The Structure of the Ordinary."* The MIT Press. 1998.

[xvii] Habraken. Page 30. *"The Structure of the Ordinary."* The MIT Press. 1998.

[xviii] Habraken *"Supports."* International Thomson Publishing. 1972

[xix] Habraken Page 18. *"Supports."* International Thomson Publishing. 1972

[xx] Lynch *"Image of the city"* The MIT Press. Cambridge, MA. 1960.

[xxi] Doug Kelbaugh. *"Repairing the American Metropolis: Common Place Revisited."* The University of Washington Press. 2002.

[xxii] see note iv.

[xxiii] See note xx

[xxiv] Sullivan. *"Kindergarten Chats."* Peter Smith Pub. 1940.

[xxv] Wright, *"Two Lectures on Architecture."* P. 91