

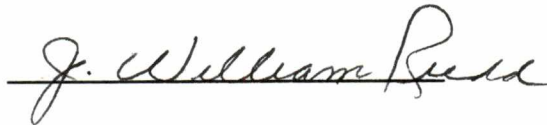
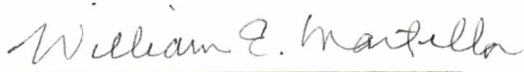
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I am submitting herewith a thesis written by Eunice H. Chen entitled "Repairing Main Street for the Twenty-First Century." I have examined the final copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Architecture.

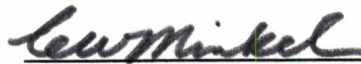


J. Stroud Watson, Major Professor

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Accepted for the Council:



Associate Vice Chancellor and
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Repairing Main Street for the Twenty-First Century

A Thesis Presented for the Master of Architecture Degree

The University of Tennessee, Knoxville

Eunice Chen

December 1997

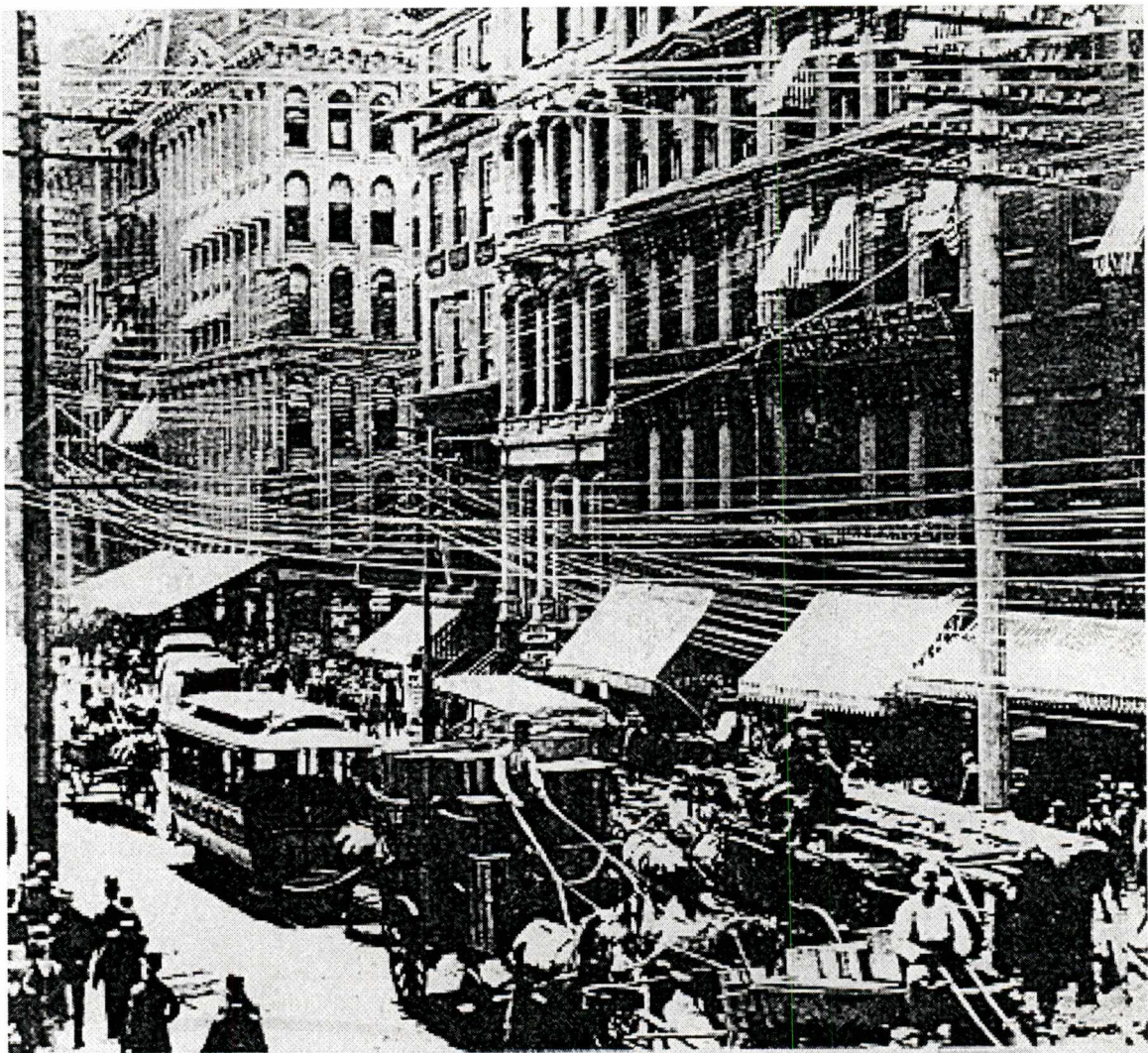


Fig. i New York City, Broadway at Cortland Street, circa 1883. Source: Anderson.

“The street is a room by agreement,” Louis Kahn.

Dedication

I dedicate this book to my family who have supported me in many ways throughout this process.

I also dedicate this book to God who continually inspires me with a better way to live.

Acknowledgments

Any endeavor cannot be accomplished without assistance. I want to thank my thesis committee. Stroud Watson always observed the building's form. He helped translate my thoughts into architectural images. J. William Rudd encouraged me to do more research, which added depth to this thesis. His suggestions strengthened the critique of suburban development. William Martella urged me to consider functions and real situations related to my project. He populated my project with clients and users. I want to offer them my sincerest appreciation for the hours they have spent critiquing my thesis and the design.

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And to Ann Lacava, thank you for being so understanding.

Abstract

All through history towns and cities have had main roads where there was a greater concentration of businesses, public buildings, religious buildings and residences. To the community, what was often called main street was not just a place to carry on business but a place to meet, gossip and exchange ideas.

Because of single-use zoning, scattered development and the car's particular needs, the strip lacks the communal gathering possibilities of main street. This thesis explores how to reintroduce communal aspects to a main road in the suburban context where structure has been eroded by strip development. The method used is to repair linkages between the road and the immediate neighborhood and to form public places, enabling the community to gather there.

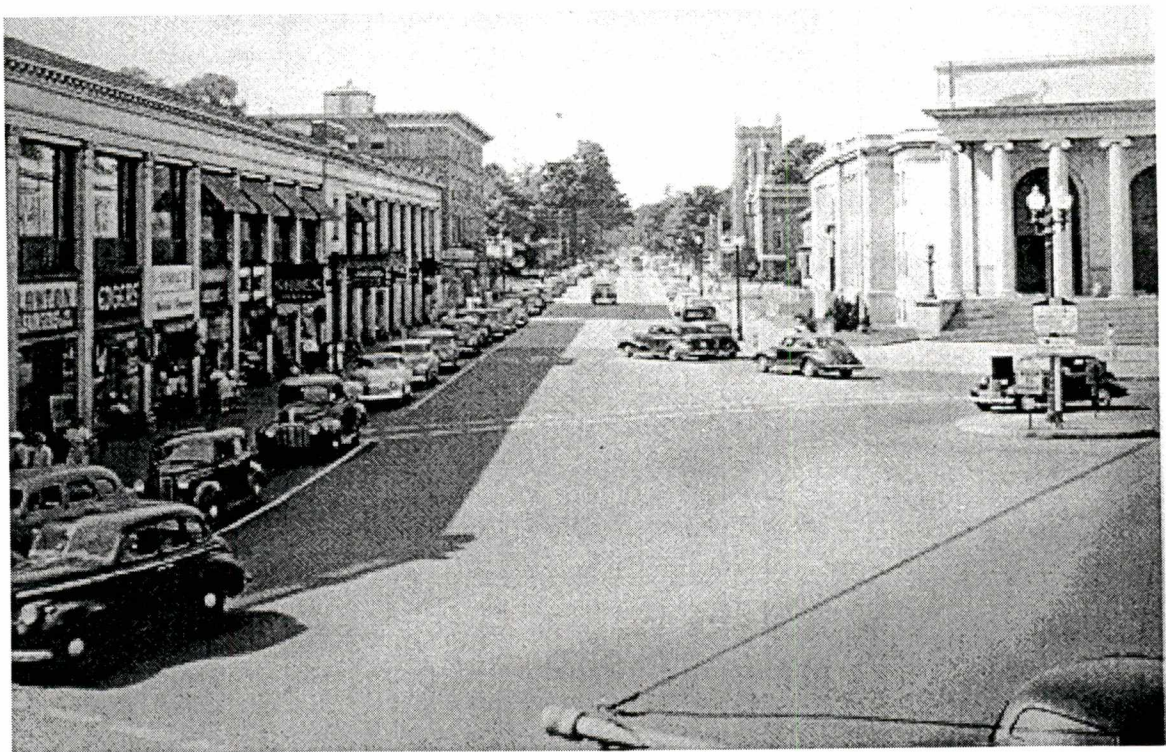


Fig.ii The main street in Framingham, MA, circa 1940s. Source: Rowe.

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I. Introduction

Main street functioned as a public room which met the community's needs for informal and formal gathering. They were physically centered in a town. Parades, rallies and fairs occurred on the street. Less formal meetings took place daily. People socialized, conducted business and learned the news.

Today this form of public space is missing on modern commercial strip roads. This thesis maintains the strip, a modern derivation of main street, needs main street's spatial characteristics to endure. Main street draws the local citizens together enabling communal dynamics to occur.

The proposition is to repair linkages between the strip and the neighborhood and to set aside gathering places for communities within the context of the strip.

This book is divided into six major sections. The first briefly examines precedents in city history and in particular analyzes the significance of developing the public gathering place.

The physical characteristics of main street are then studied and compared with the strip.

The third section explains the thesis objectives. They propose the repair of linkages and the formation of gathering places linking the strip with the neighborhood around it.

In the fourth section the site is introduced, analyzed and design responses are put forward.

The fifth section contains discussions about precedents for the street, mixed-use buildings and zoning codes. The projects are described and then implications are drawn from them.

Then the design for the street and the buildings are revealed.

Finally the design response is discussed and conclusions are drawn.

II. Definitions

BLOCK: An area in a city enclosed by four intersecting streets, often rectangular, or the length of one side of this area. (Webster's Dictionary, 1992) Blocks are the field on which unfolds both the building fabric and the public realm of the city. A versatile, ancient instrument, the traditional block allows a mutually beneficial relationship between people and vehicles in urban space. (Katz, 1994)

COMMUNITY: An interacting population of different kinds of individuals constituting a society or association or simply an aggregation of mutually related individuals in a given location. (Webster's Dictionary, 1991) The size of the local community is between 500-2,000 people. (Moughtin, 1996)

GATHER: To cause to come together in one place or group. (Webster's Dictionary, 1991)

LINKAGES: Anything serving to connect or tie. (Webster's Dictionary, 1991)

MAIN STREET: The principal street of any small town. (Webster's Dictionary, 1991) Main streets have a larger aggregation of commercial, office, residential, civic, and religious buildings.

NEIGHBORHOOD: An urbanized area with a balanced mix of human activity. One neighborhood in the landscape is a village. Cities and towns are made up of multiple neighborhoods. The neighborhood population is approximately 5,000-12,000 people. (Moughtin, 1996) Andres Duany and Elizabeth Plater-

Zyberk set out some guidelines in the book, The New Urbanism:

1. Neighborhoods have a center and an edge.
2. The optimal size of a neighborhood is a quarter-mile from center to edge. (Fig. 2.1)
3. The neighborhood has a balanced mix of activities--dwelling, shopping, working, schooling, worshipping and recreating.
4. The neighborhood structures building sites and traffic on a fine network of interconnecting streets.
5. The neighborhood gives priority to public space and to the appropriate location of civic buildings. (Katz, 1994)

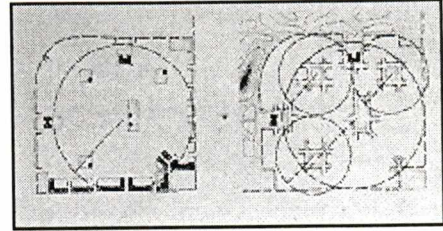


Fig. 2.1 The quarter-mile radius. It is equal to a five-minute walk from the center of the neighborhood to anywhere within the circle.

NODE: The node has four characteristics:

1. Singular and continuous quality of the walls, floor, detail, lighting, vegetation, topography, or skyline.
2. Sharp, closed boundary.
3. Distinction is improved if there is a focus for attention.
4. Break in transportation or a decision point reinforces the node. (Lynch, 1960)

PUBLIC PLACES: Public - For the use or benefit of all; est., supported by government funds (a public park) as regards community, rather than private, affairs. (Webster's Dictionary, 1991)

Places - A square or court in a city. A short street,

often closed at one end. Space, room. A particular area or locality; region. A building or space devoted to a special purpose. (Webster's Dictionary, 1991)

STRIP: A long narrow piece of road zoned only for commercial and office uses. The strip is car-oriented, concentrating on storing and moving the car. In Learning from Las Vegas the strip is defined as a different communication system. "The sign for the Motel Monticello, a silhouette of an enormous Chippendale highboy, is visible on the highway before the motel itself. This architecture of styles and signs is anti-spatial; it is an architecture of communication over space; communication dominates space as an element in the architecture and in the landscape." (Venturi, 1977) Despite this communication there is less person-to-person interaction. Buildings are spread apart so people are obligated to spend a lot of time in the car. The result is a sense of isolation and alienation.

SUBURBAN CONDITION: In the context of this thesis the word suburb will describe post-World War II scattered development, single-use zoning and car-oriented design. The exception will be the project site, which was originally a streetcar suburb.

III. Historical Perspective on Communal Gathering

Public Gathering's Transition from Village to City

Archaeologists think prehistoric people lived nomadically. Hunting and gathering, they went wherever they could find food. When people learned to farm they began to settle in **villages**.

People need the basics, but they also need to gather together. They can accomplish more together than alone. (Fig. 3.1) They can hunt bigger beasts. They can undertake large projects. (Mumford, 1961)

They may have gathered in a clearing, under a tree or along a well-trod path. They often gathered around a fire. (Fig. 3.2)

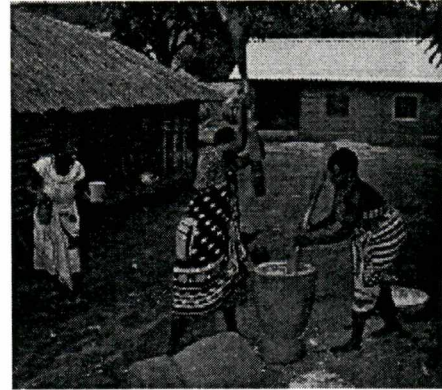


Fig. 3.1 Villagers in Liuli, Tanzania, prepare a meal. Source: Habitat World newsletter, June/July 1996.



Fig. 3.2 Primitive men and women gather around the hearth. Source: Hiorns.

Around the fire people cooked and ate. The fire provided warmth, light and kept wild animals away at night. With so many reasons to gather there, villagers met at the hearth to make decisions, pass on tradition and signal rites of passage. At night it must have been easy in that mystical, orange-red glow to spin the half-truthful, half-fictional tales of ancient history. (Fig. 3.3)

Exactly when civilization stepped from the village to the **city** is unknown. (Fig. 3.4) Lewis Mumford interprets the event's importance:

What happened rather with the rise of cities, was that many functions that had heretofore been scattered and unorganized were brought together within a limited area, and the components of the community were kept in a state of dynamic tension and interaction. ...Utopia was an integral part of its original constitution, and precisely because it first took form as an ideal projection, it brought into existence realities that might have remained latent for an indefinite time in more soberly governed small communities, pitched to lower expectations and unwilling to make exertions that transcended both their workaday habits and their mundane hopes. (Mumford, 1961)

Some cultures never advanced beyond the village stage, but for the cultures which did, a host of possibilities opened. Mumford explains the city did not just multiply what was already in the village. The city provided the means to fulfill latent human ambitions. This led to innovations in town-building and the advent of jobs not directly related to basic survival. Artisans and soldiers became new vocations.

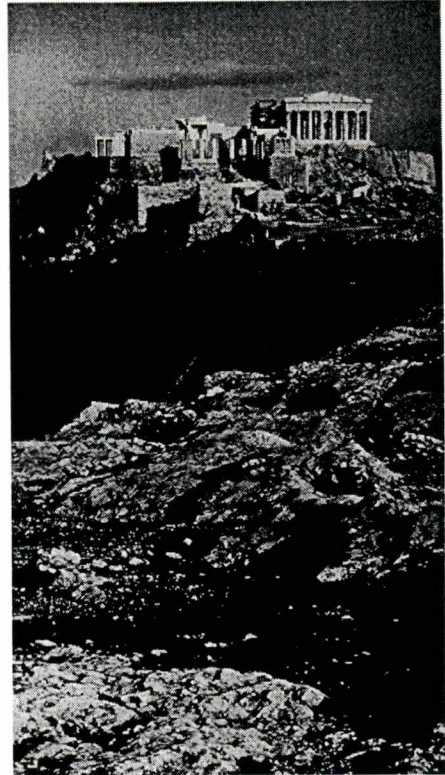


Fig. 3.3 The Acropolis, mythological home of the gods. Source: McHarg.

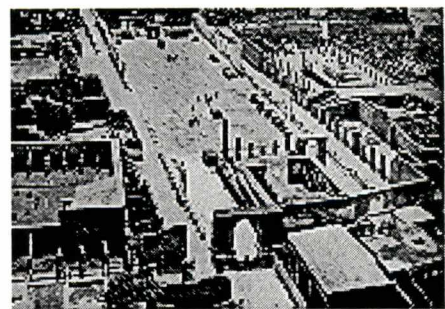


Fig. 3.4 The forum at Pompeii, Italy. Source: Mumford.

The local village chieftain transformed into the city's king. Mumford suggests, the king was really responsible for pulling the city together and giving it goals and intentions far beyond the village's. (Fig. 3.5)

Conversely, when cities formed, social gaps drastically widened. A small aristocracy ruled and the masses were considered subjects or slaves. This was the case in Egypt and Mesopotamia. (Mumford, 1961)

The Polis: Gathering for the Purpose of Self-Government

Around the eighth century B.C. the Greeks created a new sort of city, called the polis. (Fig. 3.6) The polis was "the place where people come together, not just by birth and habit, but consciously, in pursuit of a better life, ..." (Crowe, 1989)

A new organization crystallized whose principles guide the polis' form: the democracy. The polis was a city-state so each city was self-governing. In Athens every Greek male was a citizen and each had a voice in civic affairs. Citizens elected civic leaders and the positions rotated regularly.

Some have argued that the historical and human dimensions of the polis were more important than its physical location. In this view the polis was, first of all, comprised of a community of people who resided together in a certain setting, were freely subject to the same polity (the common political structure that binds them together), and were progeny of the same history: Harmony within the human

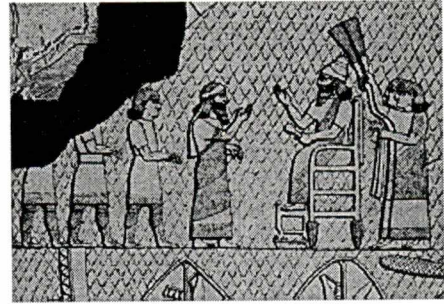


Fig. 3.5 Ancient Egyptian stone fragment depicting Pharaoh and his subjects. Source: Mumford.

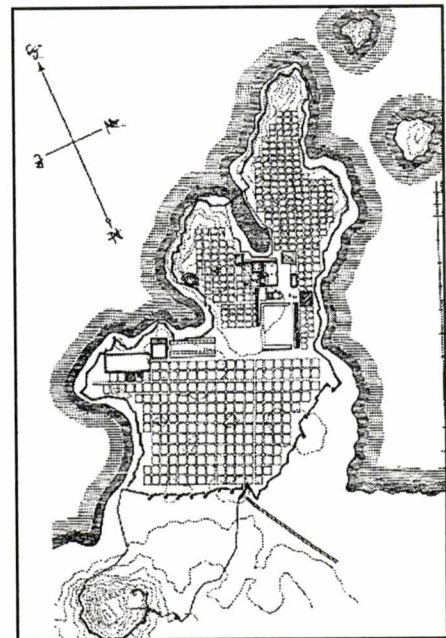


Fig. 3.6 Miletus in Greece, a typical polis. Note the public gathering place across the midsection of the polis. Source: Hiorns.

community of the polis was central to the concept of the polis itself: "... to live in a polis, meant that everything was decided through words and persuasion and not through force and violence." (Crowe, 1989)

The polis kept its government local. Crowe notes the people participating in the polis were "progeny of the same history." Having a common purpose interwoven with a common history can move people to forgo individual interests for collective ones.

If city formation created new vocations and monumental tasks, the polis enabled ordinary citizens the leisure to explore their potential through debate, study and the arts. The era was among the most inventive and prolific, rivaled by the Renaissance and the modern industrial age.

The result was not merely a torrential outpouring of ideas and images in drama, poetry, sculpture, painting, logic, mathematics, and philosophy; but a collective life more highly energized, more heightened in its capacity for esthetic expression and rational evaluation, than had ever been achieved before. Within a couple of centuries the Greeks discovered more about the nature and potentialities of man than the Egyptians or Sumerians seem to have discovered in as many millennia. (Mumford, 1961)

The Athenians strongly supported scholarship and debate. Athenian society can be compared to American society where industrialization has freed Americans to spend time pursuing their interests.

While the polis had flaws as any real system does, the polis was a model for communal interaction on a city scale. In the village the hearth functioned as the

communal centering device. In ancient Egypt the public places were focused on the religious worship of the dead and the ruling class. Marketplaces were also gathering places.

The Greek polis introduced a new type of public space: the **agora**. (Fig. 3.7) The agora was the gathering place for voicing individual needs and making collective decisions. The agora had no particular shape but a cluster of buildings enclosed the space. The agora functioned as the marketplace and the public forum, where people could gather together.

Even the most primitive community must handle its common affairs and face its common difficulties, breaking unbearable tensions of anger, fear, suspicion, restoring the social equilibrium upset by assault and revenge, by robbery and arbitrary reparation. ... All these functions of the agora would pass into the city, to assume more differentiated forms in the complex urban pattern. But in its primitive state, the agora was above all a place for palaver; and there is probably no urban marketplace where the interchange of news and opinions did not, at least in the past, play almost as important a part as the interchange of goods. (Mumford, 1961)

While public spaces were not uncommon to ancient or modern cities, using the agora to foster the democratic exchange of ideas was unique in city development. Though later urban spaces became more specialized, the agora combined day-to-day uses with the less tangible needs of self-government--the ability to have a voice in the collective destiny of one's group. It was the closeness of daily contact and the work toward a greater common purpose which enabled the Greek city-states to be creative centers. (Fig. 3.8)

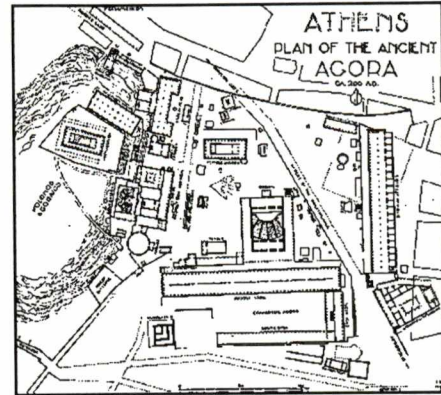


Fig. 3.7 The agora in Athens, Greece. Note the irregular arrangement of buildings around a central space. Source: Hiorns.



Fig. 3.8 Raphael painting, titled "The School of Athens," 1509-1511. In the public spaces, Greeks gather to learn and debate. Source: de la Croix.

In modern America the public space has either disappeared from city planning or lost its centering power. (Fig. 3.9) Suburban development patterns, extensive auto use, and its replacement by multimedia, offer limited or no personal interaction. (J. Jacobs, 1989)



Fig. 3.9 Downtown public space in an American city. Source: Whyte.

This thesis contends gathering places are as necessary today as they were in ancient Greek civilization. Providing places for gathering is essential to forging community and ultimately allow free expression in a democracy.

City Divisions in Democracies

Physically speaking, Greek planners understood there was an ideal size and design for the polis. Aristotle once said, "Ten men are too few for a city; a hundred thousand, too many." Too many voices and the governing process became inefficient because there were too many interests and too much conflict. Aristotle felt under a hundred thousand was a good number for democratic government.

The polis' physical size was small compared to its population. City sizes were recorded at only 100, 200 and 400 acres, while populations grew to 30,000 or 100,000. The polis' area was kept small partly to maintain a balance between country and city, between farmland and consumers. The bigger the city area the more difficult the city was to defend, traverse or feed.

The high population density increased opportunities for daily meetings. There was little landscaping within

the city. The immediacy of nature was sufficient for citizens.

In America cities have grown far beyond these proportions. To govern and build community in large cities, cities are broken down into natural or forced divisions.

The city can be subdivided into **neighborhoods**. The neighborhood has a center and an edge. The neighborhood's size is roughly quarter-mile radius from the center. (Fig. 3.10) This is the optimal distance a person will walk before turning to other means. (Katz, 1994) This thesis specifically covers this unit because today, rather than connect to the strip and help generate activity on it, neighborhoods around the strip are disconnected, and built at a low density. This thesis challenges this pattern of development.

Centers are the nuclei of neighborhoods. This is often the most memorable and busiest place in the neighborhood. Lynch notes the center is usually at an intersection. The **street** is therefore important to the life of a neighborhood.

The street is as old as the city itself. It is a linear room with, theoretically, no ends. The street stands for movement, change, goals and expectations. "The path is perceived primarily as a means towards a destination and is therefore, in principle, subject to this goal." (Thiis-Evensen, 1987, Fig. 3.11)

When buildings effectively define a space, the street becomes a room. Main street is functionally comparable to the agora. People gather on main street to hear news, conduct daily business and socialize.

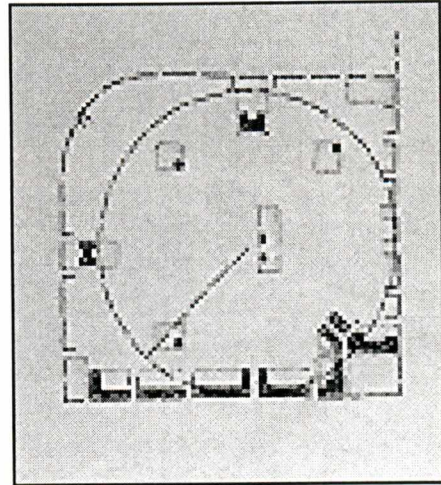


Fig. 3.10 Quarter-mile radius.

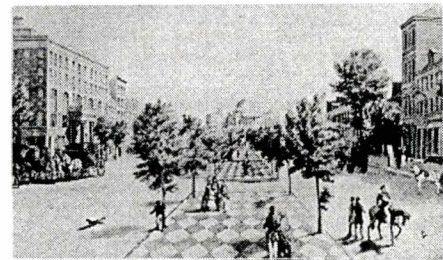


Fig. 3.11 Source: Thiis-Evensen. Caption from his book, "The street and the goal (project for Pennsylvania Avenue in Washington D.C., from Rudofsky, *Streets for People*)."

Main street's shape is symbolic of America's inherent attitude: to expand. The agora is enclosed on all sides. Main street is a seemingly infinite line. The Greeks can be characterized by the oddly shaped agora, symbolizing public-speaking and self-containment within natural boundaries. Americans can be characterized by the road: freedom, direction and destination.

The premise of this thesis is to return communal gathering to the strip by analyzing main street.

IV. Description of the Problem

The State of the Union: The Suburban Condition

Over the first half of the twentieth century America industrialized. Its factories were outfitted for mass-production. America had the capacity to arm itself when World War II began.

The suburbs grew in the post World War II prosperity. Old war factories were re-outfitted to overproduce cars, appliances and more--enough for most of the war-torn world. The U.S. became the world's supplier of goods and technology.

Ordinary U.S. citizens were sharing in the prosperity. The middle class swelled to an astonishing size. They had more disposable income than ever before. The upper class had always lived on the outskirts but the middle class had suddenly grown into a major consumer force. Developers targeted them with promises to own homes in new suburb developments, away from the crowded cities. This was sold as the postwar American dream. (Fig. 4.1) The cities were feared as being unsanitary and overcrowded. The middle class fled to the suburbs. Especially in the 1970s, the suburbs grew by leaps and bounds. (Kunstler, 1993)



Fig. 4.1 Older homes along the Magnolia Avenue strip.



Fig. 4.2 Suburban retail strip development. Cedar Bluff Shopping Center in Knoxville, Tennessee, 1995.

To accommodate the immigrants, shopping centers were hastily fabricated nearby. (Fig. 4.2) Stores were built along two-lane highways which connected cities and towns. The old highways once only had eateries and filling stations for travelers. Now developers were turning them into strip roads zoned only for commercial buildings. As the suburbs grew in population the strips experienced a development boom. (Fig. 4.3)

In Knoxville, Tennessee, the suburban population has grown by 42.10% in the past 20 years, while the inner city population has declined by 18.75%. The minority population has actually remained stable while the

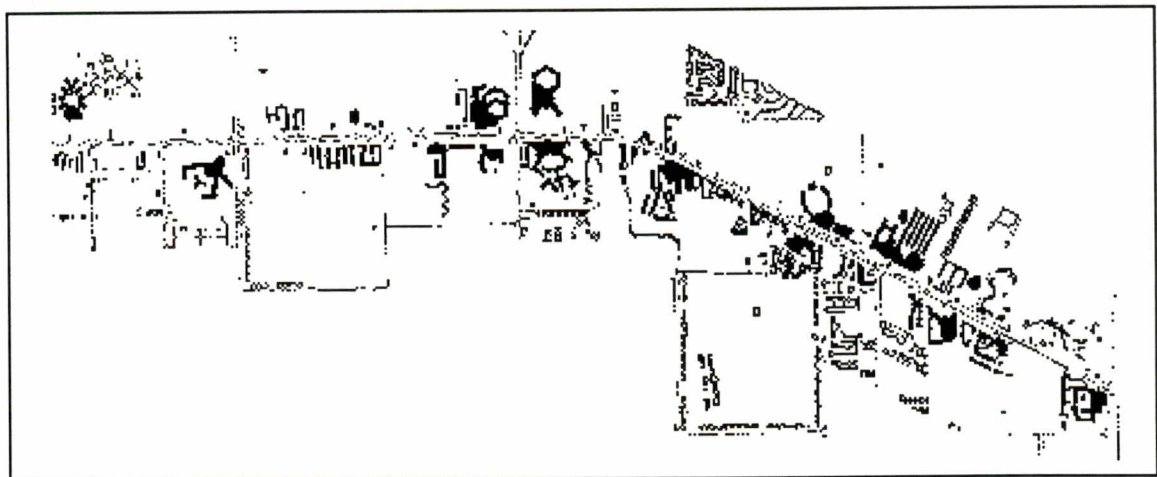


Fig. 4.3 Figure-ground diagram of the Las Vegas strip. Source: Trancik.



Fig. 4.4 Kingston Pike, a suburban strip in Knoxville, Tennessee, 1995.

white population has declined 25% in the city. A large minority of Knoxville's population lives in the suburbs.

If this trend continues a major portion of Knoxvillians will grow up in the suburbs, where civic gathering places are few and underused. (Fig.4.4) The suburbs and specifically the strip's main problem is its arrangement depends heavily on the car. Other forms of transportation are unaffordable, inefficient or undesirable. The result is people do not form community as coherently and comprehensively as in older city forms.

The suburbs have two aspirations/problems. First, the suburbs try to be the best of the city and the country. (Fig. 4.5) The strip is often neither because designers and developers overlook planning landscaping.

Second, the car has dominated as the favored mode of transportation in the suburbs. One might call it a Pyrrhic victory from the way the strip looks now. To

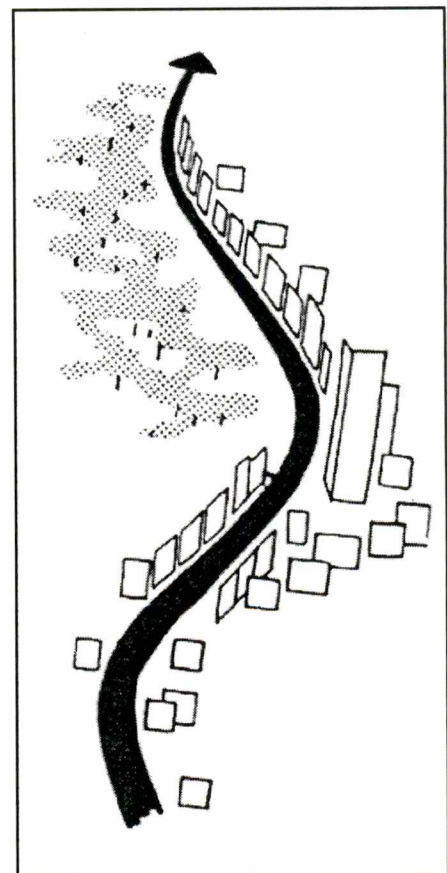


Fig. 4.5 The path separating city and country. Source: Lynch.

generate more interaction on the strip there needs to be pedestrian activity. This thesis proposes the car and the pedestrian can coexist when they have clearly defined boundaries.

Community

Referring to Chapter 2's definition of community, mutual location, an aggregation of people and interaction are building blocks to forming community.

Many locations have people, but without some public place set aside for interaction, community cannot form. Community takes time to build. Many daily/weekly meetings allow unnamed bonds to develop between individuals. (J. Jacobs, 1989) The aim of community-generating design should ultimately be to encourage daily gathering. (Fig. 4.6)

Outside of work and home there are gathering places for business or for pleasure. Today people mostly gather indoors at businesses, but remaining at a business to socialize can be awkward or expensive. (For instance, people can only spend a limited time at a restaurant or bar.) Being inside a car is also a very isolating experience.

Strip buildings are physically separated from each other by setbacks, parking requirements and planning done far away from the actual site. Gathering is therefore impeded by distances, lack of public space, dependence on the car and people's preference to stay indoors. An essential source of communal gathering has been overlooked in modern suburban planning: the public places.



Fig. 4.6 Street scene. Source: Cullen.

Public place is defined as “pertaining to a whole community; open or free to all; ...” (Webster’s Dictionary) True community gathering must not carry a social or economic price tag. Gathering at churches, businesses and residences will always stipulate some doctrinal, financial or social requirements but civic places, both indoor and outdoor, are made common to the entire community.

In Finding Lost Space, Fumihiko Maki’s linkage theory is discussed. (Fig. 4.7) Maki names three types of linkage of which the group form theory is most like main street. The group form consists of a frame upon which other structures are attached. The idea is that public spaces are formed before individual spaces. Individual spaces must always respect the form of the public spaces. (Fig. 4.8)

Today the building envelope reflects the inner spatial requirements and consequently does not contribute positively to the exterior space. (Prince, 1997)

This thesis proposes to return the strip to a “main street” arrangement. Maki’s theory lays down an important principle for repairing the strip. The public spaces should be formed first.

There are three types of public places: the civic building, the street and the square. The civic building gathers together some or many community services. (Fig. 4.9) The civic building can be molded by the community and can inform the community directly by its image and indirectly through community matters settled there. The civic building can serve as a constant reminder of the community’s beliefs.

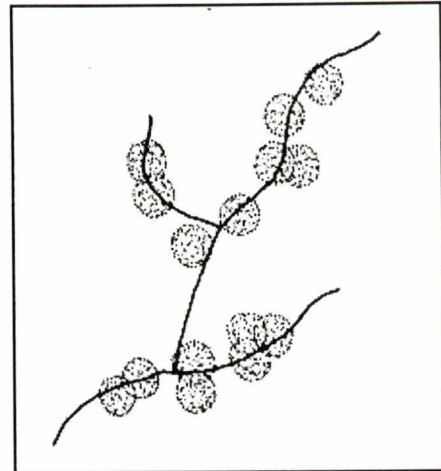


Fig. 4.7 Diagram of Maki's group form. Source: Trancik.

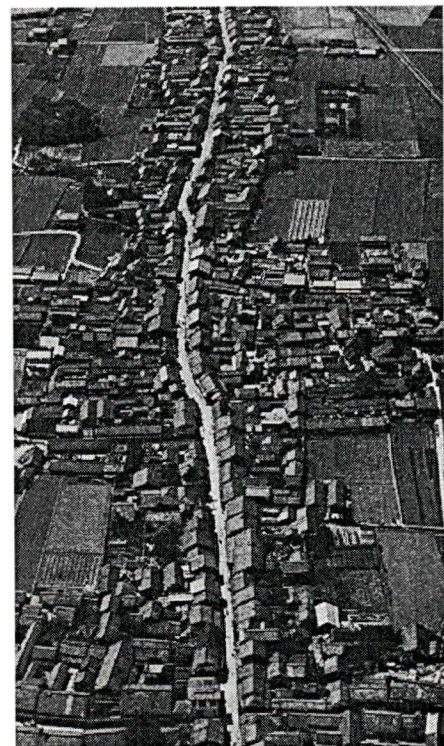


Fig. 4.8 The urban form of a Japanese village. Note the clear, intentional formation of the public street. Source: Trancik.

In The New Urbanism Peter Katz remarks, “Streets are not the dividing lines within the city. They are to be communal rooms and passages.” (Katz, 1994) Thus the street is an outdoor public place. In this room informal daily gathering can occur anytime. (Fig. 4.10)

The street is a linear open space. The third type of public place--the square, park, etc.--is a rectilinear open space. (Fig. 4.11) The square may hold crowds for rallies, protest marches, fairs or family picnics.

In a democracy public places are essential for exchanging ideas and making decisions at the grassroots where social activism starts. Today the internet, television and radio have made the world smaller than ever but the local community still needs a place to meet together face to face.

Christopher Alexander says the size of the local community is between 500 and 2,000 people and is the maximum at which decision-making can be effectively accomplished. (Moughtin, 1996)

Even though public meetings are not held on the street, the street’s gathering possibilities contribute greatly to local awareness. Issues often surface at casual on-street meetings, which can later be brought up at a formal community meeting.

Main Street

Main street is a centuries-old urban space. At least one street in town has always been preeminent for commerce and public gathering.

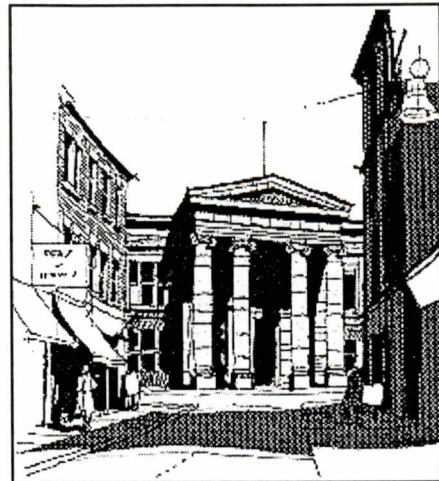


Fig. 4.9 Civic building. Source: Cullen.

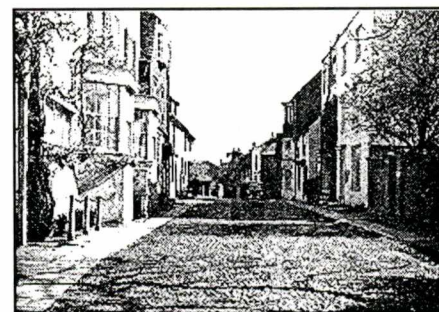


Fig. 4.10 The street space. Source: Cullen.

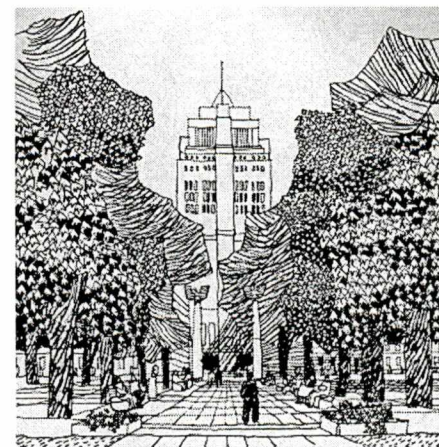


Fig. 4.11 Public square. Source: Cullen.

Neighborhoods have their own character. Main streets are often important links between them. People tend to be only concerned with the development of their own neighborhood, and as a result, main streets are forgotten or developed incongruently with the neighborhoods. This thesis proposes public space should be planned before designing the private spaces.

The main street arrangement builds community owing to basic design strategies. The design principles guiding main street's design will be the method guiding the project's design.

The **edge** functions in key space-forming ways. Having buildings side by side and along the street forms the street space. (Fig. 4.12) Main street has a strong street edge. On main street public space is connected and organized. People are not seen trekking across private property or crossing malevolent parking lots. There are parking lots behind main street buildings but more time can be spent walking in front of buildings than in these lots.

Trees, buildings and other materials can form the edge. (Fig. 4.13) Other materials need to be used in a systematic way so they can be read as an edge. For example, trees should be regularly and closely spaced.

Main street's strong edge enables building fronts to be seen equally by the passersby. The layout democratically gives visibility to each occupant. Civic and religious buildings attract people to them and they can be significant focal points for the community when located strategically on corners or at viewing angles.



Fig. 4.12 Street edge. Source: Cullen.

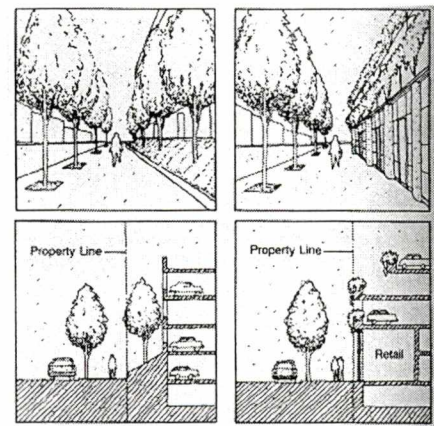


Fig. 4.13 Edges can be formed by different materials. Trees, buildings and earth can form the edge. Source: Hedman.

An **activated lower level** populated by mostly stores draws traffic and provides interest for pedestrians. (Fig. 4.14) First floor storefronts make the street safe and active more hours of the day. The lower level can have awnings or arcades for comfort and definition.

Gathering places can be designed to accommodate users. Wider sidewalks encourage people to chat or window shop. Trees can shade loiterers. Benches, fountains and grass invite lingering. (Fig. 4.15)

The street can be a room. The edges can form the walls. If the edge is punctured too often or the edges on each side of the road a too far apart the sense of the street being a room is lost. (Hedman, 1984)

The weak sense of space that streets of such proportions obtain has its counterpart in the very low and wide rooms popular in modern convention hotels. A typical modern "Grand Ballroom" may have floor dimensions of 80 by 125 feet and a ceiling height of 20 feet or less. A common observation about such spaces is that in spite of the large horizontal dimensions the visitor tends to experience the space as a sequence of smaller spaces, subdivided by tables, chairs, and people. In a street with a cross section of this proportion, the most noticeable sense of spatial definition occurs along the sides of the street where buildings, awnings, signs, and the curb line may combine to define a narrow band of space. (Hedman, 1984)

The height-to-width ratios are compared for streets. In Fig. 4.16 in the lower left corner of the street space in the sections is a person. From this person a line is drawn indicating the maximum angle of peripheral vision. The most desirable ratio is 1:2 because this is

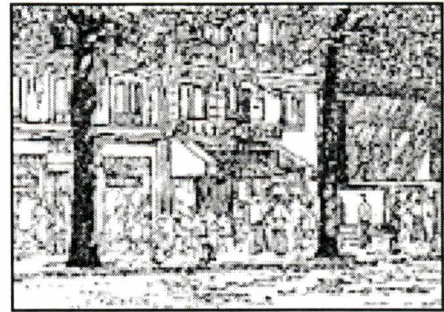


Fig. 4.14 Source: A. Jacobs. Activated lower level on Boulevard Saint-Michel in Paris.

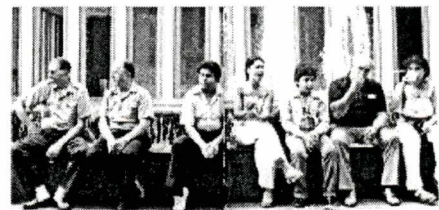


Fig. 4.15 People gather around a fountain. Source: Whyte.

where the view of the sky and the building are nearly equal.

When the height-to-width ratio is 3:2 or greater, the building's cornice is no longer within peripheral view.

Higher street walls also increasingly restrict the amount of sunlight available to illuminate and help define the space, although when sunlight does penetrate the effect may be far more dramatic due to the increased contrast in light values. Extended areas enclosed by very tall buildings may seem claustrophobic to some. (Hedman, 1984)

The ratios are good guidelines to follow when examining how to form the street spaces. Building edges can also be molded to form plazas where people can gather. Squares can be used for concerts, recreation, rallies and outreach opportunities. These places are some of the chief losses to suburban sprawl.

Mixed-use buildings contribute to street traffic because people use the building throughout the day for different reasons. (Fig. 4.17) There can be an all-night copy store, offices, boutiques, restaurants and apartments. If the building has a combination of users who are open at different times of the day the 24-hour use of the building can offer more safety and interest to the area. (J. Jacobs, 1989)

Diverse housing types promise a varied social mix. The retail/office/religious/civic uses must reflect the needs of the diverse residents. Main street's image reflects the community's personality, whether artistic, conservative, etc.

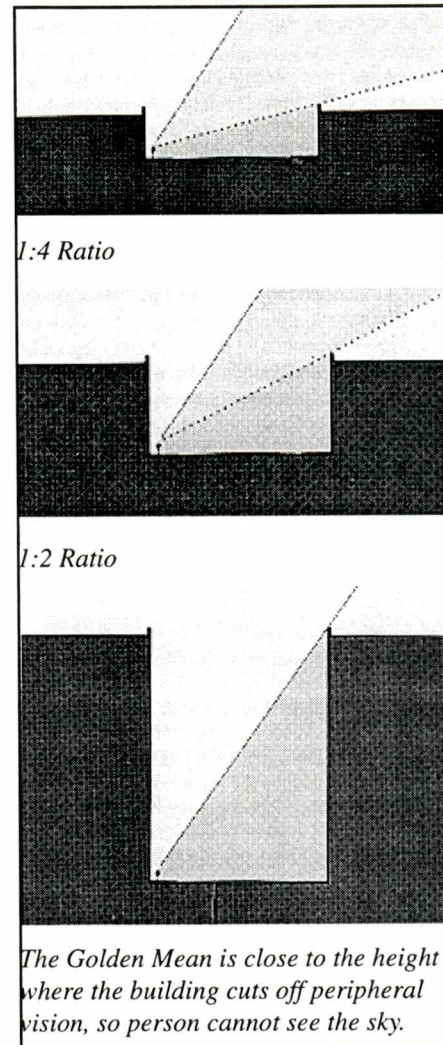


Fig. 4.16 Height-to-width ratio of street to building. Source: Hedman.

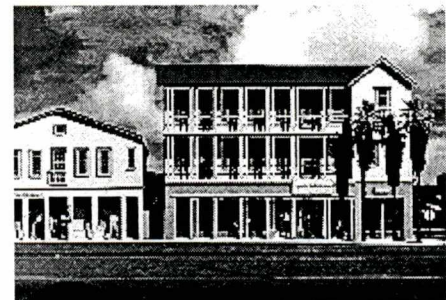


Fig. 4.17 A mixed-use building for Riviera Beach, Florida. The ground floor has retail. An arcade links the facade with others. Source: Katz.

A **medium to high concentration** of people living and working in an area raises the number of interactions and variety. Main street buildings stand side by side, raising their concentration and giving more transportation options, like walking. (Fig. 4.18)

Buildings are also more than one level. Main street has retail or offices at street level and more offices and residences on the upper floors.

Linkages between main street and the neighborhood are formed through an orthogonal network of alleys and secondary streets. (Fig. 4.19) This system keeps movement and interaction organized and efficient. Residents can access main street using side streets.

Even though main street has definite guidelines concerning the edge, concentration, activated lower levels, public spaces and mixed uses, the architecture has enough freedom to be **distinctive**. For older main streets indigenous materials are used.

Several old buildings in southern California are designed in the Spanish Mission style. Old Boston architecture is made of brick or stone. Climate, soil type, natural formations, the community and neighboring buildings can affect the design if the designer desires to contribute and not ignore the area's aesthetics.

There is a cult of personality and individuality in architecture. Vincent Scully writes about the issue.

It is curious that the houses there [at Seaside, Florida] which have been most published in the architectural press--though not in the popular press, which

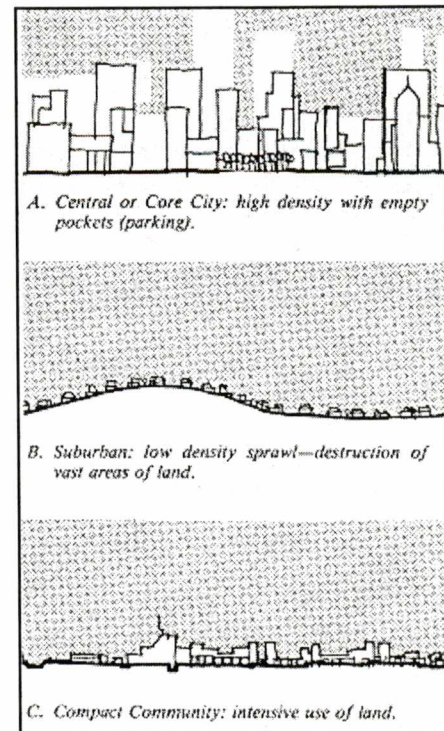


Fig. 4.18 Comparison of urban densities. The top picture is high density building. In the middle is the low-density sprawl. On the bottom is medium density, recommended for better use of land. Source: Trancik.

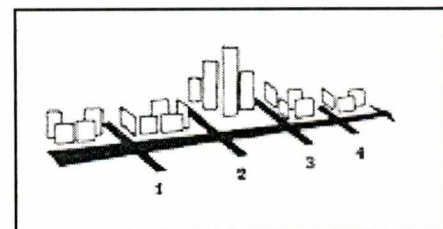


Fig. 4.19 A larger road is fed by smaller streets. Source: Lynch.

understands the issues better--are those which most stridently challenge the code, as if originality were architecture's main virtue and subversion of community its greatest good. (Katz, 1994)

The people in a neighborhood need to somehow support each other not just in political and social issues but even in architectural issues. The outside, after all, projects the unity or lack of between the residents.

The **node** as a centering device for a district, which is the same as the neighborhood, as Kevin Lynch defines the node. (Lynch, 1960, Fig. 4.20) In Lynch's studies people describe directions to places based on breaks in transportation. Therefore street intersections make a bigger impression on people's memories.

Nodes come in many forms. A node may be a point in the city. The node may have a linear form. Nodes can be a square or it can be a whole neighborhood, depending on what the piece is related to.

Nodes can also be linked together in linear fashion, resulting in a long thin city shape. (Fig. 4.21) Nodes can be repeated orthogonally, resulting in a square-shaped city. (Fig. 4.22)

The Strip

On almost every design point the strip differs from main street.

The strip has **no clearly defined edge**. Tightly formed public spaces cannot be found on the strip because the needs of individuals (business or private) and the

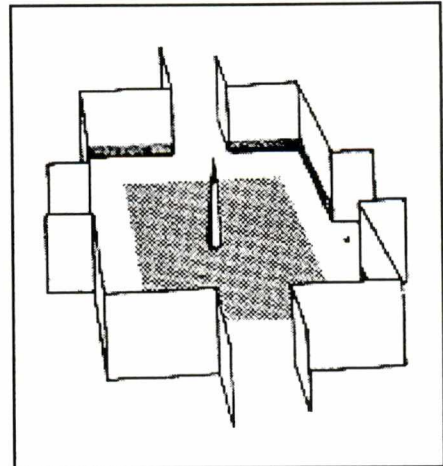


Fig. 4.20 A node with a central focus.
Source: Lynch.

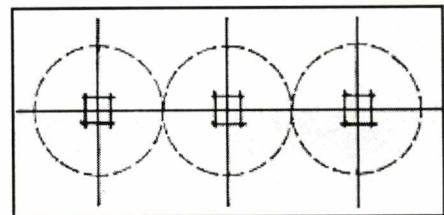


Fig. 4.21 Series of nodes along a road.

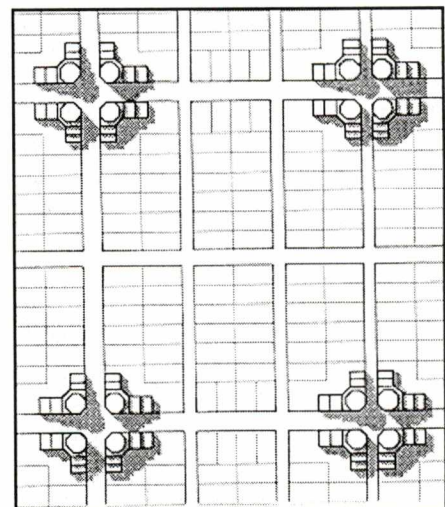


Fig. 4.22 Nodes can be repeated although each node will actually be distinguishable from one another. Each takes on or symbolizes the character of their respective neighborhoods.
Source: Hedman.

storage and maneuvering of the car are put first. In the suburbs, street space is vast and undefined. While cars know where to go pedestrians often look lost walking along the road far from buildings, which stand 50-100 feet behind the curb.

Strip developments have introduced a third dimension to pedestrian and car movement. (Fig. 4.23) On main street movement is linear, in the direction of the road. (Fig. 4.24) On the strip movement can occur on a plane. Strip mall sidewalks are superfluous because the parking lot has the dubious role of pedestrian walkway. (Fig. 4.25) People would rather walk the shortest distance from their car to anywhere at the mall.

Contrast can be engaging when used appropriately. Hedman warns against too much. (Fig. 4.26)

When every building seeks to be the center of attention, a novel and unique architectural statement unto itself, the buildings combine to an unexpected effect. Instead of providing an exciting counterpoint, the addition of each new and different building intensifies the impression of a nervous, irritating confusion. As more and more of the city is composed of unrelated bits and pieces, it becomes increasingly difficult to make rhyme or reason out of the resulting pattern. (Hedman, 1984)

The buildings may not be trying to make an architectural statement. Building designs for superstores, restaurants and other chains are meant to function like a corporate logo. The structure is given a memorable form and color. Making an impression, enables companies to plant an image on people's memories of concepts like reliability, excellence,

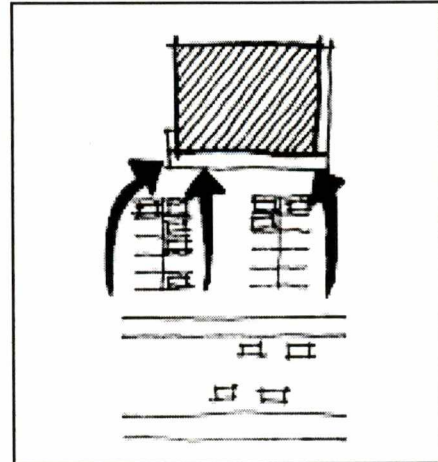


Fig. 4.23 Pedestrian circulation pattern on the strip.

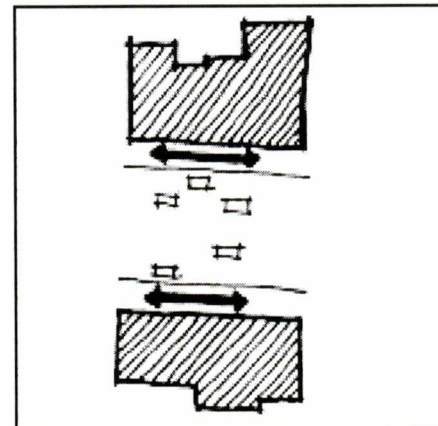


Fig. 4.24 Pedestrian circulation pattern on main street.



Fig. 4.25 A safer parking lot. In the middle of a parking lot a pedestrian median planted with grass and trees. Source: Rowe.

economy or comfort. Especially in this mobile society too much of the unfamiliar is daunting. Companies rely on their familiarity to attract customers. (Fig. 4.27)

Mass production and the **corporatization** of industry has turned out prefabricated buildings and designs which inhabit the strips around the country. (Fig. 4.28) Unfortunately the strip has many corporate, buildings which contrast with each other. Strips appear generic because the same building types occupy every one.

Inactivated lower level. Many businesses are small but supermarket chains like Kroger and Target are more isolated than ever before. They are big box buildings with a minuscule portion of windows around the entrance. Window displays have been sacrificed for the sake of cost efficiency. Signs and the building form are used to attract business. Large superstore chains rely on name recognition and sheer volume of products to draw customers.

Instead of mixed-use, buildings are **single-use**, i.e. commercial, residential, industrial, school, etc. Uses are grouped in zones of similar uses. For example, residential zones do not allow commercial uses within their boundaries. While the idea looks tidy on paper, separating uses makes people more dependent on cars because people must drive farther and more often between home and wherever else they want to go. Traffic jams are a frequent problem because at certain times of the day thousands of people are rushing to a particular zone.

Strip buildings are dispersed at a **low concentration**. The buildings are mostly one-story, scattered and often isolated. The car has made it possible to get to remote

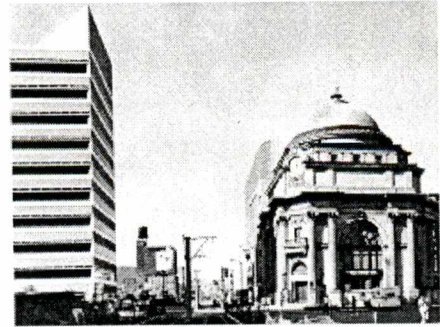


Fig. 4.26 The newer building, left, seems to have ignored the presence of the old bank, right. Source: Hedman.

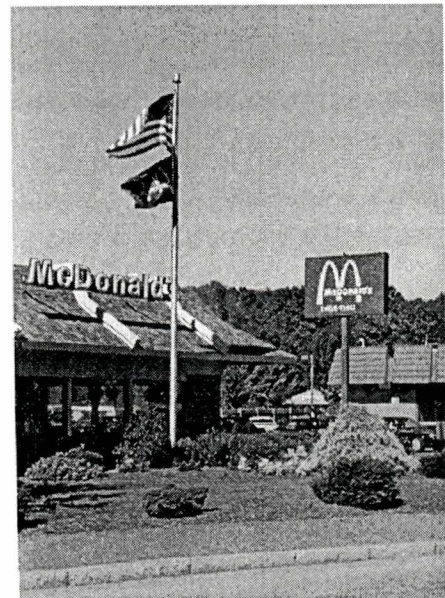


Fig. 4.27 McDonald's in Anywhere, USA. Source: Rowe.



Fig. 4.28 Best store. The building is a big box with windows located only at the entrance. Source: Rowe.

homes and workplaces. Our sphere of influence has physically widened but it is difficult to generate a sense of community when developments are spread so far apart.

Signage has replaced the building front as the chief method of communication on the strip. (Fig. 4.29) Signs are important because parking lots in front push buildings far back from the road.

Dead-end developments characterize planned suburban communities. Rather than an interlacing road network, like with main street, subdivisions dead-end. (Fig. 4.30) This puts a strain on main roads which must accommodate a high density of traffic. Strengthening and adding linkages between the strip and the surrounding area increases the activity and builds community.

If specific elements in the main street form are applied to the strip then this thesis contends the strip will become a communal gathering place again.

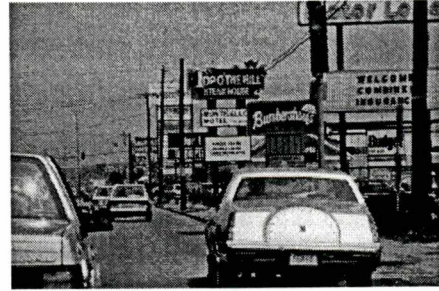


Fig. 4.29 Route 9 in Massachusetts, cluttered with signs. Source: Rowe.

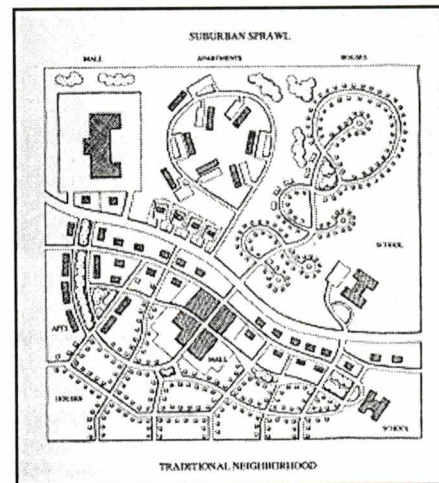


Fig. 4.30 Duany and Plater-Zyberk's picture comparing dead-end developments on the top half versus a plan of interconnected roads on the bottom. Source: Katz.

V. Objectives

This thesis concerns linking the residential neighborhood with the strip and creating public spaces to shape community. Often strips are surrounded by suburban residential tracts. These subdivisions, only a few hundred feet away, are separated from the strip by zoning codes and the well-meaning desire for privacy and safety.

Linkages

Connections. The strip has one main link between itself and the community: the road. Other links by sidewalks or buildings are almost vestigial or disconnected, but those links integrated main street with its neighborhood. Connecting the community and the strip can lead to uniting them. Some connective devices are roads, buildings and paths.

Structure in this thesis pertains to these connective systems. Suburban organization will be reviewed and reconsidered. The design must respond to the suburbs, which are an in-between condition, neither city nor country.

Zoning codes. Zoning codes separate uses in the city. They also dictate setbacks and parking requirements which have isolated buildings on the strip. These codes are revised because they affect the strip's ability to gather people. (Katz, 1994)

Distinctiveness. The strip has some distinctive qualities. Buildings capture the style of a point in time. The strip is an overall history of many periods. The architecture's distinctiveness should be shown.

Every place has its own character, or, as Norberg-Schulz puts it, a “spirit,” to which a designer can respond. So while external forces, like architects and owners, act on the site, internal contextual forces also influence the design. One goal is to design an appropriate response to these forces.

Flexibility. While one part experiences change another should remain stable, so there is continuity for the community. This is a form of linkage. The strip should be able to absorb many changes without diminishing its vitality.

Planning for the future is important. Many strip developments are speculative rather than responsive to real need. While there is no time to do economic studies, ways are explored to make the building and site adaptable to future needs.

Looking at the block structure will help create a flexible development. Repairing interconnections between the community and the strip should enable the strip to have more stability when its vitality does not hinge so much on one link.

Another approach is to look at building structure which can remain the same while uses change. For example there are several fast food restaurants on strips which are not sustainable structures since it is difficult to adapt the building for new uses. The building's forms are too distinctive in many cases.

Gathering Places

Placemaking. Forming gathering places has been overlooked in modern suburb planning. On the strip

the sidewalk has become almost useless, not a gathering place. Other spots provide gathering possibilities like outdoor seating areas and businesses, like bars, which promote gathering. As more activities go indoors, public spaces are not included in modern planning.

Some places appeal to different people. Places should be designed with at least part of the local community's needs in mind.

Layering. Streets which gather people effectively have some concepts in common. These streets often have multiple layering such as the building, followed by an arcade, then a tree-lined sidewalk, then on-street parking and finally the auto lanes. The layers add safety and a more varied experience to pedestrians. Layering also creates a sequential experience leading from public to private spaces. In the precedent studies, Kurfurstendamm and Castro Street both have many layers of uses.

Safety. Cars pose a life-threatening obstacle to community gathering on the strip. Creating safe areas preserves gathering. Children need a protected area where guardians can easily watch. The elderly like places safe from heavy traffic but still near the action. Providing a variety of spaces allow more kinds of people to use the area.

Sustainability

An overall goal of the thesis is to explore what makes a sustainable community. The Greek polis and the Fumihiko Maki group linkage model demonstrates the equilibrium found between the town and country. Spaces at the community's fringes restrict the town

according to rural needs. The town needs a certain amount of farmland to sustain it so both reach a balance which can fluctuate without collapsing.

Buildings, materials and spaces can be reused time and time again if designed with thought given to future needs. The thesis goal is to create a sustainable community, one which can to some extent constantly regenerate itself.

VI. The Project

Site Location

The site is located in Knoxville, Tennessee, (Fig. 6.1) at the intersection of Magnolia Avenue and Chestnut Street, near the I-40 Cherry Street exit. (Fig. 6.2)

The methods used in the project to recreate main street are to form linkages and to create public gathering

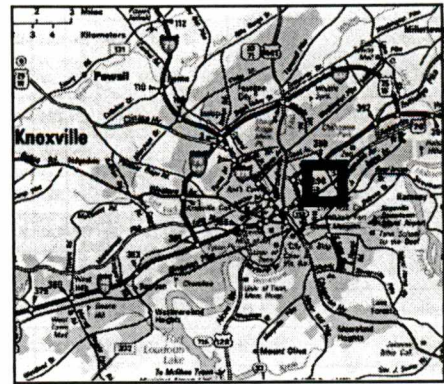


Fig. 6.1 Map of Knoxville showing interstate highways and major roads.

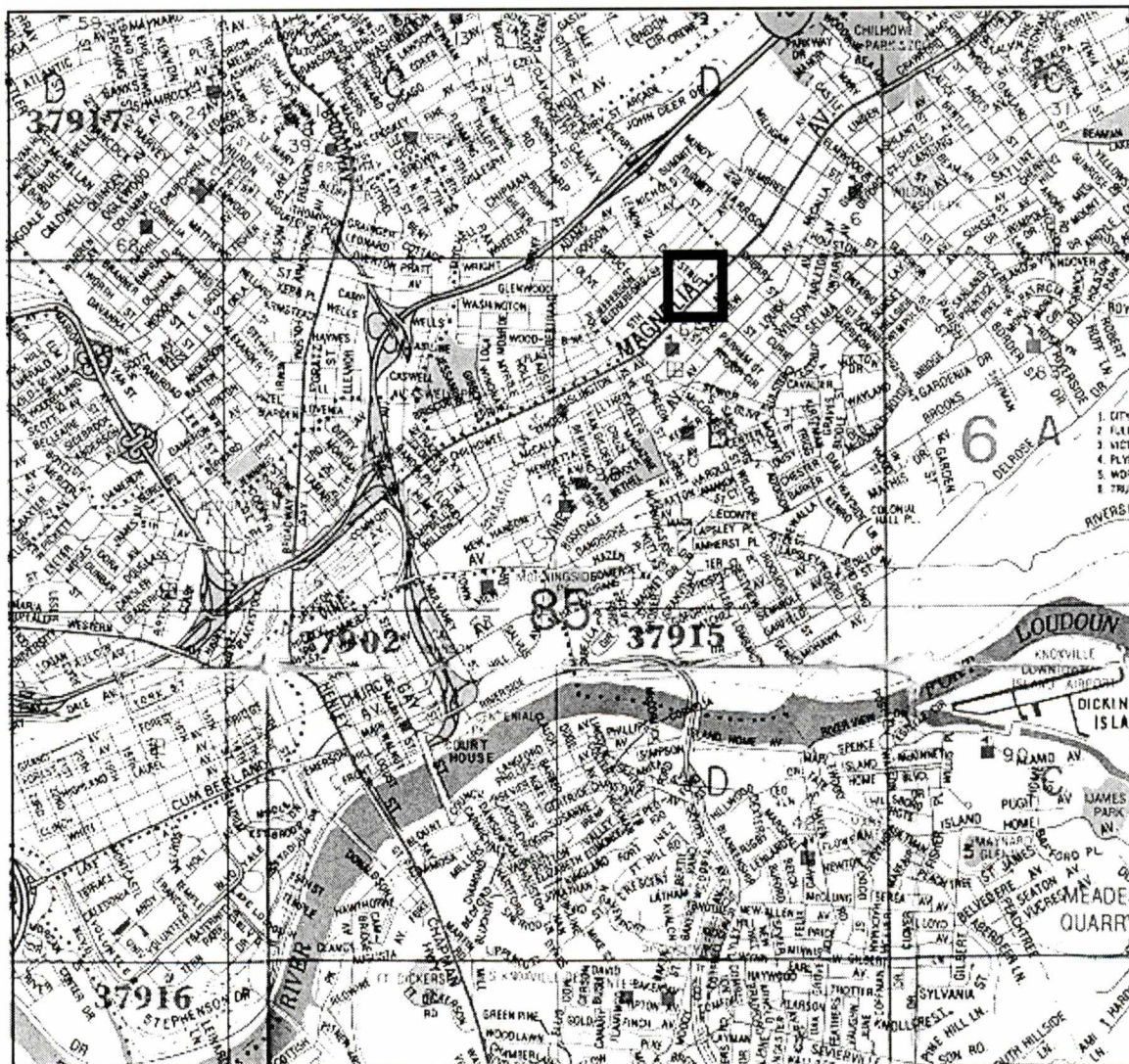


Fig. 6.2 Street map of Knoxville, TN, 1988. Downtown and The University of Tennessee are in the lower left corner. The site is 1 1/2 miles from downtown.

places. The site was selected because there is an organized street system in place. The rectangular grid has an inherent ability to link the neighborhood with Magnolia Avenue thus enabling the neighborhood to support the re-creation of main street. (A6.1 Location/Block/Quarter-Mile Radius)

The site's dimensions are approximately 450 feet by 530 feet. The site includes six properties and the public intersection. (A6.2 Site Boundaries and Existing Building Uses) The site boundaries are determined by considering the size needed to demonstrate street and building linkages and placemaking. Individual properties are also kept together.

The neighborhood building concentration is high enough to support local gathering. The Magnolia area within the quarter-mile radius has about 416 houses. The population may be 1,200-2,000 individuals, if three-to-five people live in each home. This number matches Christopher Alexander's estimate for the size of the local community. (Moughtin, 1996)

History of the Area

The railroad network expanded after the Civil War, connecting Knoxville to southeast and East Coast cities. Knoxville's location made it an important wholesaling center for the southeast. (Fig. 6.3) Among Knoxville's major industries were cotton, textile and clothing mills, and furniture and mantel manufacturing.

Magnolia Avenue and its neighborhood were planned in the 1880s. The neighborhood was called Park City

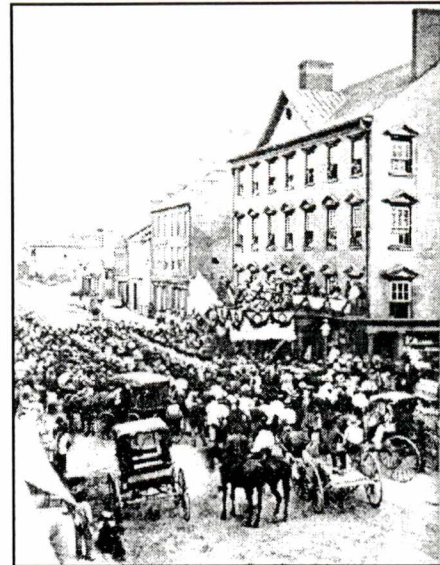


Fig. 6.3 Knoxville's main street was once Gay Street. The Lamar House, today called the Bijou Theater, once hosted President Rutherford B. Hayes on September 21, 1877. He is speaking to citizens from the hotel balcony. Source: Creekmore.

because it extended to Chilhowee Park, then called Lake Ottossee. The straight streetcar lines link the area with Knoxville. The suburbs were laid out in a grid. One streetcar line was laid down Magnolia Avenue.

The land was subdivided into plats 25-50 feet wide and 100 feet deep. The first homebuyers were middle and upper-middle class families. The avenue was primarily a residential boulevard then. At different times since its inception the street was lined with magnolia trees. (A6.3 View of Magnolia Avenue, circa 1930) The avenue was probably a promenade for residents. Each home had a front porch for socializing.

Park City's social composition shifted, to include more working class families in the first half of the twentieth century. Industries like Levi Strauss and Standard Knitting Mills set up factories there. Factory workers, salesmen, clerks and railroad employees moved in.

In the 1950s textile companies cut employment. By the 1960s the average resident was older. A housing project was built nearby. Newcomers displaced by urban renewal moved in. (Knoxville/Knox County Metropolitan Planning Commission, 1990)

The area has a fair amount of racial integration compared to most of Knoxville, although Magnolia Avenue may be one border between predominantly black and predominantly white neighborhoods. Most upper class families probably live elsewhere in Knoxville but professionals may have moved into some home in the historic district. The Park City neighborhood northwest of the site has been partially claimed as a historic district in the 1980s.

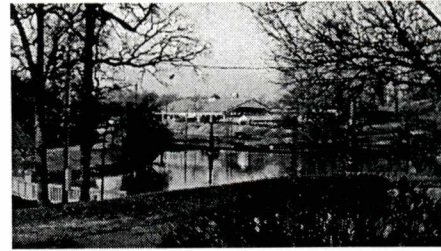


Fig. 6.4 View across the lake at Chilhowee Park.

From the 1950s until now Magnolia Avenue has been undergoing a transformation from a primarily residential street to a commercial road. Zoning ordinances have restricted buildings on Magnolia to only commercial and office uses. Its residential character has largely disappeared.

The Gateway, the Corridor and the Connector

Description

Magnolia Avenue has traditionally been Knoxville's gateway for travellers coming from the east coast. Decades ago the land's relative flatness, the grid and the rows of homes lends itself to a picturesque entry to the heart of the city. (Figs. 6.5-6.6)

Today Magnolia acts more as a corridor than a gateway between east Knoxville and downtown. The road is heavily used by industry and commuters. Over 20,000 cars travel Magnolia daily. One block from the site is a congestion problem at the Cherry Street intersection which connects to I-40. (A6.4 Traffic Problems)

Magnolia has potential to be a connector between neighborhoods. Main street is a connector because of its mixture and concentration of activities. Residents gather there daily.

Zoning. The properties facing Magnolia Avenue are zoned strictly for commercial and office uses. (A6.5 Zoning) There are residences on Magnolia. Present codes dictate, if the home has been abandoned for more than six months the property must comply with present codes.

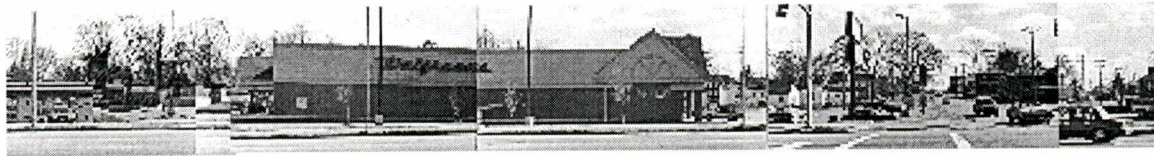
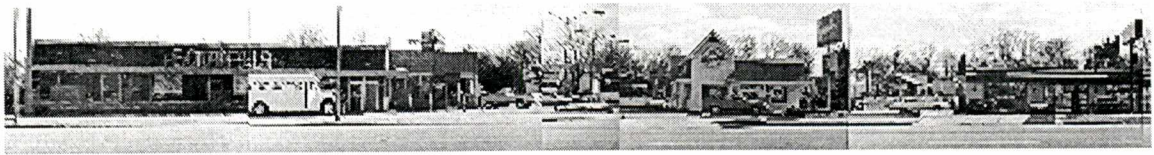


Fig. 6.5 Magnolia Avenue facing southeast, 1997. Read pictures from left to right and from top to bottom.

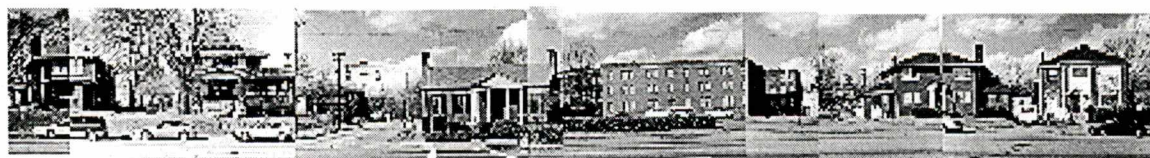
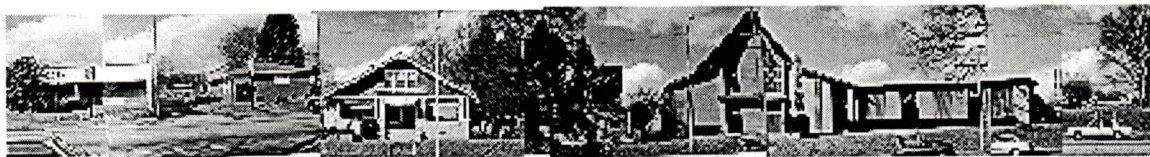


Fig. 6.6 Magnolia Avenue facing northwest, 1997.

Programming

A large portion of through traffic has rerouted to the Interstate 40. Most long distance travellers will not see Magnolia, but developing the street can reassert it's image as a graceful, localized entry to downtown Knoxville. Reasserting the entry will involve reconstructing edges using buildings and landscaping to frame the outdoor street spaces. Strengthening entry points can mark the node's boundaries.

To make Magnolia a connector or a public room for the neighborhood the road must be narrowed and somehow traffic should be tamed to make the intersection safer. Slowing down traffic can be done to some extent, but reducing traffic would exacerbate congestion on this important road and send cars to other routes. Losing a large part of traffic may hurt businesses on Magnolia.

The US Department of Safety published a booklet on describing traffic-calming strategies. Some ways to slow driving speeds are to narrow the road, introduce on-street parking and wiggle the road, making it harder to drive fast. These methods can be used to make the site special and to make Magnolia safer for pedestrians. Adding traffic lights also slows down passing cars.

To increase gathering at the site mixed-use buildings will be allowed. The zoning codes will be changed for this project to make Magnolia a mixed-use zone. (A6.6 Zoning-Design Response)

The thesis' broad idea is to apply nodes along the strip to integrate the surrounding residential zones with the

main road. A series of nodes helps close the width of the strip and provides centers for neighborhoods. The strip is able to be reclaimed as a gathering place for the community. (A6.7 Nodes)

The Block

Description

The block is the buildable land between the streets in a grid. (Fig. 6.7) A block is layered with green strip, sidewalk, front yard and building edge. (Fig. 6.8)

The way in which a block is developed determines its gathering potential. Among the older buildings the blocks in Park City already have green strips, sidewalks, front yards and a consistent edge. The strong edge forms the walls of the street, the public room.

The public room might only be the sidewalks but through analysis other public spaces are considered. Adding more types of public spaces offer an even greater diversity of gathering experiences. More types of people are attracted if different activities are provided.

Newer strip developments have destroyed some of this fabric, but this site was selected because, overall, the block structure has been left intact. The blocks average 800' x 150'. This is a 3-minute walk on the long side of the block. The 800 feet long block along neighborhood streets fosters a microcosm of the neighborhood. About sixteen plats can fit on one side of the block. (A6.1 Location/Block/Quarter-Mile Radius) Interaction occurs on these streets.

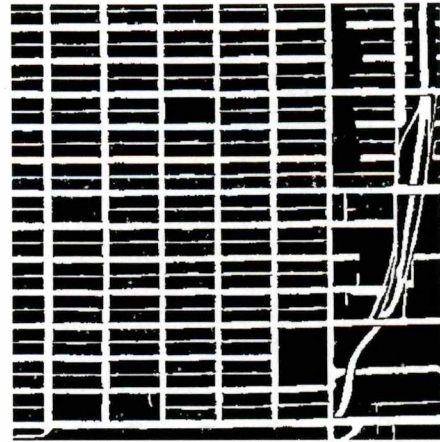


Fig. 6.7 Figure-ground of block structure for Santa Monica, CA.
Source: A. Jacobs.

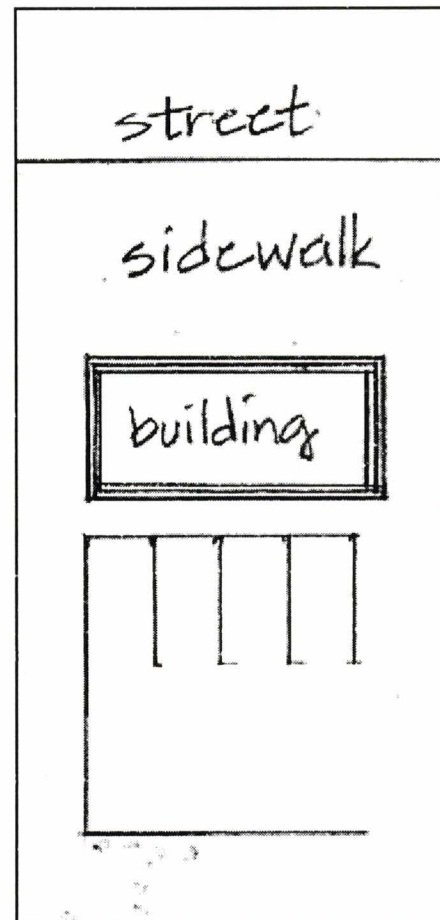


Fig. 6.8 Layering. From top to bottom: street, sidewalk, building, sidewalk and parking.

Platting Patterns. The block is rectangular so the land divides into regularly sized orthogonal plats. Magnolia has not seen the runaway development other strips have experienced. This is partly because the platting pattern limits the size of developments, which must satisfy parking and building requirements. Large supermarkets are built farther away where larger parcels of land are available.

The finer-grain plat sizes have yielded to larger plats over the past century. (A6.8-A6.10 Platting, 1924-1996) This is partly due to the plats switching from residential to commercial uses. Commercial buildings are fewer but larger. Parking required for the buildings also takes up a lot of space. The white space on Appendix 11 vegetation shows how much space is given to the car's movement and storage. Around most larger buildings very little space is left for landscaping. Parking arrangements leave little room for a higher density of buildings.

Figure-Ground. The rectangular grid has not changed since its establishment. The pre-World War II homes follow a 40-50 foot setback. (A6.11-A6.12 Figure-Ground, 1981-1996) During the second half of the twentieth century, strip designs have eroded the edge. (A6.13 Setbacks) The front setback on newer strip buildings are farther back to accommodate parking. (A6.14 Setbacks - Design Response)

Magnolia Avenue itself is 70 feet wide and the 45 feet setback on both sides makes the street very broad. It is important to narrow the road so Magnolia will have a more human scale and pedestrians will feel as though they are in a public room.

The medium density building also raises the population to support businesses and gathering places on the strip. Many elderly walk there for exercise or for socializing. Children play on the less trafficked neighborhood streets.

Programming

Strip buildings have been erected which ignore the older edge condition and the scale and style of the older buildings. But while Magnolia has changed to fit the needs of cars, the older grid still makes the area ideal for reintroducing main street elements. The edge, the building concentration and the grid can easily support the main street project. Magnolia's linkages need to be strengthened and reformed. Then public gathering places should be added to the site.

Linkages should be formed. The sidewalks need to be repaired and widened. On the southeast side of Chestnut Street sidewalks need to be built. Sidewalks on Magnolia will be widened to encourage more public activities other than walking to take place there. (A. Jacobs, 1993)

The building edge links the neighborhood with the site, but it also forms the street space. The building edge along Magnolia is 45 feet back from the existing street curb. The building edge must be closer to Magnolia, to get the street's height-to-width ratio nearer an ideal for this suburb, 1:2.

The building height should be taller to form a strong edge down the broad avenue. Newer developments are big boxes or fast-food corporate designs. They are out of scale with the pedestrian because their goal is

to attract the passing motorist. Kentucky Fried Chicken, Walgreens and Mrs. Winners restaurants both have a distinctive color scheme and mass produced forms. They starkly contrast with older buildings in the neighborhood.

The building concentration on Magnolia should match or slightly exceed the existing concentration because the concentration can distinguish the node from the rest of the neighborhood by its massing. The concentration also groups together more activities which raises the number of possible interactions.

The area is in the suburbs, a place which tries to offer both town and country. Landscaping and building materials can repair linkages between the site and the neighborhood. Using materials found in the area can create direct visual links. A tall row of trees can define an edge to Magnolia and Chestnut to narrow the streets. (Fig. 6.9) Trees provide comfort and a human scale. Smaller trees can define small public and private gathering places. Magnolia Avenue once had magnolia trees lining the road (A6.3 View of Magnolia Avenue, circa 1930) and they will be used once again.

Existing parking lots on the site do not contribute to Magnolia's formation into a public room. The lots are large open voids which are not usable as communal space. They and their curb cuts disrupt the street edge. The lots should either have buildings in front of them or have some other kind of edge so their openness is not the impression made on passersby. The number of curbs cuts should be reduced, too.

Layering will help form the gathering places along the street. Layering delineates separations between



Fig. 6.9 Trees shape the street space.
Source: Rowe.

Street furniture transforms these layers from zones of movement into places to stand or sit. Gathering should be urged by adding benches, shade, light and interesting views. (Fig 6.10) They also give a human element to the street.

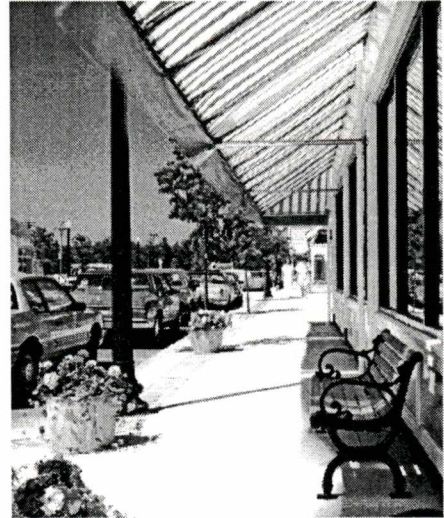


Fig. 6.10 Benches provide shoppers a place to rest in the public street space.

The Street

Description

Present suburb designs are often characterized by a series of cul de sacs connected to feeder roads. Park City/Five Points suburbs are older. Streets are laid out in a grid which is a framework organizing streets, buildings and sidewalks.

The Grid. The grid organizes movement and offers various routes to get to a destination. (Kunstler, 1993) President Thomas Jefferson called the grid a symbol of equality and consequently democracy. The grid is used by American planners to quickly subdivide large tracts of land, back when the country was unsettled wilderness. (Fig. 6.11) The pattern gives choice, relieves traffic congestion and makes equal-sized, orthogonal plats.

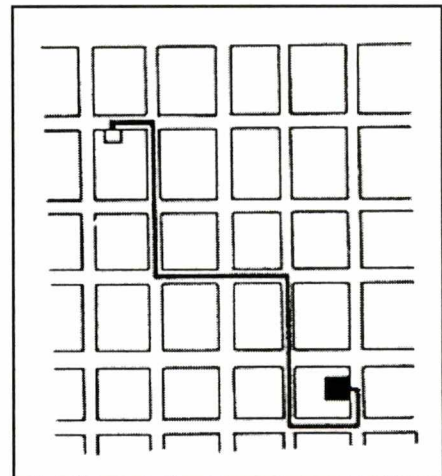


Fig. 6.11 The grid. Source: Lynch.

The grid ensures Magnolia Avenue is linked with surrounding neighborhoods. Without the organized infrastructure this thesis contends Magnolia would be unable to secure its reclamation as a neighborhood connector.

Street Types. The grid organizes different uses for each street. The streets can be classified as major avenue, neighborhood street, cross street and alley. (Fig. 6.12)

Magnolia, the avenue, can be the location for commercial, office, civic, religious and residential uses. Avenues are wider to carry more traffic and thus are more used than the other street types. Traffic also moves at higher speeds and moves more fluidly than on other streets.

The cross streets are along the short side of the block. The short side does not have many buildings facing it but the corners are prominent locations for religious, civic, commercial, and office buildings built within the neighborhood.

Most buildings face the neighborhood streets and not the cross streets. Residences are the primary building type on neighborhood streets.

The final category is the alley. Unlike more recently developed strip roads, Magnolia Avenue is not cluttered with utilities because most utilities are placed along the alleys. Placing services on the alleys has two advantages. Deliveries and garbage pickup, do not impede traffic and utility poles and wires do not mar the view on the main roads.

The street system organizes movement and use. On suburban roads utilities, services, and primary users are packed on the same road. This multiple use for roads can be a source of traffic delays, sight obstruction and aesthetic offense. (Fig. 6.13)

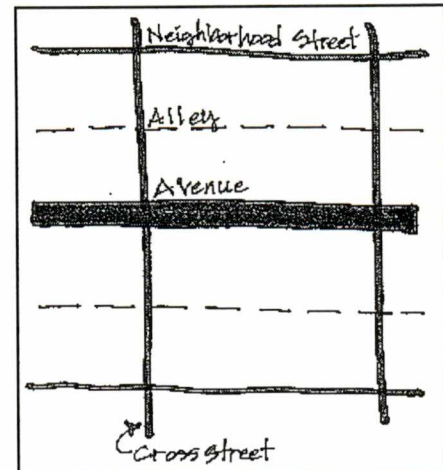


Fig. 6.12 Diagram showing the different street types.

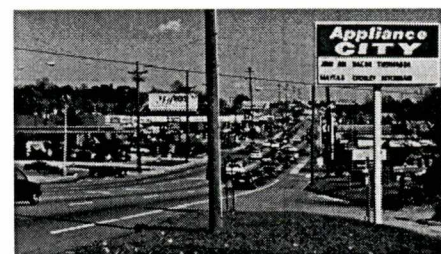


Fig. 6.13 Utility poles crowd the view along Kingston Pike in Knoxville, TN.

Traffic Lanes. Magnolia Avenue has four lanes of moving traffic, a center lane for turning and a parking lane on each side. The alleys are a single lane and they are one way. (A6.14-A6.15 Traffic Lanes)

Programming

Park City's grid is well-organized making it more favorable to the objectives of this thesis than strip road in other areas in Knoxville. The streets interlace with one another offering alternative routes, relief and neighborhood/strip linkages.

Magnolia is very wide and because it handles so much traffic the part which passes through the site is not pedestrian-friendly. (Fig. 6.14) Magnolia should be narrowed to slow down traffic and to make Magnolia feel more like a outdoor space to pedestrians and motorists.

On the street a median strip can be planted with trees down the center of the street. The median divides the width of the street in half and provides a place for pedestrians crossing Magnolia to pause.

On-street parking can be a buffer protecting pedestrians from cars. Textured paving and a slight level change makes the node more distinctive.

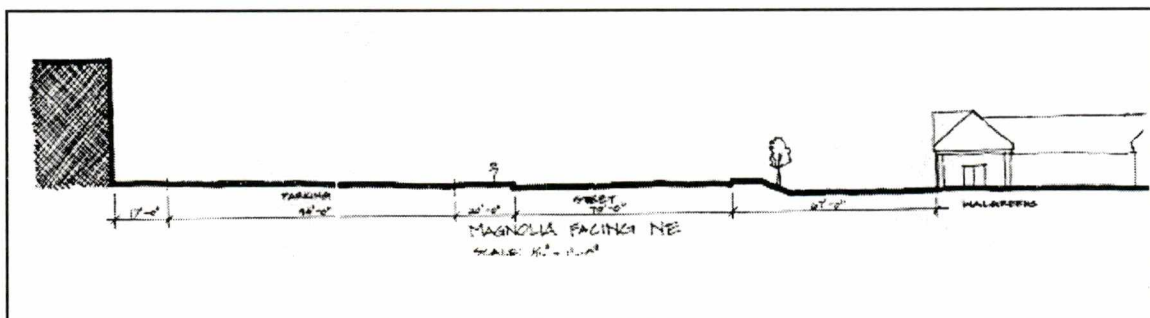


Fig. 6.14 Magnolia Avenue section through E. Fifth Avenue Baptist Church and next to Walgreens.

The Site

Square footage for site:

North (200' x 175')	78,750 sf
East (200' x 170')	79,875 sf
South (170' x 170')	42,900 sf
West (150' x 175')	38,500 sf

North Section (78,750 sf)

The north section already has two historic places, the old Park City branch library and Fifth Avenue Baptist Church's building, located on the site. (Fig. 6.15) Additional landscaping and outdoor spaces are planned for this corner.

East Section (79,875 sf)

The east section is occupied by a Walgreens drug store, which was built in 1995. (Fig. 6.16) The store is heavily used by the local neighborhood so it will be integrated into the redesign.

A mixed-use building is planned for the site. The mixed-use building will bring more people to the area and add an anchor to the corner.

An arcade at the bottom of all the mixed-use buildings facing Magnolia in the program will add weather protection for pedestrians. The arcade will also increase the sidewalk width without pushing the building edges farther from the street. This helps the street width stay closer in proportions to a reasonable height/width ratio.

South Section (42,900 sf)

The existing Kentucky Fried Chicken is not included in the new design. A mixed-use building replaces it.

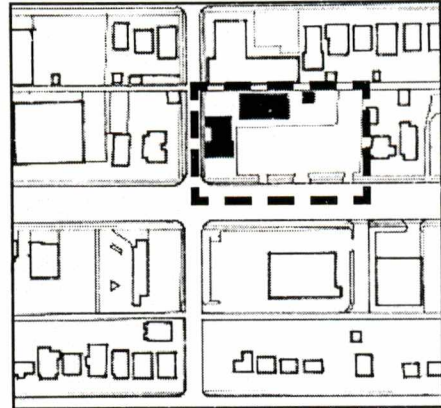


Fig. 6.15 North section with McDonalds headquarters and a wing of Fifth Avenue Baptist Church.

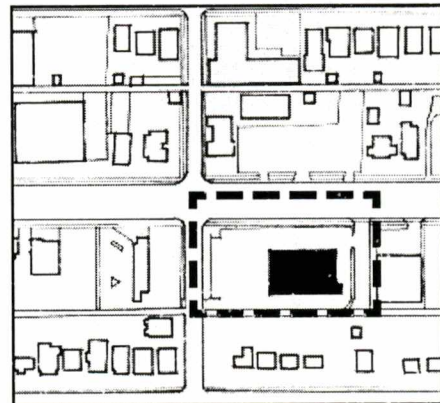


Fig. 6.16 East section with Walgreens store.

(Fig. 6.17) The building is assumed to be the same as the mixed-use building designed for the east section and therefore will not be designed.

West Section (38.500 sf)

There are two existing houses on this corner which were built in the 1920s. (Fig. 6.18) The homes are in good condition and reasonably attractive, so they will be maintained.

Site Analysis

Power/Telephone/Sewer. The power/telephone lines have been hidden along the alley. The sewer system is located on the main road and on neighborhood streets but sewer openings are concealed in the street curbs. (A6.16 Power/Telephone/Sewer)

Pedestrian/Vehicular Circulation. In the Pedestrian/Vehicular Circulation diagram streets are shown by a solid or dashed line according to the amount of traffic. (A6.17-A6.18 Pedestrian/Vehicular Circulation) The more solid the lines are, the heavier the traffic. Magnolia has the most use. The dotted lines represent pedestrian circulation. Magnolia will need to be made much safer for pedestrian movement.

There are numerous curb cuts on Magnolia for parking lots. The driveways slow down traffic but they also interrupt building and landscaping edges, eroding the formation of the street/room.

Landscaping. Some trees are clustered along Magnolia. They are mainly around homes and do not contribute to forming public spaces. Grass areas are limited to private property except for some grass strips next to the sidewalks on Magnolia and Chestnut. Most

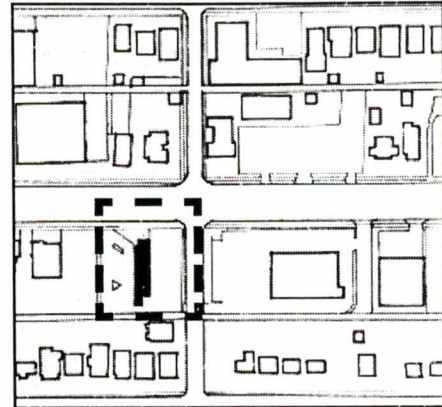


Fig. 6.17 South section with Kentucky Fried Chicken restaurant. This is the only building on the site which will be eliminated.

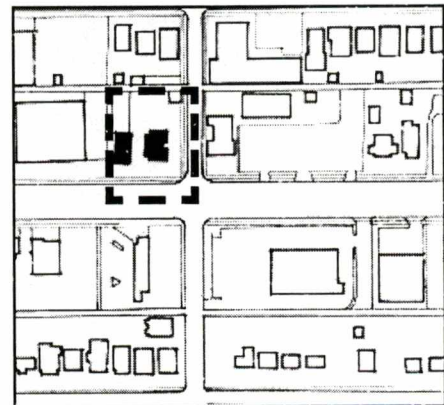


Fig. 6.18 West section showing existing homes.

otherwise grassy places have been paved with parking lots and driveways. Urban shade trees are missing on Magnolia. (A6.19-A6.20 Vegetation)

Contours. The site is not very steep except in front of the sidewalk on the northwest corner of the site and on the southeast corner behind Walgreens. (A6.21-A6.22 Contours) The steep slope on the northwest corner is not a serious problem for erosion since it is covered with grass.

The pronounced slope to the rear of Walgreens is a challenge for locating parking and for making service access to Walgreens. (Fig. 6.19) There are retaining walls along the alley and between Walgreens and the neighboring group of shops. The walls must remain to support Walgreens' foundation, but a service entry must be included in the new design.

Drainage. Drainage is not a problem because there is enough slope for draining rainwater. The minimum slope is a 1/4 inch per foot. (A6.23 Drainage)

Lighting. Existing lighting on the site is very bright to simulate visibility during the daytime. The city uses standard lamps normally seen on the interstates. (Fig. 6.20) The lamps are out of scale with pedestrians and are meant for vehicular traffic.

Sun Path. The facades facing the north side of Magnolia do not receive direct sunlight. (A6.24-A.25 Sun Path) Lighting keeps the Magnolia facade from being very dark. The parking lot on the north section needs protection because the asphalt will make the area inhospitable to pedestrians.



Fig. 6.19 The view along the alley behind Walgreens. The massive retainer walls will pose a challenge to planning service circulation and parking.



Fig. 6.20 Street lighting on Magnolia Avenue facing southwest. The high lamps flood light onto highways. For the pedestrian scale of the project human-scale lights seem appropriate.

Public Transportation. Knoxville has a small public transportation system compared to other cities. Shuttle vans help people with special needs. The bus is the only public transportation, which runs regularly on Magnolia. (A6.26 Public Transportation) The buses run Monday through Friday 5:25am - 9:05pm and from 5:25am - 7:15pm on Saturdays. Bus trips and their hours have been cut back.

Public transportation contributes to gathering the neighborhood on Magnolia. The more important the intersection becomes to the area, the more the desire to gather there. Bus stops at the node would be another reason to gather there.

Existing Buildings. Most buildings in the immediate vicinity are community services, restaurants and a drugstore. (A6.2 Site Boundaries and Existing Building Uses) There are five existing buildings which will be kept on the site. (Fig. 6.21) Two are old homes, both occupied by community service programs, on the site's west corner. On the north corner are the McDonald's headquarters and a wing of Fifth Avenue Baptist Church. These buildings are in good condition even though most of them are over sixty years old.

A Walgreens drugstore stands on the east corner. (Fig. 6.22) The store will stay because it is well-patronized by the neighborhood, even though it does not conform to new site stipulations. Tearing down all nonconforming buildings wastes materials, labor and time. Salvaging and integrating some of these buildings will save costs. The thesis project must repair the existing fabric. The Walgreens is a way to test the relinkage methods.

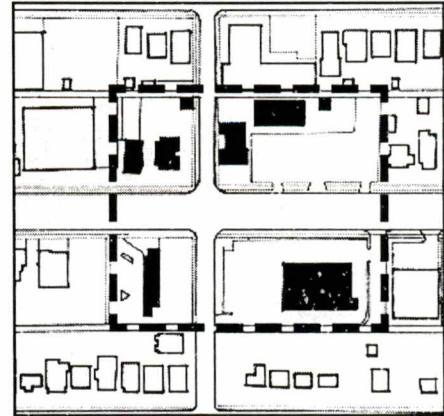


Fig. 6.21 Existing buildings on and around the site. The site is shown with a dashed line.



Fig. 6.22 Walgreens store on the corner of Magnolia Avenue and North Chestnut Street.

Site Codes.

Building Uses and Types

Mixed-use: retail, office, civic and residential.

Parking (Calthorpe, 1993)

On-street: Parking will be provided on Magnolia Avenue and Chestnut Street. The spaces will be a minimum of 9 feet wide and 22 feet long.

Off-street: Parking shall be provided behind buildings. Curb cuts shall be limited on main roads.

Sizes: 1 space/1000 sf retail
1 space/1000 sf office
1 space/1000 sf residential



Fig. 6.23 Once the Park City Library, now the McDonald's headquarters for Knoxville.

The Building

Description

Significant Buildings and Places. On the site is the old Park City Library, now the McDonald's headquarters in Knoxville. (Fig. 6.23) The branch library, built in 1930, is in the Georgian style. The building helps contribute to the edge on the northwest side of Magnolia. This place and the two houses across

Chestnut from the library remain since they support the structural fabric of the area. (Fig. 6.24)

Bill Meyer baseball stadium, Chilhowee Park and the Knoxville Zoo. (Fig. 6.25) The homes in Park City historic district are a variety of styles. There are Queen Anne, Eastlake, Bungalow and Italianate style homes to name a few. Most are in good condition.

The homes, churches and commercial buildings are primary use buildings but, like the street, there is a second type called the outbuilding. Outbuildings are small buildings which usually face the service alleys. (Fig. 6.26) They are used as garages and storage rooms. They sometimes served as servants quarters for larger homes. The outbuildings provide another layer of detail and flexibility in building types.

There are many interesting buildings near the site. Parkridge is a historic district so there are numerous homes, churches and a school to use as precedents in style or concept. One building, though, does not dominate the project in its design influence. Instead, the collective buildings exert an overall influence.

The strongest visual element of the neighborhood's building is the porch. Front porches are the gathering places for the homeowner. This is a place for people-watching, being seen and entertaining. Its function is similar to the battlements on a castle. The porch is a place to assert one's presence in the neighborhood and a place to survey the land. The whole focus of the porch is outward. (Fig. 6.27)

One former resident recalls growing up in the neighborhood in the 1940s and 50s. After work

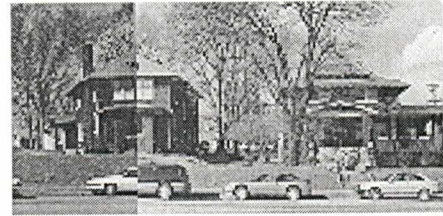


Fig. 6.24 Two houses on the west section of the Magnolia site stay in the redesign. The house on the right is a Bungalow style house.

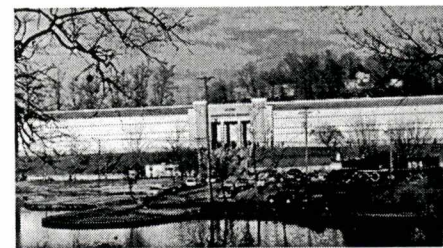


Fig. 6.25 Jacobs Building, the exhibition hall at Chilhowee Park.

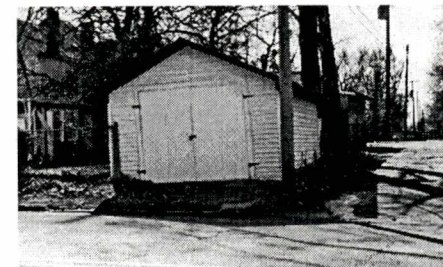


Fig. 6.26 An outbuilding along the service alley.



Fig. 6.27 Two houses on Magnolia show the typical form of porches. Porches are generously sized, unlike today where they are often too shallow or too small in both directions. 1996.

neighbors sat on their porches and talked until dark. Residents regularly caught up on news, like births, deaths, and engagements. Neighbors exchanged advice, helped raise each other's children and entertained. The porch was vital to promoting interaction in the neighborhood.

Magnolia Avenue has sidewalks for the public, but vacant lots and erratically placed strip buildings have eroded the spatial definition and attraction of these public spaces.

Programming

In the neighborhood there are different types of homes. One-, two- and three-story homes are dispersed throughout the neighborhood. Outbuildings add another layer of diversity. The program should include many types of housing to encourage many types of families to dwell there.

The commercial uses should be visible from the road, while the apartments should have enough privacy, especially where they face busy Magnolia Avenue.

The building type is mixed-use, but commercial, office or civic uses must occupy the bottom level and residential or office uses can occupy the upper floors. Having an activated lower level helps make the area safer because the storekeepers and customers act as watchful eyes. (J. Jacobs, 1989) The businesses are also a way to gather people together.

The bottom floor is commercial or office while the upper floors are residential. The upper floors consist of various housing types. Efficiencies, one-bedroom and two-bedroom apartments are located there.

Residences, workplaces, public buildings and religious buildings all combine to make the neighborhood useful all day and into the evening.

The buildings which will face Magnolia Avenue and North Chestnut Street will be at least three levels high so the buildings have a presence on the street and they have a density of activities to support gathering. The building height is kept close to the scale of other older houses and buildings.

The building design may have some distinct differences but unless it houses an important function then it is best to follow the neighborhood's character. Linking the design with the neighborhood can be accomplished by indicating the same materials. Forms which relate to the area can also be a motif for the design. The design ingredients can be found within Park City's architectural language: porches, roof pitches, materials, etc. Going beyond this area is unnecessary and may bring discordant forms.

The buildings should link with the neighborhood using form, material and/or directly by closing the distance between it and the homes. The buildings should also link with the Walgreens and define the building's entrance since it is set back from the street.

Finally, gathering places are vital to the project's success. Gathering should happen at varying degrees of privacy within the building design. Communal rooms and porches can distinguish the whole complex from strip buildings. The form of these spaces can reflect influences from the neighborhood.

Spatial Requirements

East Section (79,875 sf)

Mixed-use facility: Main Buildings

Ground Level

Retail	8800 sf
--------	---------

Second Level

One-Bdrm Apts	400-500 sf ea
---------------	---------------

Efficiencies	200-300 sf ea
--------------	---------------

Third Level

Two-Bdrm Apts	700-1000 sf ea
---------------	----------------

Parking/Circulation (28 spaces)

5,000 sf

Mixed-use facility: Townhouses

Ground Level

Offices	600 sf ea
---------	-----------

Second and Third Levels

Townhouses	1,100 sf ea
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Building Codes

Setback: The building setback shall be located 10 feet from the main street curb. Setback shall be 10 feet on sides facing secondary roads. There is no setback limit for sides which face alleys or face other plats.

Materials: Brick, stone or clapboarding must be used on at least 20% of the street facade.

Scale: Three floors or 45 feet shall be the maximum buildable height. Maximum width of a bay shall be 50 feet.

VII. Precedent Analysis

The Node

Transit-Oriented Development

Description: In the mid-1980s TIME magazine published an article about an alternative to the suburb. Developer Phil Angelides persuaded his partners to enlist the help of Peter Calthorpe, an architect and urbanist, who had developed a city-building module called the TOD or Transit-Oriented Development.

A TOD is the average size of a circle with a quarter-mile radius. Every TOD is a neighborhood unit including a core commercial area, public space, a transit stop, offices and residences around the core. (Fig. 7.1) A mass-transit system links the TOD's with industry, downtown and other TOD's. (Fig. 7.2)

Implications: The TOD is a prototype for city building. The TOD is designed to be a self-sustaining entity which can be linked to form a city or simply remain freestanding.

For this thesis the TOD's design elements (public open space, transit stop, commercial core, offices and residences) are given as basic city ingredients. To create a node for this thesis there are basic pieces which should be identified and used in the final project.

Piazza San Marco, Venice, Italy.

Description: The node is an element which can be used to orient people and should thematically reinforce the neighborhood's distinctiveness. Lynch names the Piazza San Marco as an example of a distinctive node.

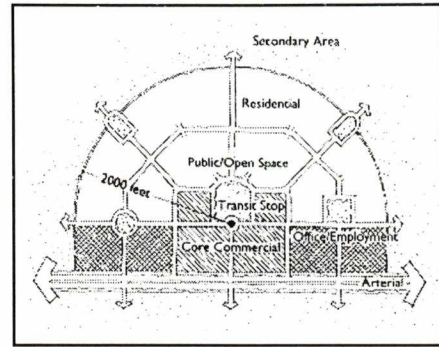


Fig. 7.1 Diagram showing the main parts of the Transit-Oriented Development. Source: Calthorpe.

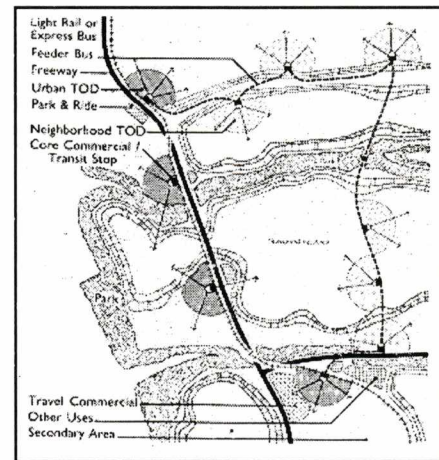


Fig. 7.2 A masterplan illustrating the additive capability of the TOD concept. Source: Calthorpe.

(Fig. 7.3) The piazza has a distinctive appearance and its openness contrasts with the narrow streets leading to it. There is also a view to the sea further reinforcing its specialness.

Implications: The buildings around the Piazza San Marco are made of the same materials as the buildings throughout the city, but the piazza asserts itself by the buildings' monolithic massing, a monumental tower, striking open space and an unencumbered view of the sea. The piazza distinguishes itself from the finer-grain residences around it. The design can likewise look at area styles and while it can share common characteristics with the area it can also be distinctive through its massing and use of details.

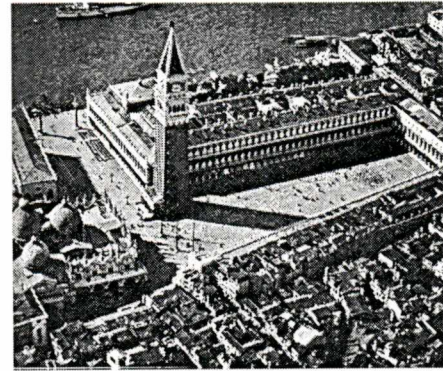


Fig. 7.3 Piazza San Marco in Venice, Italy. Source: Lynch.

The Street

In the past main street drew people from the area together. People were attracted by activities such as people-watching, shopping, business, and public gathering for parades or over election results.

The important facets of main street have been enumerated but here are some examples of streets which possess these design characteristics.

Kurfurstendamm, Berlin, Germany.

Description: This street is not in the U.S. but its dimensions and purpose are similar to Magnolia Avenue. (Fig. 7.4)

Kurfurstendamm is a major commercial street in Berlin. The street began as a boulevard. Boulevards usually are broad, well-maintained, and more

Layering of spaces

Building/arcade/trees/
auto lanes/median.

Layering offers a variety
of experiences on the
boulevard.

Placemaking

Many store fronts give
transparency to the
pedestrian level.
Transparency makes
pedestrian view
interesting.

Wide sidewalks
encourage unhurried
strolling.

Center median is
uninterrupted by any
turning lanes.

Large trees lining the
street and an arcade
create space and scale
and offer comfort to the

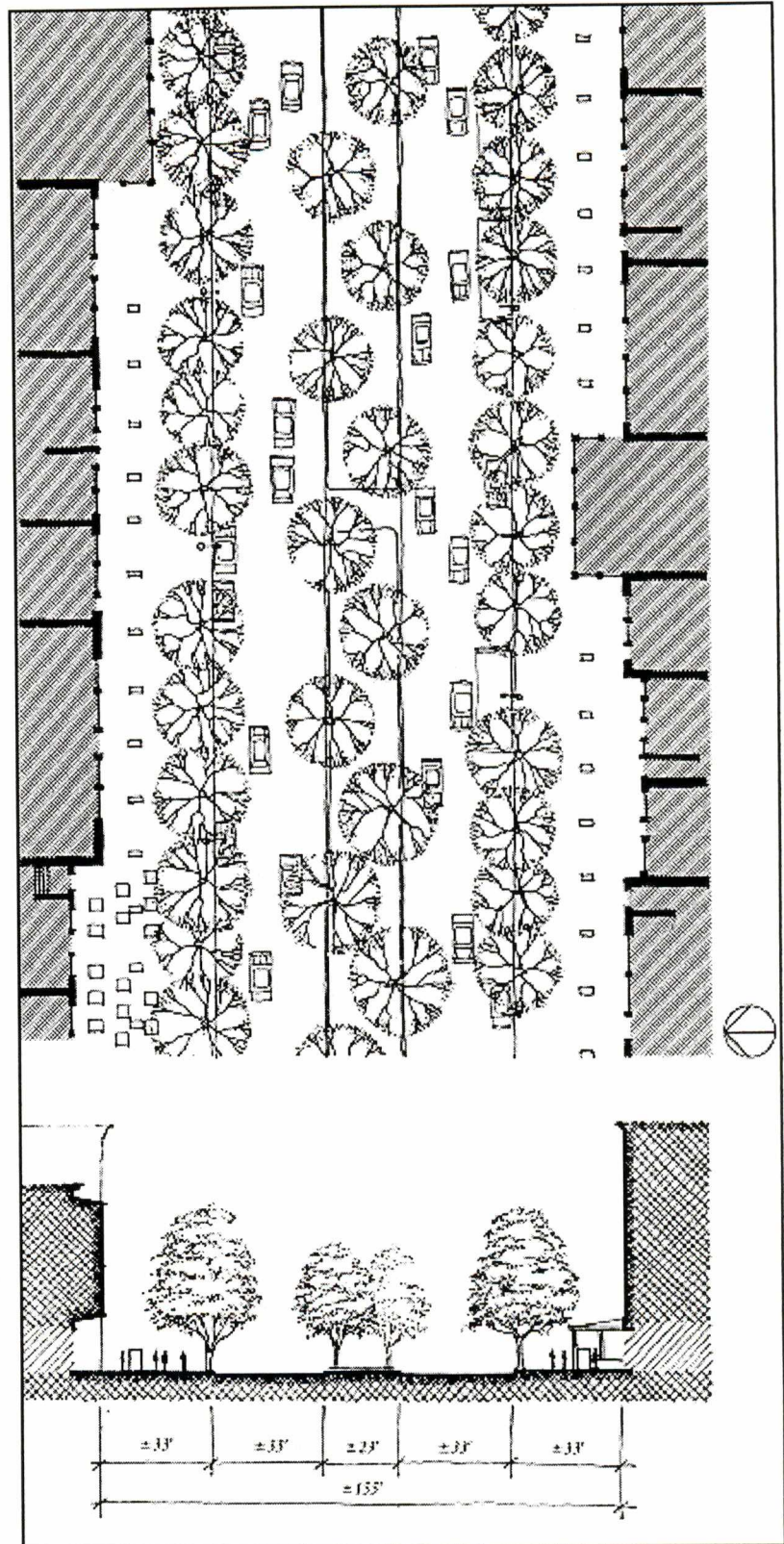


Fig. 7.4 Plan view of Kurfurstendamm. The top picture shows the layering of elements and activities. Section view (bottom) shows the building-to-street scale. Source: A. Jacobs.

landscaped than most streets. The street is in fact wider than Magnolia. The buildings are four- to six-stories high. If dimensions are compared to Hans Blumenfeld and H. Maertens "ideal street" the overall street width complies with the ideal. (A. Jacobs. 1993)

Rows of trees narrow the width of the outdoor room. The center median, lined with trees, further decreases the width of the street space. Tree rows are not interrupted often by curb cuts. If the rows were interrupted often the trees would be unable to form a coherent edge for the street.

Gathering is accomplished by creating many stores. The storefronts are transparent so pedestrians have something interesting to see without entering the business. Wide sidewalks enlarge the walking spaces and allow unhurried strolling. The continuous line of trees softens the hard building edges and shades pedestrians.

The street is a linear room and layering uses organizes pedestrian and vehicular movement on the street. The first layer is the building fronts themselves. They are heavily fenestrated to sell the goods and services within. The second layer is the arcade which is the communal porch, the commercial version of the residential porch. The porch/arcade implies shoppers can take their time to look under covering without actually entering the store. The layer of sidewalk under the arcade can still be considered public, not private space.

Even the speed of traffic is layered for both pedestrian and motorist, the closer to center the faster the speed, the closer to the buildings the slower the traffic.

Sidewalks outside the building edge are given to faster walking. Trees are an amenity and also used as a penetrable barrier between the walker and the car.

On-street parking helps slow cars in the moving lanes. It, too, is a layer separating cars from pedestrians. The median cuts the width of traversing the street in half--important for pedestrians, especially for old or very young walkers, whose stride may not be long.

Implications: Kurfurstendamm presents ways to turn a wide road into a main street--maybe eventually a "great street." Adding layers to the street will be essential to encouraging multiple uses and more users. Strip roads are exclusively designed for moving cars. Pedestrians and parked cars are not provided for.

Many people of all ages and perhaps of many incomes. A true, central *community* street? Many are strolling, talking. A place to walk. There is a pleasant sense of informality. (A. Jacobs, 1993)

There are many stores, restaurants and theaters to draw people there. Buildings on side streets are packed with apartments and their ground floors hold commercial uses, adding to the concentration of people in the neighborhood. Edges can be subdivided often to provide more businesses and thus more interest for walkers. Residences, workplaces, and retail held together in medium to high concentration form a sustainable place.

Castro Street, Mountain View, CA, 1990.

Description: Castro is a well-considered small town main street. (Fig. 7.5) The usual items which were cited for "great streets," the trees, on-street parking,

Placemaking

Lower level can be used for pedestrians, cars or businesses.

Street width is not really wide like other "great streets" but middle street level has dual uses.

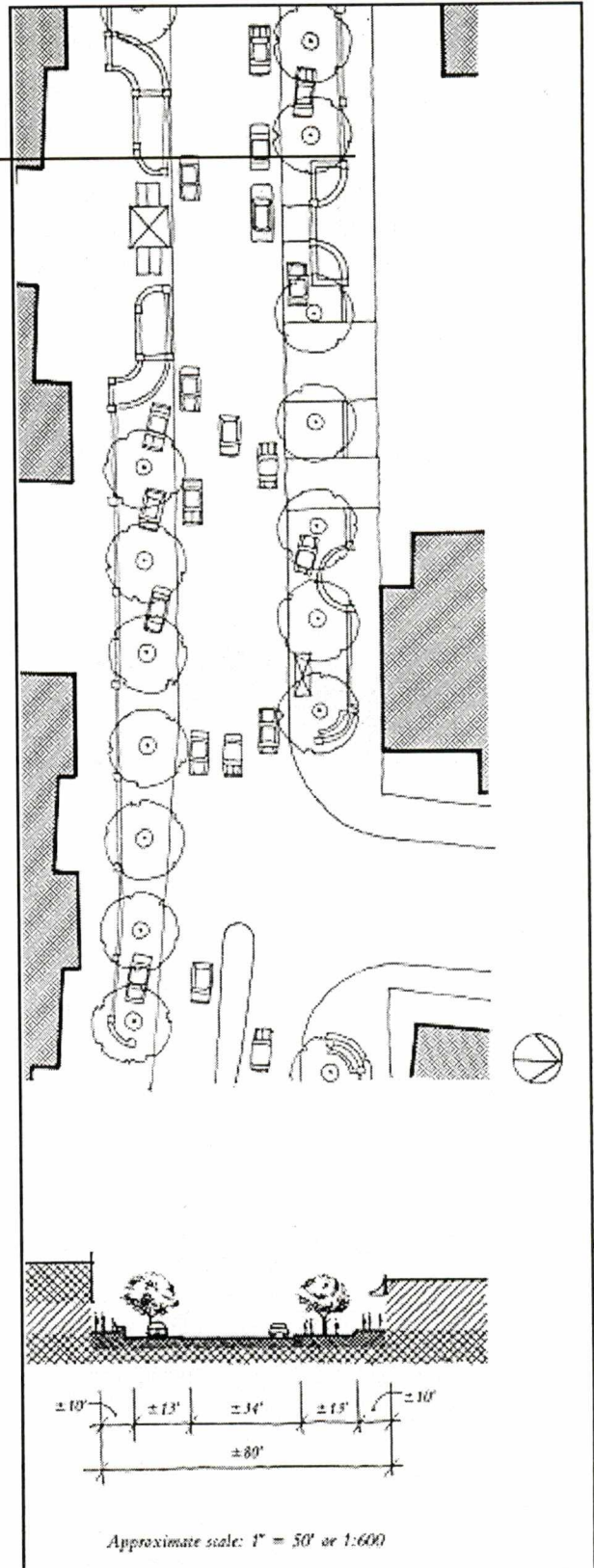


Fig. 7.5 Plan and section views of Castro Street.
Source: A. Jacobs.

generous sidewalks, awnings and street furniture are all on this little street. Distinguishing features are the three street level changes which denote sidewalks, parking/pedestrian/landscaped areas and the road. (Figs. 7.6) The middle level enables Castro Street to layer uses even though space is more limited than Kurfurstendamm. In this case the layers overlap.

Implications: Level changes can delineate street layers. On Magnolia paving materials and street levels should be considered for giving the site more distinctiveness. Also, if the street is narrow some uses can share the same spaces.

The level changes also widen the public sidewalk's width. On Magnolia the buildings must stay close to the street edge to keep the proportions of the street-room. The level changes may help widen the sidewalk space without losing width for the auto lanes.

The pedestrian orientation is also remarkable in this small town street. The designers clear objective was to encourage a varied and vibrant pedestrian life. One can imagine the town citizens being easily drawn to this street because of the wide sidewalks, trees, human scale street furniture and intimate proportions of the street room.

Mashpee Commons, Cape Code, MA, 1986.

Planners: Buff Chace and Douglas Storrs, Andres Duany Elizabeth Plater-Zyberk.

Description: The old building was just a typical strip shopping center built in the 1950s or 1960s. The one-level building had a narrow sidewalk around the building and a vast parking lot between it and the

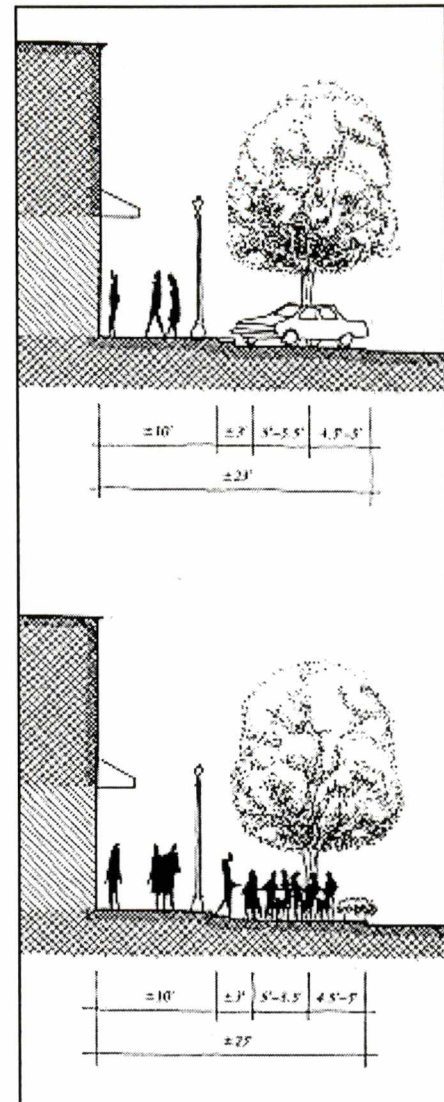


Fig. 7.6 Partial street sections of Castro Street which show the layering of uses. The intermediate level offers chances for multiple uses. Cars can park or tables can be set out there. Source: A. Jacobs.

street. (Fig. 7.7) The lot, looking underutilized, is the most prominent feature of the old strip mall. The landscaping scheme also did little to contribute to defining space.

Two developers made a radical decision. They decided to transform a dead shopping center into a main street. Then they got help to plan a community around it. (Fig. 7.8)

The new Mashpee Commons consists of a street network where buildings are approximately the same height as the old shopping center but the new ones have a strong street presence and the second story facade is not blank but instead interesting and usable. (Fig. 7.9) Whereas the old layout catered to the car, trees, paving changes a second story and street furniture reinforce the human scale. The old shopping center mostly remains but new buildings have been added in front of it, creating an edge along the street.

The masterplan brings many uses--residential, commercial, civic, religious, etc.--within five minutes of each other. The density is similar to a small European town.

The parking lot in front was eliminated. The buildings now form the street edge. There is on-street parking and more spaces behind the buildings. The street now has a strong edge which creates public space for people to gather. The difference is dramatic.

Implications: The sidewalks are not just a minimal provision. Shopping centers tend to miss this opportunity, both in placing the building and furnishing the site. Sidewalks should be credited as



Fig. 7.7 New Seabury Shopping Center before transformation. Source: Katz.

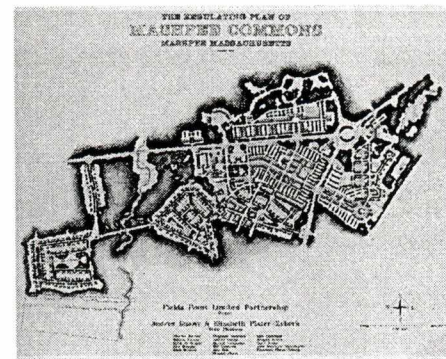


Fig. 7.8 Masterplan developed for Mashpee Commons. Source: Katz.



Fig. 7.9 Mashpee Commons after the radical redesign. Source: Katz.

public spaces which should be designed more deliberately because each opportunity has the potential for a different but meaningful experience. On the thesis site the sidewalks do not have to be treated the same. Each can be experienced differently.

Playa Vista, Los Angeles, CA, 1989.

Planners: Elizabeth Moule and Stefanos Polyzoides, Moore Ruble Yudell, Andres Duany and Elizabeth Plater-Zyberk, Legorreta Architectos, and Hanna/Olin.

Description: Playa Vista is conceived as a large-scale planned community. The planning objectives were fundamentally similar to Mashpee Commons: create a mixed-use community where the streets are as much for pedestrians as they are for cars.

Notable in its plan is over half the site is set aside for a variety of open spaces. (Fig. 7.10) There are playing fields, parks, squares, trails, greenbelts, walks and wetlands. The streets are detailed with pedestrian amenities, such as grass strips, which serve as buffers between the sidewalk and the street.

These programmatic moves are significant to the Magnolia site because of their emphasis on integrating the landscaping and natural features with the buildings. Grass strips border the sidewalks. Trees line the streets. (Fig. 7.11)

Implications: Whenever appropriate, landscaping should be used extensively to give the site a softer, more residential aspect. Different types of public spaces should be planned to allow different activities.

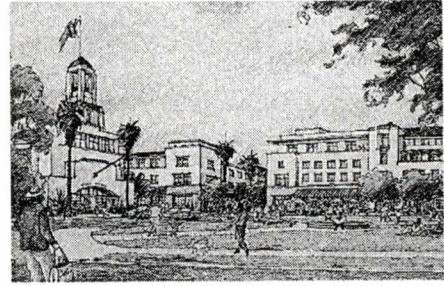


Fig. 7.10 Street scene of Playa Vista.
Source: Katz.

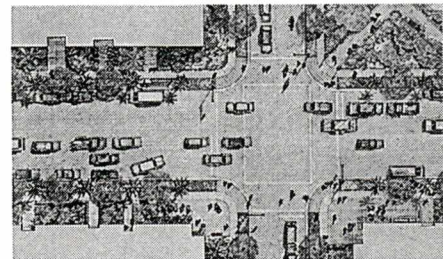


Fig. 7.11 Typical intersection for Playa Vista. Source: Katz.

Mixed-use building

The mixed-use building developed as a result of people working and doing business in their homes. People felt the need to have a more formal space for visitors or customers while keeping the home separate.

Seaside Commercial and Residential Complex, Seaside, FL, 1990.

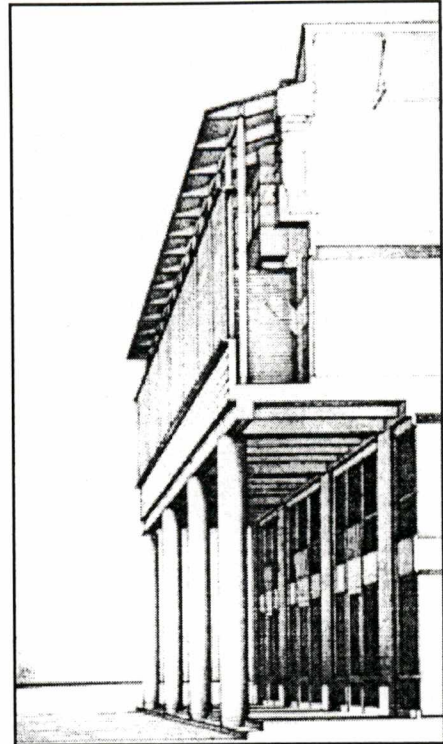
Architects: Machado and Silvetti.

Description: The complex is located on the town square at Seaside, Florida. Seaside's urban code requires a solid edge of buildings, which are connected by a continuous twenty-foot high arcade. The code also restricts buildings to eight classifications. The uses prescribed include shops, offices, hotels, and multi-family units.

A major goal was to design the facade so it would have a civic presence. Large shutters on the top two floors and the high arcade cause the building to read as two floors more than as four floors. (Fig. 7.12) The facade's scale is oversized to respond to the scale of other buildings in the town center.

The design is distinctive to the area because the architects took visual cues from the Gulf of Mexico, the Caribbean, Florida, Seaside and Latino/Mediterranean resorts.

The separations on the facade read clearly to onlookers. The large-scale shutters denote the two private residential floors. The open, arcaded lower floors read as commercial uses. (Fig. 7.13) Within the residential floor is a private courtyard which is an



*Fig. 7.12 Perspective section of
Seaside Commercial and Residential
Complex.*

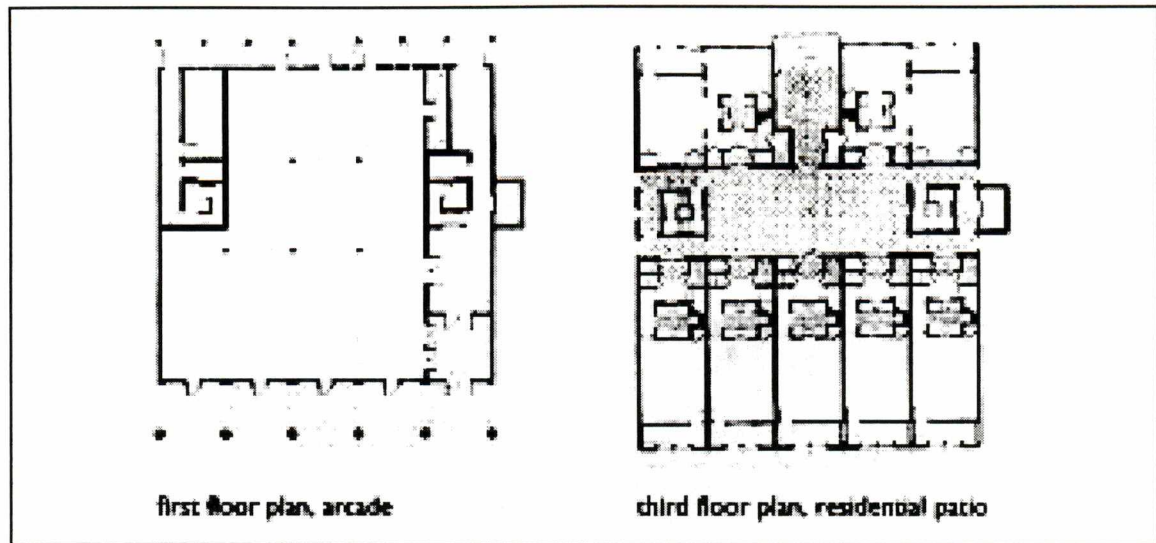


Fig. 7.13 Source: First floor plan, left, shows flexible planning for commercial uses. Third floor plan, right, has residential which continues on the fourth floor. The second floor is for offices.

intermediate space between the public street and the private apartment. (Fig. 7.14)

Implications: The mixed-use building on Magnolia may base its design direction on local architectural styles and on climate considerations. Silveti and Machado were influenced by local tropical styles.

Residences can also be represented as distinct housing units in the buildings' massing. This method shows inner functions on the outside. Materials used are local. On Magnolia materials can directly link the new developments with the older, existing buildings.

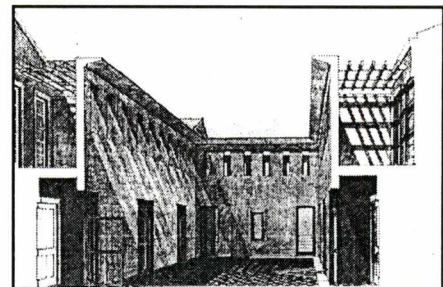


Fig. 7.14 Source: View of the residential courtyard.

Hybrid Building, Seaside, FL, 1986.

Architect: Stephen Holl

Description: Critics said Seaside, Florida was becoming a showcase for vernacular architecture until Stephen Holl showed the strict zoning codes still allowed room for something modern and different. (Fig. 7.15)

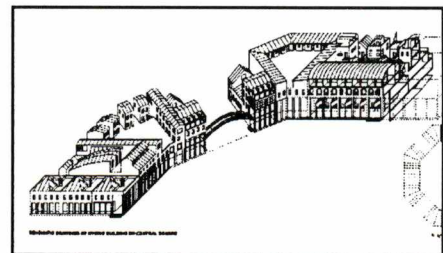


Fig. 7.15 Axonometric drawing of the hybrid building in the Seaside town square. Source: Progressive Architecture.



Fig. 7.16 West elevation of the Hybrid building facing the town square at Seaside, FL. On the bottom floor is retail. The second floor rents to offices and the two top floors in this view contain the apartments for the boisterous residents. Source: Progressive Architecture.

While the Silvetti/Machado building derived its image from local precedents, Holl preferred to stay with his unique modernist style.

Holl formulated a narrative to develop his design. On the west side of the building, facing the square, he programmed spaces for what he called his boisterous residents, the party lovers. (Fig. 7.16) He reasoned his boisterous tenants would not mind sharing a balcony and they were late risers who would get up in time to toast the setting sun.

Holl designated the east side with a view to the sea for the introspective residents. He personifies these tenants as: the mathematician, the tragic poet, and the musician. Holl reasons these people are early risers who desire privacy. He details each apartment to suit their personalities and each has a patio, topped with a wooden frame to symbolize each persona. (Fig. 7.17)

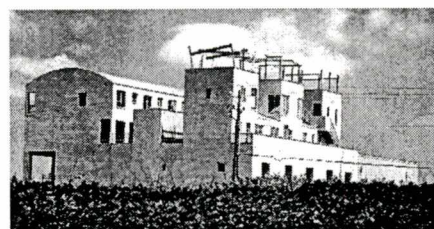


Fig. 7.17 South elevation showing the boisterous dwellings on the left and the introspective apartments on the right. A courtyard separates the two sides. Source: Progressive Architecture.

Implications: Holl designed the building for many uses. His use of a narrative is a good tool for getting inside the design, since there were no specific users helping him direct his program.

The variety of spaces increases the possible users and the uses for the building. Mixed-use buildings can be mistaken for an exercise in generic design, but in both Silveti/Machado and Holl's designs the form reflects functions inside. While the buildings external form must contribute to the street's edge and height conditions, the legibility of the architectural forms makes the buildings distinctive and understood by people on the street.

Urban Codes

Separating uses became a widespread planning practice during this century because of scientific understanding of the effects of overcrowding linked with the spread of contagious diseases in the city. Work and industry were and separated from residences to keep people from harmful pollution and dangerous machinery. (Katz, 1994)

The hardship caused by this separation has been mitigated by widespread automobile ownership and use, which in turn has increased the demand for vehicular mobility. The priority given to road building at the expense of other civic programs during the last four decades has brought our country to the multiple crises of environmental degradation, economic bankruptcy and social disintegration. (Katz, 1994)

Hilton Head Island, NC

Description: The resort area strictly codes materials, colors, sign heights, and building setbacks among other things. This forces national companies such as McDonald's and Exxon to satisfy these codes. The enforcement preserves natural greenery and views on island. Buildings rarely peak above the tree line. Signs are not obtrusive.

Implications: The Magnolia site will internally generate a scheme for greenery, setbacks, signage, materials, and height limits which could suggest a direction for coding on the remainder of the strip.

Seaside, FL

Planners: Andres Duany and Elizabeth Plater-Zyberk

Description: No discussion would be complete without looking at Seaside's codes. Seaside is the town where Stephen Holl, Silvette and Machado built their mixed-use buildings. (Fig. 7.18) The town was planned to have a more rigorous code to preserve the building concentration, distinctiveness and aesthetic compatibility needed to form a community. The codes are described as prescriptive, and they give setback limits, prescribe materiality, designate uses allowed for each site, set roof pitches, establish street widths, and select the building types for the town. (Fig. 7.19)

When they explain the codes to new developers, the planners have a sheet where the codes are explained and diagrammed to ensure clarity.

Implications: Seaside planners wrote strict, specific codes to preserve the image and form of the town.

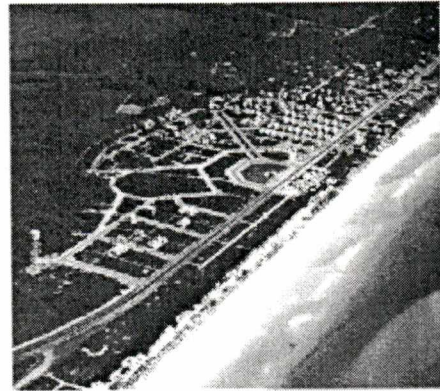


Fig. 7.18 Aerial view of Seaside, FL, showing the street network. Source: Katz.

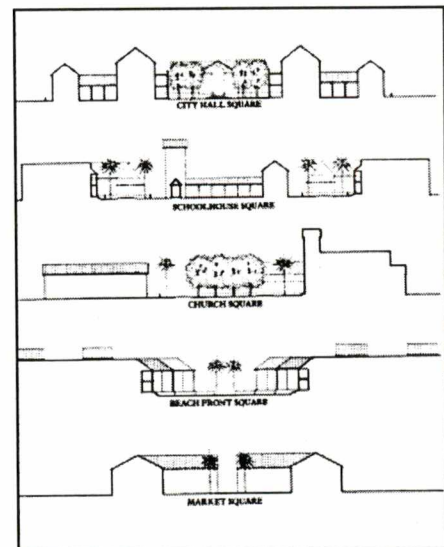


Fig. 7.19 A portion of the Seaside zoning code. Here sections of street types show the proportioning system for each kind. Source: Katz.

Unlike normal code books, the one made for Riviera Beach is concise, fitting on a large sheet. The codes are applied street by street instead of by block or by building. This means the street gets developed as a unified space. As mentioned earlier in the thesis streets are not approached as a single space. What effort is given to their appearance is made by some building owners in a piecemeal manner. Even a block by block approach does not take into account the entire length of a street.

Implications: Magnolia Avenue once had a distinctive residential character. The modern age, zoning ordinances and generic corporate architecture and planning has transformed it into another strip road. By treating the street as a room, a place to dwell, it can become a distinctive place. Urban codes set guidelines so every development contributes to the creation of the communal room.

VIII. The Design

The Site

The guiding concepts controlling the site design are to repair and form linkages with the neighborhood and to shape the streets into public gathering places.

The palette consists of landscaping, materials, sidewalks, street furniture and buildings. All are employed to mold Magnolia Avenue and Chestnut Street into public rooms.

The Gateway, the Corridor and the Connector

Magnolia Avenue is an important entry to downtown Knoxville. To reassert its prominence magnolia trees mark the entrances to the node. The tree type is reintroduced to the street but its use is limited. Magnolia trees are very dense and would block views if used more extensively.

Red maple trees are used to line Magnolia Avenue. The trees form an edge and a canopy for the street.

The Node

The node embodies the distinctive qualities of the neighborhood. (B8.1, Site Plan) The node, though, is not just a higher concentration of neighborhood activities. Community and business functions at the node gather the neighborhood to it. (Lynch, 1961)

The site is at a lighted intersection so it gathers traffic, distinguishing it from other points on Magnolia. The concentration of activities is increased by making the new buildings mixed-use and three floors high.

The Edge. The building edge is brought to within ten feet of the curb to give the buildings a visual presence to drivers and pedestrians. Parking will no longer be the view for people travelling down the main road.

While the old pre-World War II houses follow an old 40 feet setback the distance is really too great for the thesis goals. The sense of Magnolia Avenue being a room is lost because the distance across the street is more than twice the height of the buildings. Therefore the setback is only 10 feet on the building side and 15 feet on the landscaped side of Magnolia.

Materials. The paving changes when someone reaches the site the street is made of brick or embossed concrete. The sidewalks have a brick and concrete pattern. The paving difference is used to help distinguish the site from the neighborhood.

The Street

Design changes to the two streets intersecting on the site can best be understood from street sections. In section the streets can be viewed as public outdoor rooms. Two sections were taken through Magnolia Avenue and the other was cut through Chestnut Street. (B8.2, Locations of Sections)

When a section is made through Magnolia Avenue, the street space is very wide. (Fig 8.1) In the project the street space is divided into smaller spaces (B8.3, Street Sections). The buildings on the southeast side of Magnolia form an edge to that side. Rows of trees form an edge on the northwest side. A planted median strip has been created on Magnolia to visually break up the size of the street. The median protects cars

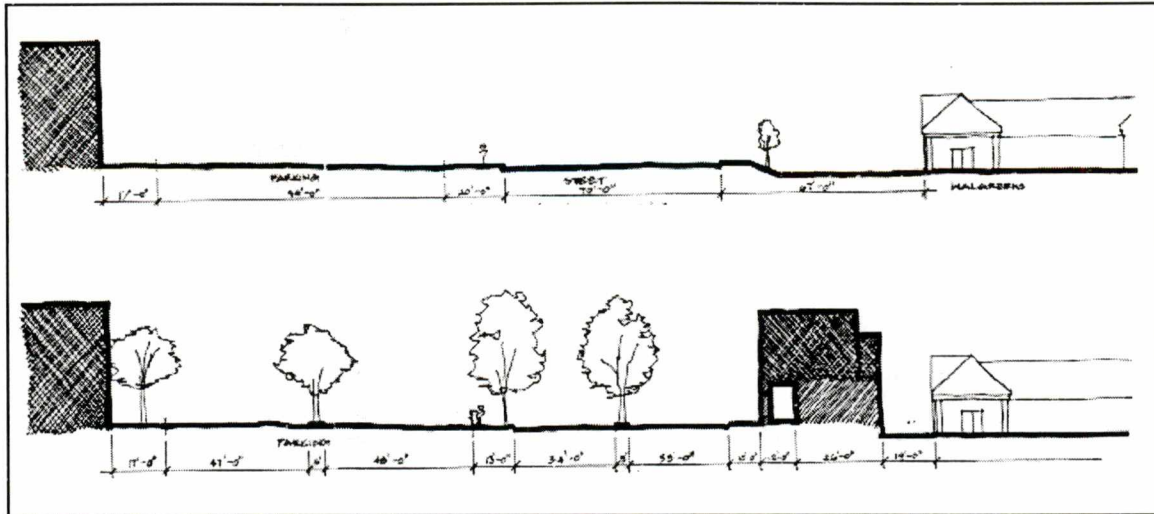


Fig. 8.1 Top: Section through Magnolia before changes to the strip. Bottom: Section through Magnolia after redesign. Note greater differentiation of activities and stronger street definition.

traveling in opposite directions and is a pausing place for pedestrians crossing the wide street.

Vehicular circulation is organized on the site. (Fig. 8.2) Several curb cuts are eliminated on the parking lot in the north section. The Walgreens parking lot on the east corner is kept behind the new buildings.

On-street parking on Magnolia slows traffic through the site. This gives a layer of protection between the pedestrians and the moving cars. The curbs are extended at the intersection and wherever there are driveways turning off the roads. The curb extensions protect parked cars and widen the sidewalks, narrowing the lanes set aside for moving traffic.

Linkages are formed between the strip and the neighborhood through repairing and laying down sidewalks. Lines of trees are not exclusive to the site but continue through the neighborhoods.

Chestnut Street is only three driving lanes wide. (B8.3, Street Sections) In the design one lane is set aside for

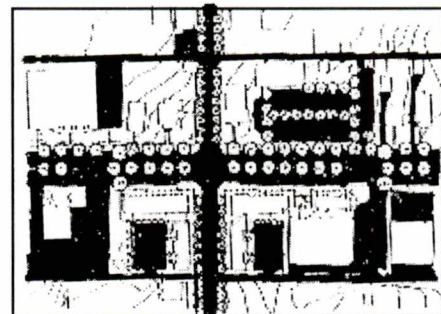


Fig. 8.2 Vehicular circulation and storage. The black areas include streets, driveways and parking.

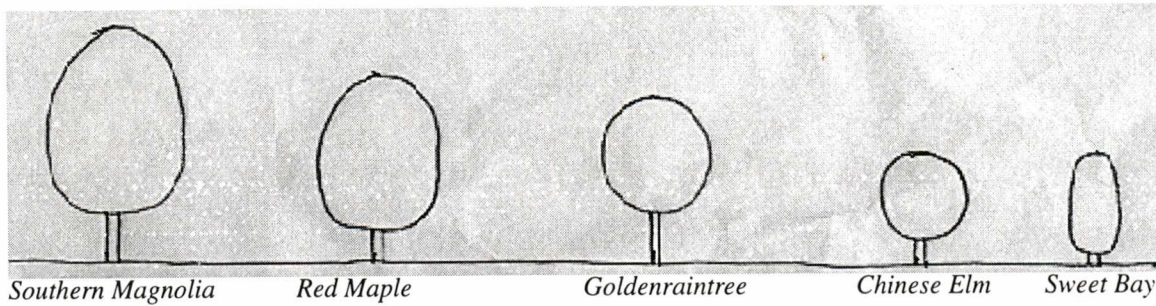


Fig. 8.3 Trees arranged in order of size.

on-street parking on the other side. Chestnut Street less than half the width of Magnolia. With the new buildings in place, the height-width ratio is close to 1:2, the ideal ratio. (p.22) Tree rows have been added to both sides of the street to give shade and to link the strip with the neighborhood.

Landscaping. Trees are planted on one side of the street. Overall the trees are selected by different criteria. Some are picked because they are varieties of magnolia trees. Others are picturesque and recommended as good street trees. Finally, they are picked in descending order of size. (Fig. 8.3) By ordering the trees by size, it reinforces the hierarchical importance of different places on the site. Trees indicate uses for different streets, paths and parking lots. It visually orders the site.

The Southern Magnolia, the largest tree represented, had once been used on Magnolia Avenue, hence the name. (A6.3) Magnolia trees are too dense to be used extensively as a street tree. They will grow to 55 feet high and 35 feet wide. They will be used to frame the node's entrances. (Fig. 8.4)

Red Maple trees will be used on the median strip and along one side of Magnolia. (Fig. 8.5) The trees are

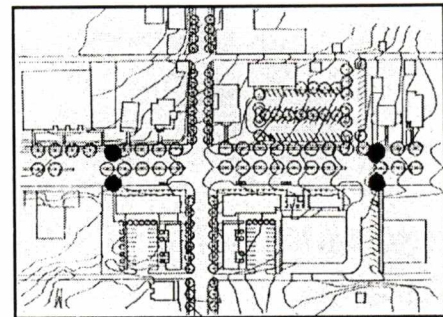


Fig. 8.4 Southern magnolias

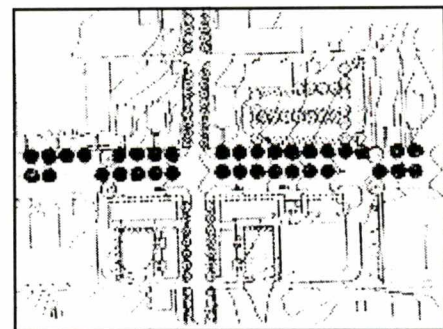


Fig. 8.5 Red maples

deciduous and recommended as good street trees. Their average size is 45 feet high and 30 feet wide. In fall the leaves will change colors and add a distinctive contrast to the evergreen Southern Magnolias.

Sweet Bay Magnolia trees are used to accent pedestrian areas around the buildings. (Fig. 8.6) Sweet Bays are very narrow trees which grow very straight, 25 feet high and 10 feet wide. They line the service sidewalk behind the main building, and they are sentries to the entrances to the townhouses.

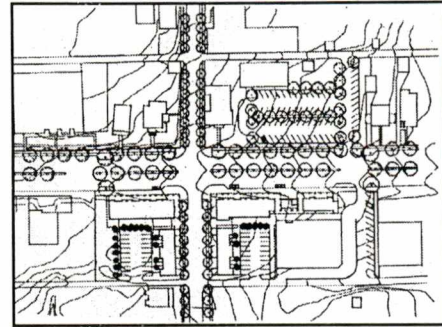


Fig. 8.6 Sweet bay magnolias

Along Chestnut Street goldenraintree trees line the sidewalks. (Fig. 8.7) They are used to reinforce the linkage from the site to the neighborhoods next to it. The trees will grow to 25 feet high by 20 feet wide. The leaves are yellow-green, turning yellow in the fall. They also produce yellow blossoms in clusters in the spring.

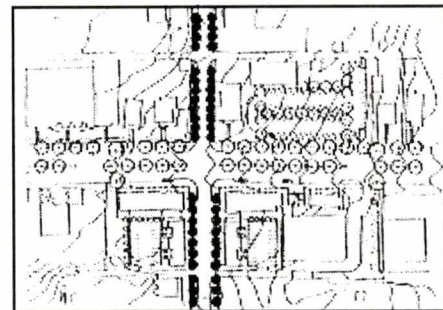


Fig. 8.7 Goldenraintree trees

The Chinese Elm is chosen for the parking lot facing Magnolia Avenue. (Fig. 8.8) The leaves are a dark green color, turning red or purplish in the fall. The trees grow to 40 feet high and 25 feet wide. They are recommended for parking lots where the heat not only beams from the sun but is radiated up from the pavement. The parking lot is landscaped with trees and medians so it will not be barren. The trees also absorb heat and light, keeping the parking lot from being an extremely hot, inhospitable place.

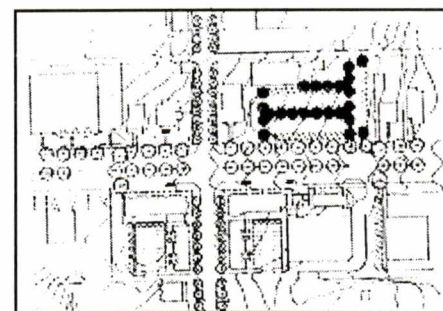


Fig. 8.8 Chinese elms

The parking lots behind the buildings on the east and south corners receive landscaping attention since there are other layers of movement, entry and gathering taking place there. Along the sidewalk on the north

corner there is a hedge which is a screen between the parking lot and the sidewalk on the north corner. (Fig. 8.9) The hedge blocks the pedestrian's view of the parking lot and it forms an edge consistent with building setbacks. A wall on the northwest corner keeps the steep slope on the house plats from eroding. (Fig. 8.10) Seats can also be made in the wall to encourage socializing. In these ways landscaping defines pedestrian boundaries.

Pedestrian Circulation. The new site plan accommodates pedestrians a great deal. (Fig. 8.11) Sidewalks are added along the street and around the new buildings. The layering of sidewalks creates new choices for pathways. Like the roads which have four different types, there are new walkways within the development which are for service, residential, public and commercial.

Cars passing through the site have been tamed somewhat by shrinking the size of the parking lots and narrowing the portion of Magnolia Avenue which crosses the site. The old site claimed a lot of space for cars and left pedestrian areas to crumble. The new plan claims more land for pedestrians, and with landscaping and street furniture, people are given incentives to stay on the site.

Layering. Kurfurstendamm and Castro Street both use layering to proceed from public to private and to increase safety for pedestrians and to raise the number of activities. Starting on the northwest side of Magnolia there are the existing buildings and a church parking lot. The next layers are as follows: grass, sidewalk, trees, on-street parking, moving lanes of traffic, a median strip, more moving lanes, on-street

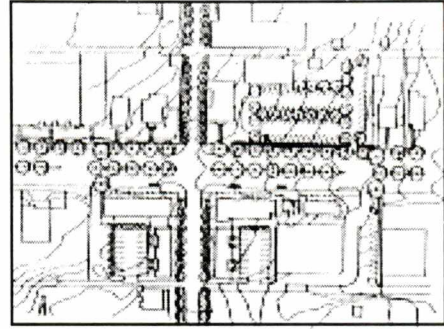


Fig. 8.9 Hedge

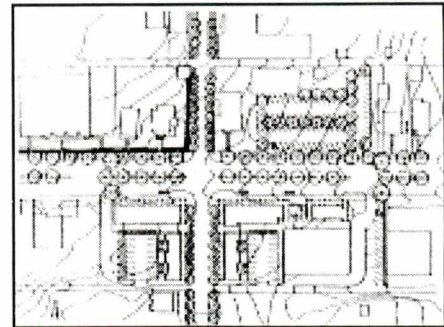


Fig. 8.10 Location of retaining wall proposed for the site.

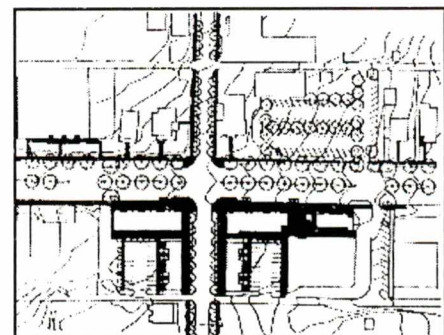


Fig. 8.11 Pedestrian areas indicated on the new design.

parking, sidewalk and finally building. (B8.1, B8.3, Site Plan and Street Sections) The layers help protect pedestrians from moving cars. When there are more layers there are more uses given to the street. For example, trees and street furniture invite people to linger.

Gathering Places. Providing seating throughout the site contributes toward gathering people. Along the retaining wall on the west corner seats are built into the wall. Next to the hedge on the north corner facing Magnolia Avenue are benches for walkers. The colonnade has seats built into it. (B8.8, Main Building Elevations - Front)

Normal strip roads do not provide sidewalks or benches for pedestrians though people walk on the roads. On Magnolia, people sit on steps or stand on the sidewalk. Some might argue that because Magnolia is a high crime area relative to the rest of Knoxville, gathering encourages more problems. The thesis contends that having people to spend time at the node will help protect the area by drawing more attention to it. (J. Jacobs, 1989) People living in the new mixed-use buildings can watch the street. Shopkeepers can also watch the street. And pedestrians on the street watch the street. Jacobs argues streets are unsafe because people do not “live” on them. Communal bonds are not formed on the strip which spurs residents to look out for each other.

Street Furniture. Like in any room, furniture indicates how the owners intend to use the room. (Fig. 8.12) If the street is used for sitting then seats should be there. Furniture encourages people to spend time there. Human-scaled lamps promote pedestrian use. Trash

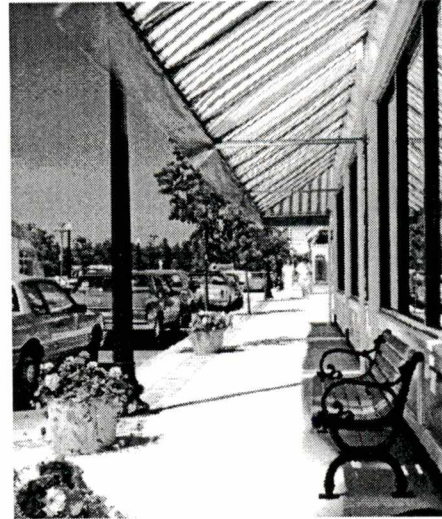


Fig. 8.12 Planters and benches along the sidewalk at Mashpee Commons.
Source: Katz.

cans are for convenience for people there. Planters, window boxes and hanging baskets beautify the sidewalks, keeping them from being bare. Allows the place to change with the seasons.

Smaller, human-scaled lamps are planned. The lamps will alternate in between the red maple trees. There will also be lamps attached to the arcade. These are not standing lamps like the ones across the street. The lights replace the tall highway lamps which related to the car and not to the pedestrian. Trash cans will be located next to benches and seats.

Seats gather people who come to the site. There are benches planned next to hedge. Seats are built into the brick wall on the west section. (Fig. 8.13) Seats are built onto the columns on the new buildings. (B8.8 Northwest Elevation) The courtyard in front of Walgreens also has benches and chairs.

Along the new building side of Magnolia, there will be planters on the sidewalk edge. On the rear of the new building are permanent planters which soften the experience of the pedestrian alley.

Four perspectives have been taken showing the streets with and without the new buildings. (B8.4-B8.7 Street Perspectives)

The Buildings

The existing buildings are darkened to show their relationship to the new buildings on the site. (Fig. 8.14) Most existing buildings around the site are older and follow a consistent setback. They have a specific

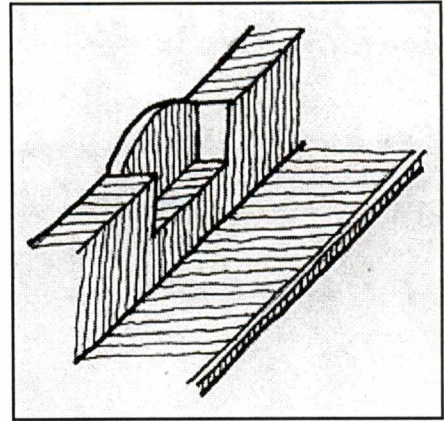


Fig. 8.13 Example of a built-in seat in the wall.

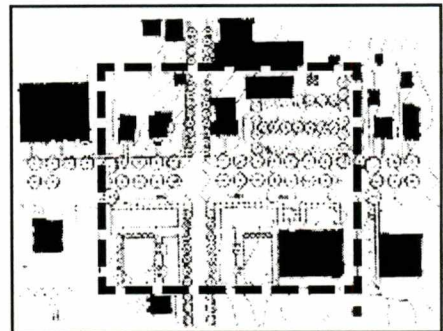


Fig. 8.14 Existing buildings darkened to show their locations.

architectural character which have the capacity to influence the image of the new buildings. Many of these buildings are of architectural significance. One house is in the bungalow style. The McDonald's headquarters is in the neo-Georgian style.

The mixed-use buildings carry the heaviest responsibility for forging linkages and gathering the community. (Fig. 8.15) Even with the street and block system in place strip developments have not capitalized on the gathering capabilities inherent in the neighborhood's organizational system. The success of the buildings' design will determine the success of the thesis proposition. The buildings on the east corner where the Walgreens is located are the focus of the architectural design.

Connections. The first need is to establish the buildings' setback distance to 10 feet from the street. The shortened setback and continuous edge narrow the overall street width, so Magnolia is more like an outdoor room.

Walgreens is partially concealed by the new buildings but the new buildings are strategically divided into three pieces on the east corner to elaborate entrances to Walgreens. (Fig. 8.16) Linking Walgreens to the new buildings demonstrates how to integrate strip buildings with main street type buildings.

One in-between space is a pedestrian alley, an alternative service route behind the buildings. The alley is parallel to Magnolia. Since flexibility is important to creating a sustainable place, numerous pedestrian routes diversifies uses and gathering activities on the site.

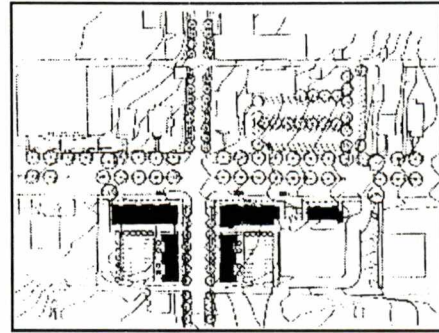


Fig. 8.15 Mixed-use buildings which are the focus of the thesis design.

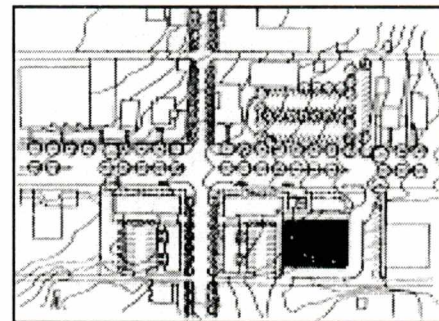


Fig. 8.16 Existing Walgreens shown on the site.

A small public courtyard mediates Walgreens' main entrance. The courtyard provides a special pedestrian/gathering area that is interior to the block. A fountain in the courtyard entertains gatherers and covers traffic noise from Magnolia. The rest of the courtyard is flexible for public or business needs. The alley and the courtyard are landscaped with planters.

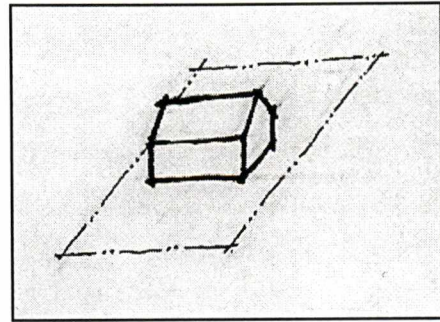


Fig. 8.17 Diagram of a standard house plat seen in axonometric.

The townhouse building's form derives from the need to architecturally connect the strip and the new main building with the neighborhood. The form's development is described in more detail in the next section.

The Building Concepts

Distinctiveness. The thesis discusses linking the strip with the neighborhood and it explores integrating them. In integration the strip and the neighborhood come together. The building designs were generated from three concepts; platting patterns, mixed-use and the porch, are ideas used to incorporate the neighborhood's character into the design. The buildings are based on a 12 feet grid since a 12 feet by 12 feet room is a standard and comfortable size.

THE PLATTING CONCEPT. The platting concept is a way to link the new buildings with the imagery and the underlying planning of the local neighborhood. Analyzing the plat is a way to use the distinctive qualities of the neighborhood in the design. (Fig. 8.17)

In the neighborhood the plat is a 50 feet by 150 feet rectangular piece of land. The short side faces the street. A house is typically located in the center of the plat, and an outbuilding is sometimes in the backyard.

The first approach is to look at the main street model. Main street buildings occupy an entire plat or plats. (Fig. 8.18) Each building is different but their facades connect to form a whole. (Fig. 8.19) Plats facing main street are tall and deep but not very wide, 25 to 50 feet. In contrast, strip building facades are wide but not as deep and only one floor high. Main street has smaller stores on the street level which encourages in a livelier street life.

The main buildings are visually subdivided to break up its monolithic appearance. (Fig. 8.20) Each division can represent a separate store or apartment depending on the floor. Building uses do not need to conform to these rigid boundaries. For example, commercial spaces on the street corners may want to be larger because it is a more visible location. The new buildings are subdivided into sections on the facade so they would mimic the sense of buildings connected together, like on the main street model.

The second approach is to look at the imagery of the typical neighborhood plat. Building types often have a basic recognizable, architectural form. The house has a pitched roof. The modern commercial building is a monolithic slab. These forms are combined to project the image of the local residential plat. The massing of the new building appears to be houses floating on plats.

On most plats there is a house with an outbuilding in the back. In plan view for the mixed-use building the apartment is in the front of the plat and storage or back porch space is in the rear.

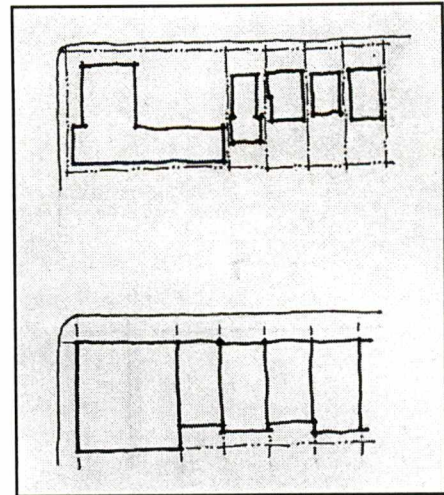


Fig. 8.18 Comparison of platting in plan view. Platting in the Magnolia suburb, top. Platting on main street, bottom.

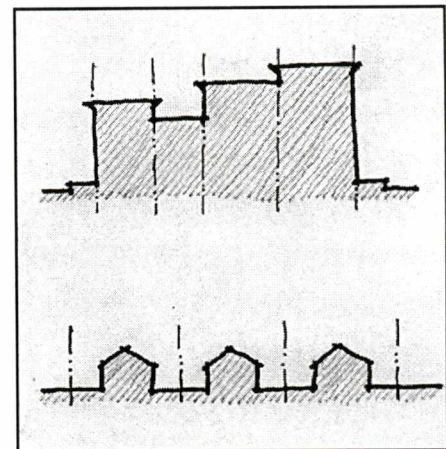


Fig. 8.19 Comparison of platting in elevation view. Platting on main street, top. Platting in the suburbs, bottom.

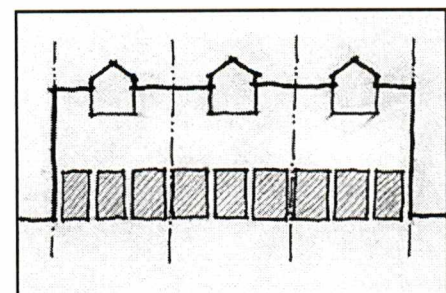


Fig. 8.20 The house and main street building combine on the project. The house form seems to float on the otherwise monolithic facade the way a house normally sits in a plat.

THE MIXED-USE CONCEPT. The mixed-use concept is a method for relating the building facades specifically to the streets they face. The method is also a way to link the buildings to the neighborhood. This approach makes the facades even more site specific and shows how the streets in the neighborhood have a different character. In this concept the architectural forms of the house and the business are combined to show the mixed uses in the new buildings' form. In the elevation studies for the buildings a form evolved which integrated the two.

On the Magnolia facade the monolithic character of the big commercial box is emphasized. (Fig. 8.21) The gable form is set back and seems to float over the street. The visual image directly relates to the platting arrangement but it also relates to an interplay between the two uses.

When the building turns the corner onto Chestnut Street, the emphasis reverses. The house form suddenly finds its legs on the ground. The gabled facade has also moved to the foreground and the big box has receded to the back. (Fig. 8.22)

The Magnolia elevation has a continuous edge similar to main street. The Chestnut Street edge is broken up similar to the spacing of houses in the neighborhood. This is another visual linkage made between the strip and the neighborhood. Using this concept the buildings have a distinctive group style but the buildings also tie in with neighboring buildings.

THE PORCH CONCEPT. Park City experienced its development before there was central air, television or radio. After a long day at work people talked or

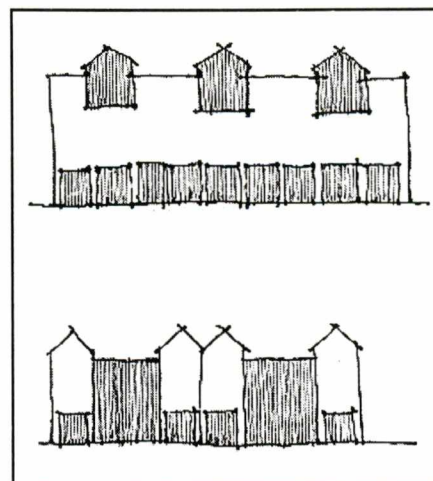


Fig. 8.21 Top: The Magnolia elevation shows the dominance of the monolithic form. Bottom: The Chestnut elevation shows how the house form dominates the imagery on this side.

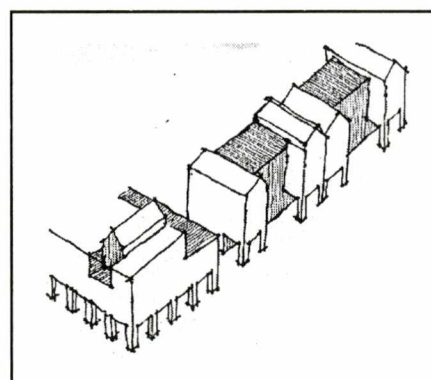


Fig. 8.22 The monolith/house forms shown three-dimensionally.

entertained in the evenings. The porch was an outdoor room where people could visit or observe their neighborhood. (Fig. 8.23)

The porch's historic use coincides with the thesis' goal to create gathering places. This traditional communal room is directly integrated into the building design.

On the ground floor of the main buildings facing Magnolia Avenue the arcade is a communal porch. Porches on the second and third floors are for the one- and two-bedroom apartments. (Fig. 8.24) Only the efficiencies on the second floor do not have balconies. Porches are on the back elevations. They have more communal possibilities because the apartments share the same access in the back. (B8.8 Main Building Elevations)

The Chestnut Street elevation has porches for the townhouses and the businesses at street level. (B8.13 Townhouse Elevations) The colonnade has turned the corner from Magnolia and has become individual porches for the offices.

The types of porches in the design vary in their degree of privacy. This enables people to use the porches for different reasons within the project.

The Main Building Design

The mixed-use buildings should strongly embody the neighborhood's character while distinguishing themselves through their concentration and scale. (Fig. 8.25) The buildings should also encourage gathering through layering and placemaking. (B8.8-B8.11 Main Building Elevations and Plans)

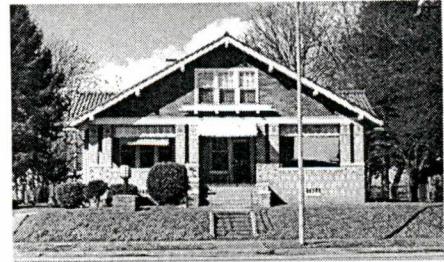


Fig. 8.23 Front porch of a house on Magnolia Avenue. A house without a porch is unusual in the Park City neighborhood.

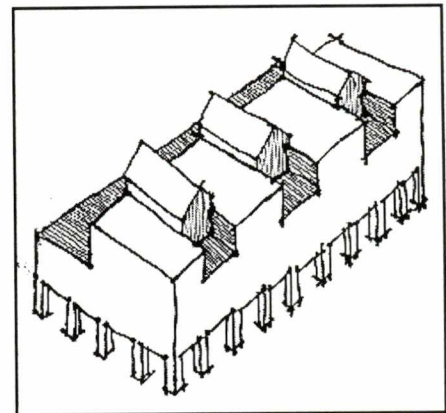


Fig. 8.24 Axonometric view of the main building. The colonnade on the ground floor is the communal porch. On the top floor private porches are on the building front.

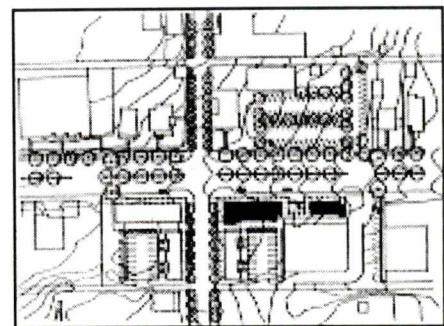


Fig. 8.25 Location of main buildings.

Flexibility. Sustainable places constantly experience change but they are able to maintain equilibrium through an underlying stable structure. To some extent the new buildings' uses undergo change, but its structural framework remains permanent.

Specialty developments can find a market niche but they are more successful when grouped with two or more primary uses. (J. Jacobs, 1989) The mixed-use buildings pair commercial with residential uses to increase their chances for success.

There are also several housing types to foster a diverse socioeconomic community and to broaden its saleability.

The second floor holds eight efficiencies and six one-bedroom apartments. On the third floor are six two-bedroom apartments. (B8.11, Main Buildings - Third Floor Plan) The building facing Chestnut Street has two-bedroom townhouses.

Some materials may have a short lifespan while others are more durable. In the main buildings the bottom floor is a load-bearing brick construction. A precast concrete slab rests on top of the first floor. (B8.12 Main Building Wall Sections) On the second and third floors brick veneer overlaps wood stud frames. The brick walls and columns form a permanent structure.

The interplay of materials represents flexibility and permanence on main street. Strips seem to have fragile economies. Businesses such as Burger King do not always succeed and when the building is up for lease, its sheer individuality prevents it from readily being reused.

Looking into the future the community may need more apartments or businesses. The openings in the brick veneer on the second floor suggest something other than apartments can occupy these spaces. The wood stud construction can be removed and new building can be done on top of the brick and concrete structure. Window display cases on the commercial level can easily be replaced with regular store windows or walls. The structure is intended to last, though parts of it can be altered to suit renters.

Placemaking. Placemaking is part image and part place. Efforts made to emulate the neighborhood's distinctiveness contribute to placemaking. Sidewalks, the courtyard and porches on the buildings are specific gathering places.

Connecting the main buildings is a pedestrian bridge which encapsulates the thesis' themes. (B8.8, Main Building Elevations) The bridge links the two main buildings and it is a communal room between them. Balconies astride the walkway are fitted with seats.

The structure of the bridge is reminiscent of flexibility and permanence. The basic frame is composed of steel. The balconies fit into the frame but are removable. The side which faces Magnolia is also more enclosed for privacy while the alley side is open.

There are two ways to access the upper floors. The formal entrance is on Chestnut Street, the road connecting the site to the neighborhood. (B8.13, Townhouse Elevations - Front) The two-story cover show this entrance is different from the rest of the arcade.

The other entry is on the other end of the main buildings facing Magnolia Avenue. (B8.8, Main Building Elevations) There is a simple stairway, although the building vocabulary is the same.

Layering. Layering functions sets more detail into the design. The richer the variety, the more interest generated for the community. Layering also organizes activities. The front of the building has different uses than the back and layering groups them together.

Layers facing Magnolia Avenue are public. The layers form the street environment. Window displays, weather protection, etc. create the walls and ceilings for the sidewalk activity. A colonnade on the ground floor enables the building's edge to be close to the street, to form the side of the public "room," while keeping the sidewalk wide for unhurried walking. (B8.3, Street Sections) The colonnade is a layer between the public (street) and private (building) realms. (Fig. 8.26)

The colonnade is the first layer into the building. (B8.9, Main Buildings - First Floor Plan) Store windows form a second layer. The retail spaces are the third layer. Storage rooms are the fourth layer. Then outside is a layer of utility rooms, housing central air units.

The layers on the ground floor are arranged from public to private/service. The placement follows the street system which separates uses on the public main road from the service alleys.

The upper floors follow the imagery of the platting pattern in the way they are layered. In the platting

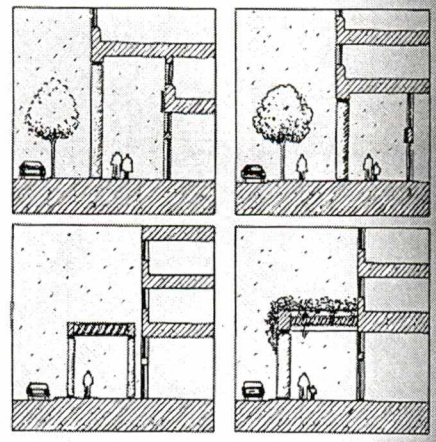


Fig. 8.26 Sections showing the colonnade (top two pictures) and the trellis (bottom two pictures). Both were used in the final design. Source: Attoe.

concept the house faces the street and the outbuilding faces the alley. In the main buildings the apartments face Magnolia Avenue, the main road, while storage rooms and circulation face the alley.

On the public side the windows on all levels are larger. The living rooms of the apartments face the street. Front porches are incorporated on the front elevation, reinforcing the neighborhood motif. The railing on these porches are more enclosed to give more privacy to the apartments behind them. Apartment windows on the alley side are smaller because of the southern sun but the porches and walkways facing the alley are more open to admit sunlight and because this side has more privacy.

Entrances to second floor apartments are paired to encourage interaction. (B8.10, Main Buildings - Second Floor Plan) The storage rooms form a service layer behind the larger main building. This placement reinforces the idea of putting services in the rear.

The Townhouse Design

The townhouse is another housing type offered on the site. (Fig. 8.27) The townhouses are designed to be a formal link between the strip and the neighborhood. The single building's form has the individual rhythm of houses on a neighborhood street. (B8.13, Townhouse Elevations)

Another idea behind the townhouse design is the arrangement where people often used to live above their stores and offices. A thesis principle is to combine two primary uses, in this case work and home into one building. The bottom floor has office/retail spaces and the upper floors hold the townhouses. The

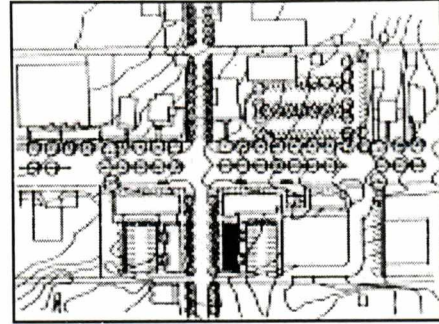


Fig. 8.27 Location of the townhouses.

two-bedroom townhouses can rent to a couple or a small family. (B8.14, Townhouse Plans)

Porches, extensively designed into the townhouse, are integral to the project goals. The porches are the receiving places for the apartment. They are the individuals' public space in his or her home. There are porches on the front and rear elevations.

The townhouse building is not designed to have the flexibility the main buildings have. Its uses are fixed. Whereas the main buildings have a structural frame and changeable parts the townhouses are composed of two discreet alternating pieces. The house shape is the main piece and the brick piece contains circulation and storage. The architectural forms are again used to symbolize the uses within.

The Walgreens

The Walgreens needs a facelift for the building to conform with project goals. (Fig. 8.28) The design methodology on today's superstores is to make a big box like a warehouse. Displays and windows have been sacrificed in the name of efficiency and cost. Now large, multipurpose stores are completely inward-focused. There are only a series of doors and very few windows.

Windows represent openness and vulnerability. Safety may be why windows are not on Walgreens. In the redesign the brick will in effect be peeled off the two facades facing the townhouses and the pedestrian alley. Windows will replace the veneer. The windows are a way to open up the box and they provide eyes to watch over the parking lot and the pedestrian alley. (B8.11, Main Building Plans and Elevations - Walgreens)

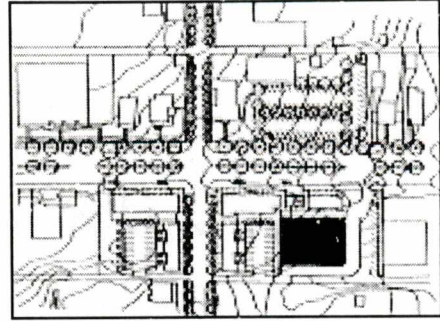


Fig. 8.28 Location of Walgreens.

The Details

In the project attention to details makes a space more memorable.

On the main buildings the apartments open to the outdoors. An open slot over the second floor hallway allows in natural light. A metal framework spanning the slot can support vines to shade the hallway. Planters sustain the vines and they are dividers between porches on the third floor. Windowboxes can hang over the railings. (Figs. 8.29-8.30) These details turn the hallways into gathering places.

There are seating spaces on the third floor rear porches and on the second floor bridge to encourage gathering and casual interaction. The brick sills on the Walgreens building are also intended to be seats.

Signs are attached to the front building elevation and on the lower half of the second floor. (Figs. 8.31-8.33) The signs are small compared to the building's overall size. The mixed-use building's form, window displays and the development of the node is expected to explain the uses more than signage.

Landscaping

Landscaping is used throughout the building to reinforce the suburban/residential aspect of the site's location and to add comfort, shade, visual, olfactory and tactile dimensions to the design.

The trellis is used to shade people walking on the top floor of the main buildings. (B8.8, Main Buildings Elevations - Rear) Coral vine was chosen for the trellis. The vine virtually dies in winter, but grows

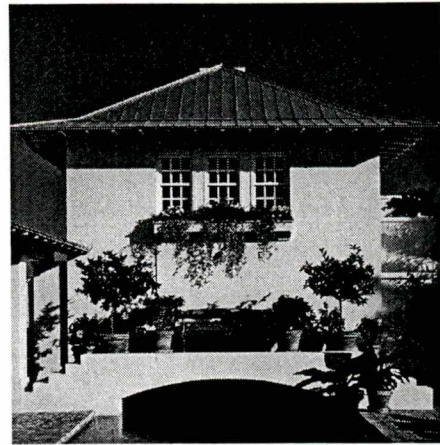


Fig. 8.29 A windowbox on a house in Windsor, FL. Source: Katz.

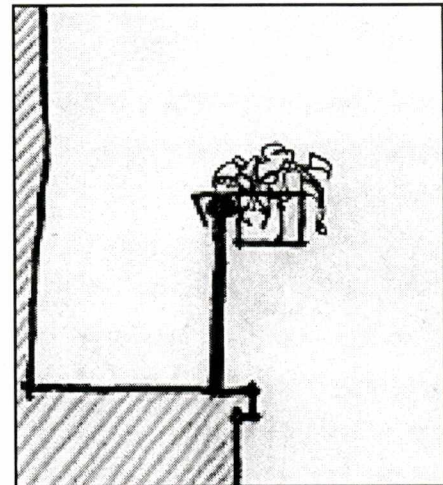


Fig. 8.30 A windowbox may be hung over the balconies.

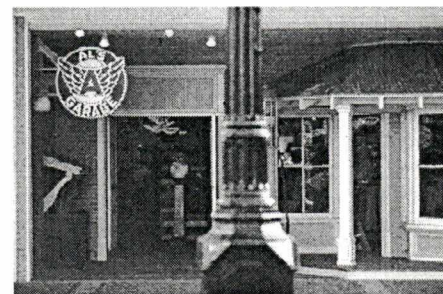


Fig. 8.31 Storefront sign for a clothing store in Newport Center, CA. Source: Follis.

back every spring. The coral vine was decided upon because it would not outgrow its space since the plant virtually dies every year.

Windowboxes are planned for all the buildings on the residential floors. They are another layer of distinction to the complex.

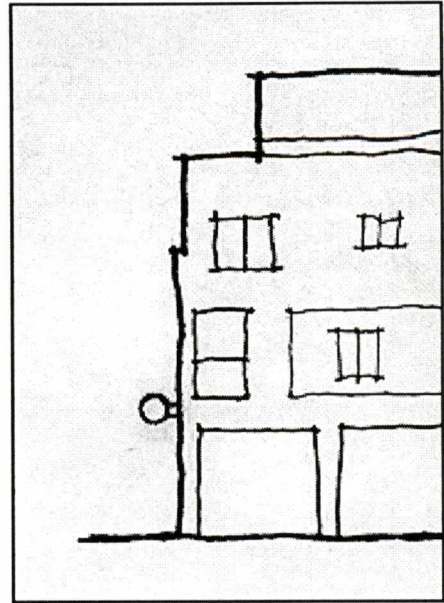


Fig. 8.32 A store sign viewed from the main building's side elevation.

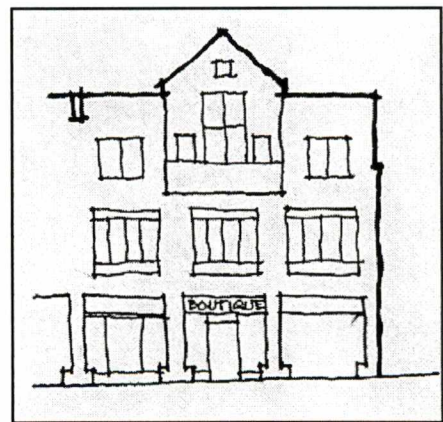


Fig. 8.33 An optional form of signage. This is harder for motorists or pedestrians who are next to the building to see.

IX. Conclusions

Reviewing Objectives

The intent of the thesis is to test main street principles on the modern suburban strip, where the public realm has largely been excluded. The basic thesis concepts are to link the neighborhood with the strip and to shape public gathering places on the strip.

The thesis should be judged by whether connections and gathering places were made in the project. Since the project is fictitious results must be conjectured.

Each of the eight design strategies in the main street model has been employed in the thesis project. These are the edge, an activated lower level, mixed-use, higher concentration (medium density), gathering places, linkages, distinctiveness and nodes.

On visits to the project site it was clear people in the neighborhood desired to gather. People were mingling on front porches and children were playing on neighborhood streets. They just had no outdoor space to gather together on the strip.

Rebuilding pedestrian paths from the neighborhood to the strip allows residents safe access. Creating gathering places on the strip provides destinations for the people. Paths and gathering places are included on the strip, but main street has clear boundaries for pedestrians, vehicles, buildings and landscaping. On the strip boundaries between pedestrians and cars are blurred because parking lots form a layer between the street and the building.

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The intent of the thesis is to test main street principles on the modern suburban strip, where the public realm has largely been excluded. The basic thesis concepts are to link the neighborhood with the strip and to shape public gathering places on the strip.

The thesis should be judged by whether connections and gathering places were made in the project. Since the project is fictitious results must be conjectured.

Each of the eight design strategies in the main street model has been employed in the thesis project. These are the edge, an activated lower level, mixed-use, higher concentration (medium density), gathering places, linkages, distinctiveness and nodes.

On visits to the project site it was clear people in the neighborhood desired to gather. People were mingling on front porches and children were playing on neighborhood streets. They just had no outdoor space to gather together on the strip.

Rebuilding pedestrian paths from the neighborhood to the strip allows residents safe access. Creating gathering places on the strip provides destinations for the people. Paths and gathering places are included on the strip, but main street has clear boundaries for pedestrians, vehicles, buildings and landscaping. On the strip boundaries between pedestrians and cars are blurred because parking lots form a layer between the street and the building.

The main street principles, when used in the project design, address the objectives set out in Chapter V. These were to establish connections, revise local zoning codes, make the strip distinctive, design flexibility, create gathering places and form layers of public activities on the street.

These objectives express sensitivity to contextual forces and the need for public space and flexible design. Today products are reinvented daily. New technology makes products outdated. Making a design flexible aims towards making the development sustainable.

Repairing the Strip

The strip is naturally the busiest street in modern day cities. Its usefulness necessitates struggling to somehow solve its problems so it can better address the needs of the community.

It may be arrogant to suppose one only needed to mold a site on the strip and gathering would occur. In Jane Jacobs book she discusses how cities are problems of organized complexity. Many factors affect whether and what kind of communities will form at a site. Simply applying main street principles cannot assure communal formation. What is certain is the American consumer lifestyle cannot go on forever. The supply of natural resources needed to perpetuate it is limited.

America is one of the few countries which is accustomed to discarding developments and materials regularly. Disposable diapers, plastic cups and trading

in cars every three to five years is a mainstay of American culture.

In most other countries recycling and reuse are age-old practices. Objects and building are used until they fall apart. The concept of technological obsolescence is new--only a few decades old. (Fitch, 1990) The strip is commonly evaluated under these strenuous demands. This partly explains why buildings are cheaply made and why, rather than reusing buildings, they are often abandoned.

Rapid and uncontrolled technological evolution has become so institutionalized that change is now seen as synonymous with progress. The annual model, the disposable container, the throwaway city have become the norms; the sheer prestige of the new has suffocated the old fool, the traditional craft, conventional wisdom in general. (Fitch, 1990)

In the federal study, The Costs of Urban Sprawl, researchers reported,

"...sprawl is the most expensive form of residential development in terms of economic costs, environmental costs, natural resource consumption and many types of personal costs. ...This cost difference is particularly significant for that proportion of total costs which is likely to be borne by local government." If all these hidden costs are to be truly expressed in the balance sheet, then the retrieval and recycling of the built environment will once again seem a rational means of managing the materials resources of the nation. (Fitch, 1990)

Trying to convince developers and common citizens to change their individual goals to a shared purpose seems akin to plugging up a dike with one's fingers. This is especially true in cities where the government considers designers an unnecessary expense. Forward-thinking cities such as Chattanooga, Tennessee, and Portland, Oregon, require measures which support sustainable urban development. Planners in other cities are beginning to think twice about proposals on their boards. But planners are still waiting to see the results from these city experiments.

Still, is it not worth the time and money to change what is known to be destructive building (an oxymoronic phrase), in favor of proven, centuries-old planning practices? This is crucial since the necessity for change will ultimately come pressing upon designers. Continuing with present planning practices will leave people stranded in disconnected developments when natural resources finally dry up.

In the final analysis sustainable development is a clinical way of recommending the need for communities in the sociological sense of the word. The Bible gives an account in Genesis of a time not long after the flood when the whole world spoke the same language. The people got together and decided to build a city and a tower that would reach to the heavens. Their plans were arrogant but God saw that as long as the people were united nothing was impossible for them. The Lord caused the people to speak different languages so their plans would be frustrated. The people scattered and did not finish the city. The city was called Babel, which sounds like the Hebrew word for confused.

The story shows men, when united in a city can undertake grand projects which transcend mere survival. The modern city has been scattered by the independence afforded by technology. The common interest has not been urged, rather, individuality and privacy has been accommodated in American cities.

The power of the main street concept lies in understanding what people want or need deep down. Kuntsler ponders the answer.

When Americans, depressed by the scary places where they work and dwell, contemplate some antidote, they often conjure the image of the American small town. However muddled and generalized the image is, it exerts a powerful allure. For the idea of a small town represents a whole menu of human values that the gigantism of corporate enterprise has either obliterated or mocked: an agreeable scale of human enterprise, tranquility, public safety, proximity of neighbors and markets, nearness to authentic countryside, and permanence. (Kuntsler, 1993)

According to Kunstler the small town offers a vision of security. Security comes from feeling at ease with one's situation, both internally and externally. This deep comfort comes from getting to know local people and places every day. Daily communication is key. Main street provides a place for exchanges to occur.

When people can freely share ideas and experiences great plans can be conceived. Mumford sums up the chief argument for protecting the city form:

The final mission of the city is to further man's conscious participation in the cosmic and the historic process. Through its own complex and enduring structure, the city vastly augments man's ability to interpret these processes and take an active, formative parts in them, so that every phase of the drama it stages shall have, to the highest degree possible, the illumination of consciousness, the stamp of purpose, the color of love. That magnification of all the dimensions of life, through emotional communion, rational communication, technological mastery, and above all, dramatic representation, has been the supreme office of the city in history. And it remains the chief reason for the city's continued existence.

X. Recommendations for Further Research

The work done for this thesis does not forge new territory but instead reviews particular planning principles. Much of these principles came from New Urbanist literature. If this research were extended then an area would be to study other urban planning approaches. This will provide a broader perspective for the eventual design.

Other urban theories were in fact studied but because the subject has been analyzed extensively it was necessary to narrow the focus to a particular method. While this method is valid the New Urbanist guidelines tend to be prescriptive rather than conceptual. Following a concept can yield more imaginative solutions than simply applying principles.

Communal gathering is deeply dependent on the synchronization with people's daily habits. Places which tap into essential community needs are the most sustainable. Location, structure and design determine the building's flexibility. Further exploration into community design with the aim to pedestrianize the street would strengthen the thesis's design solution.

The strip is a wide and busy car-oriented street. The pedestrian is not safe near a moving car. Searching for ways to further protect or separate the two without significantly decreasing the usefulness of a public street deserves more research.

Bibliography

Anderson. On Streets. Cambridge, MA: MIT Press, 1978.

Architecture. May 1996, p.126-130, 194.

Attoe, Wayne; Logan, Donn. American Urban Architecture. Berkeley, CA: University of California Press, 1989.

Calthorpe, Peter. The Next American Metropolis. New York, NY: Princeton Architectural Press, Inc., 1993.

Cooper Marcus, Francis, People Places: Design Guidelines for Urban Open Spaces. New York, NY: Van Nostrand Reinhold, 1990.

Creekmore, Betsey Beeler. Knoxville. Knoxville, TN: The University of Tennessee Press, 1958.

Crowe, Norman. Nature and the Idea of Man-Made World. Cambridge, MA: The MIT Press, 1995.

Cullen, The Concise Townscape. London, England: The Architectural Press, 1971.

de la Croix, Horst; Tansey, Richard G. Gardner's Art Through the Ages. San Diego, CA: Harcourt Brace Jovanovich, Publishers, 1986.

Dixon, John Morris. "Seaside Ascetic" Progressive Architecture. 1989, Aug., v. 70, no.8, pp. 59-67.

Fitch, James Marston. Historic Preservation.

Charlottesville, VA: University Press of Virginia, 1990.

Follis, John; Hammer, Dave. Architectural Signing and Graphics. New York, NY: Whitney Library of Design, 1979.

Hedman, Richard; Jaszewski, Andrew. Fundamentals of Urban Design. Washington, DC: Planners Press American Planning Association, 1984.

Hiorns, Frederick R. Town-Building in History. New York, NY: Criterion Books, 1958.

Jacobs, Jane. The Death and Life of Great American Cities. New York, NY: Vintage Books, 1989.

Katz, Peter. The New Urbanism. New York, NY: McGraw-Hill, Inc., 1994.

Knoxville/Knox County Metropolitan Planning Commission. Park City: National Register Historic District Nomination. Knoxville, TN: July 1, 1990.

Kuntsler, James Howard. The Geography of Nowhere. New York, NY: Simon & Schuster, 1993.

Lynch, Kevin. The Image of the City. Cambridge, MA: The MIT Press, 1972.

McHarg, Ian L. Design with Nature. Garden City, NY: Doubleday/Natural History Press, 1971.

Martin, Edward C. Landscape Plants in Design. Westport, CT: AVI Publishing Company, Inc., 1983.

Moughtin, Cliff. Urban Design: Green Dimensions. Boston, MA: Butterworth Architecture, 1996.

Mumford, Lewis. The City in History: Its Origins, Its Transformations, and Its Prospects. New York, NY: Harcourt, Brace & World, Inc., 1961.

Neufeldt, Victoria, ed. Webster's New World Dictionary. Cleveland, OH: Simon & Schuster, Inc., 1991.

Prince, Bart. Lecture for University of Tennessee School of Architecture and Planning. Knoxville, TN, March 14, 1997.

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

Scott Brown, Denise. Urban Concepts. London, England: Academy Editions, 1990.

Trancik, Roger. Finding Lost Space. New York, NY: Van Nostrand Reinhold, 1986.

Venturi, Robert; Scott-Brown, Denise; Izenour, Steven. Learning from Las Vegas. Cambridge, MA: The MIT Press, 1977.

Whyte, William H. The Social Life of Small Urban Spaces. Washington, DC, The Conservation Foundation, 1980.

Vita

Eunice Hsin-yi Chen was born September 8, 1967 in Buffalo, New York, to Dr. James P. Chen and Mrs. Metis L. Chen. She has an older brother, Mark H. Chen and a younger one, Jeremy H. Chen.

When she was only seven months old she moved to Taiwan with her mother and older brother. Soon after her first birthday her father found a professorship at the University of Texas Medical Branch in Galveston, Texas. He moved his family to a small town named La Marque, Spanish for "the market." Sidewalks, the grid and visiting with neighbors were very much a part of the old town. There were people of all ages and, in-between playing with children her age, she befriended an elderly couple who opened her eyes to new ideas and other cultures.

Seven years later her father moved the family to Knoxville, Tennessee, where he became a professor at the University of Tennessee Research Center. In contrast to the small town, the family moved to a new suburb, where there were cookie-cutter homes and many young children.

After high school she enrolled in Smith College in Northampton, Massachusetts. She completed a Bachelor of Arts degree majoring in architecture and minoring in electives. It was here she matched her love for creating with her love for problem-solving.

She moved to Nashville where she worked for two newspapers which helped develop her critical thinking. In 1993 she enrolled in the Master of

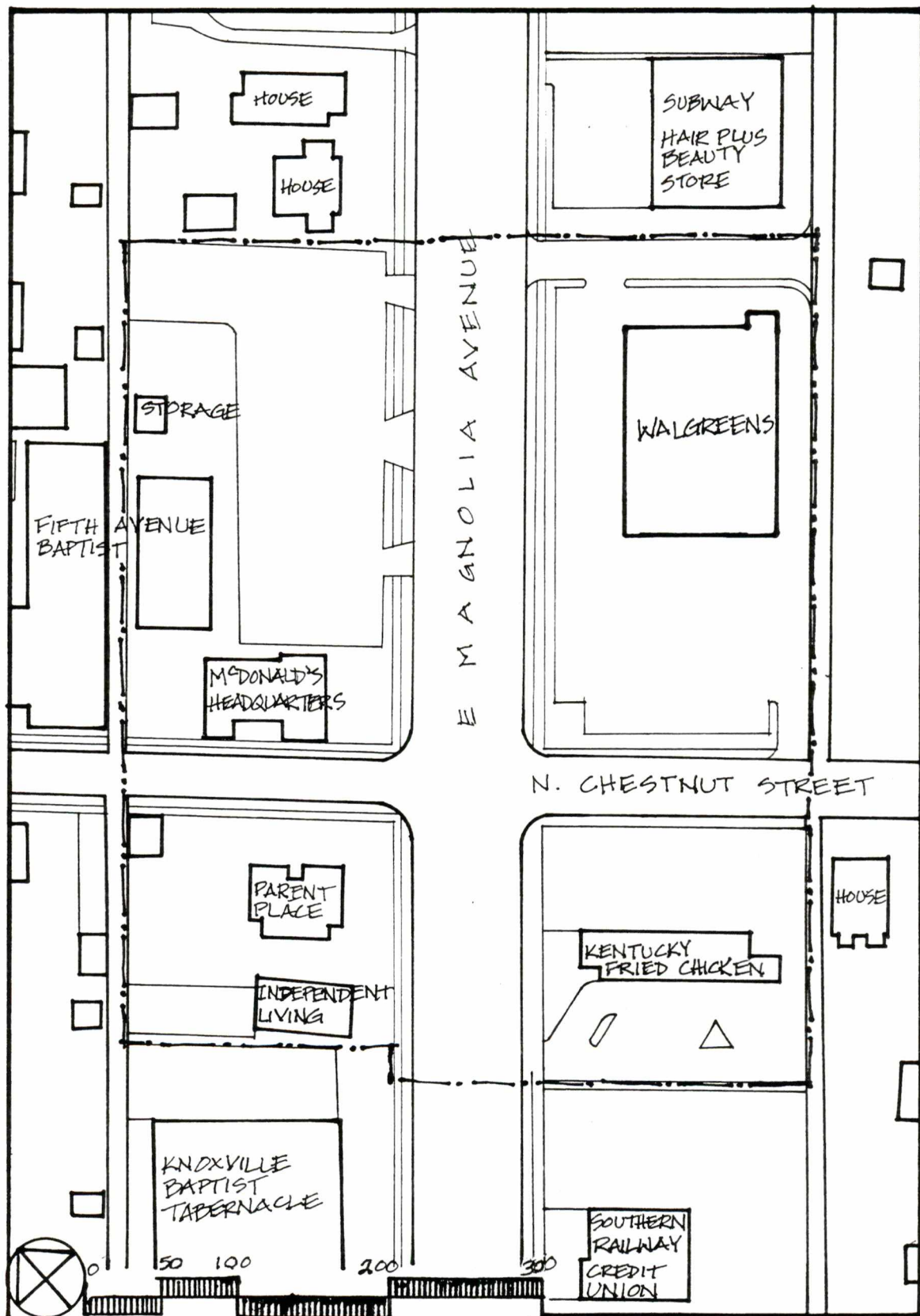
Architecture program at the University of Tennessee
in Knoxville.

Eunice has always been very interested in issues of
equality and fairness. Perhaps it was somewhere
between her desire to cure modern social ills and her
experiences in the North and South, she found the need
to build communities.

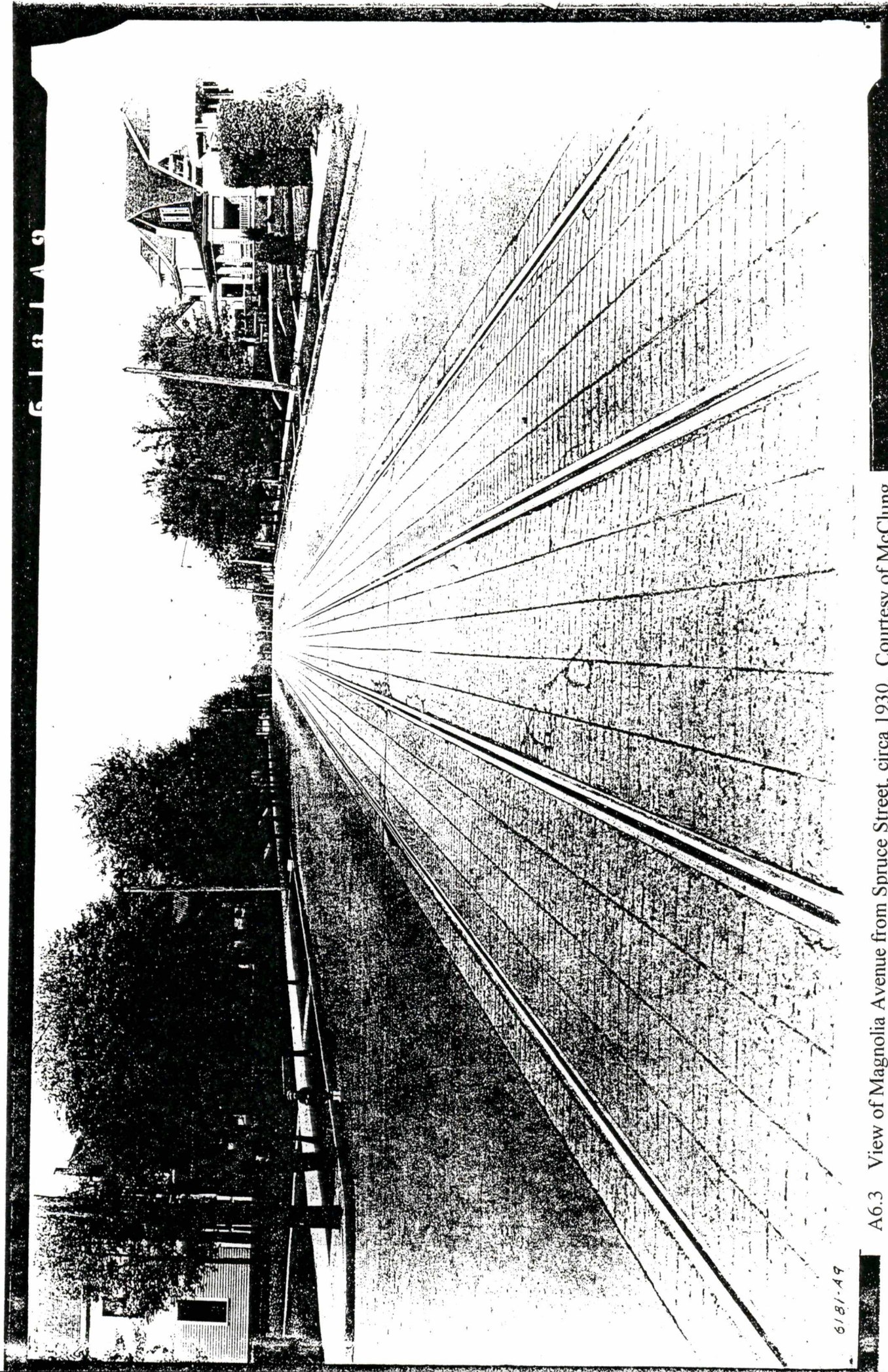
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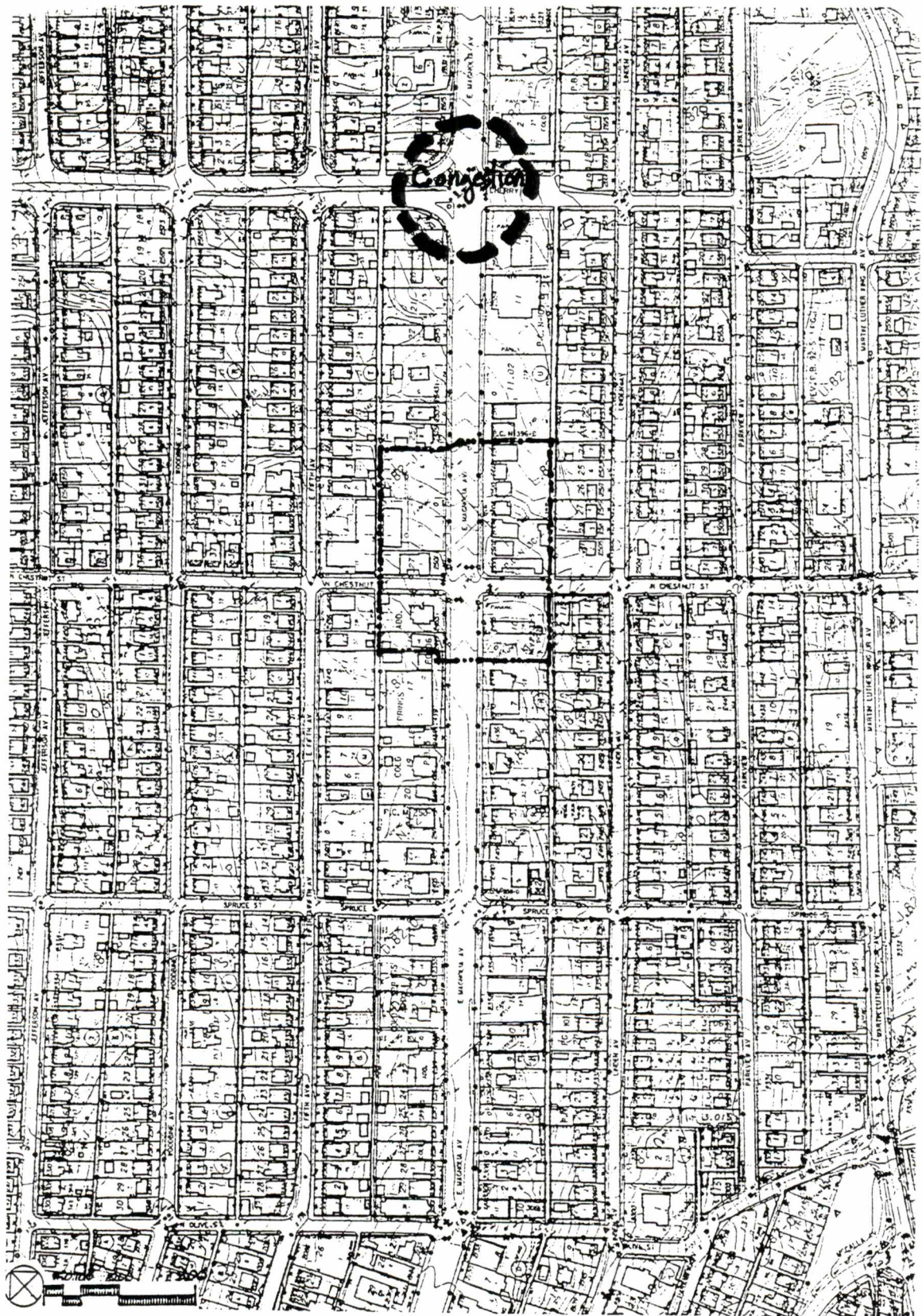
A6.2 Site Boundaries and Existing Building Uses



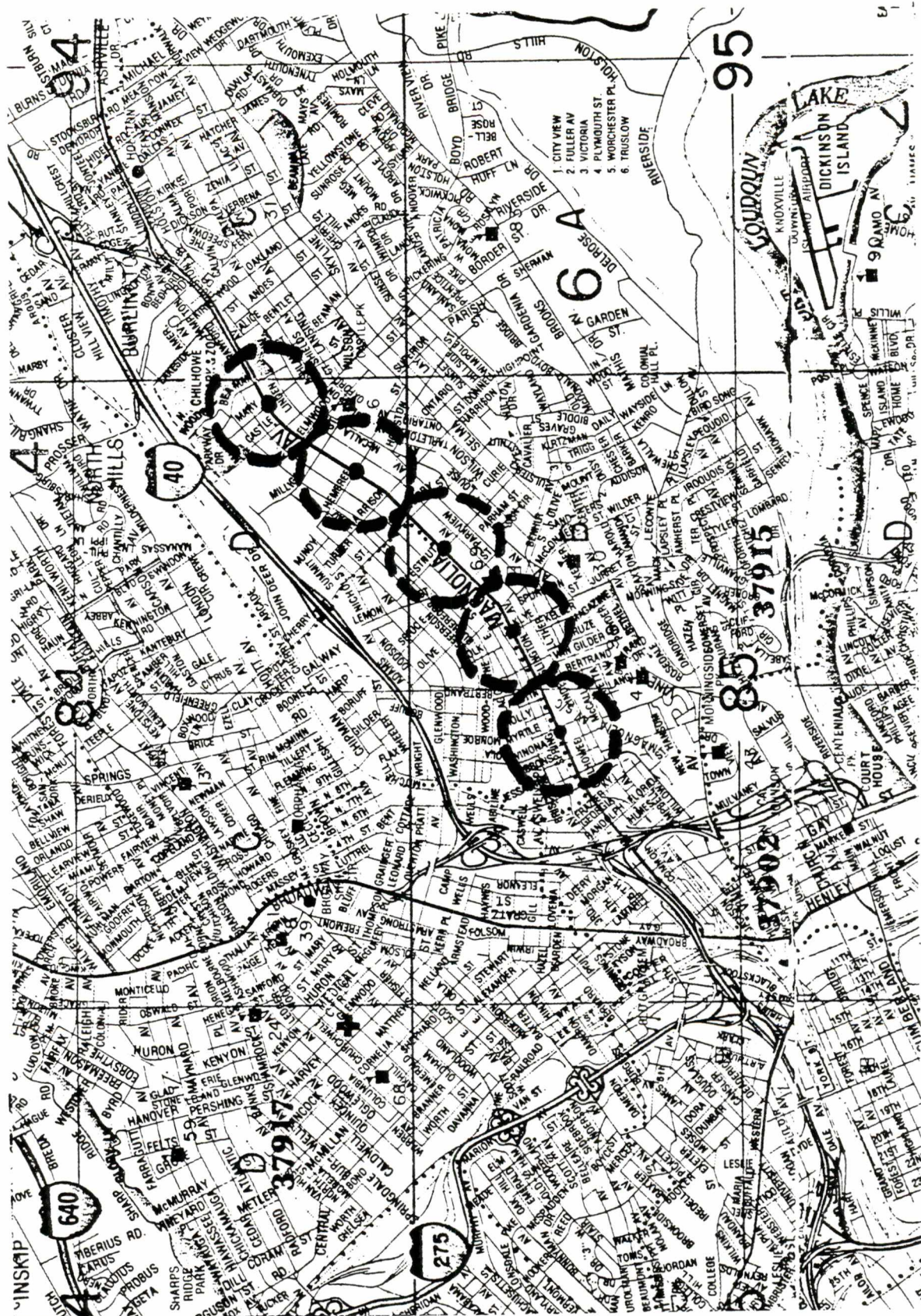
A6.3 View of Magnolia Avenue from Spruce Street, circa 1930. Courtesy of McClung Historical Collection

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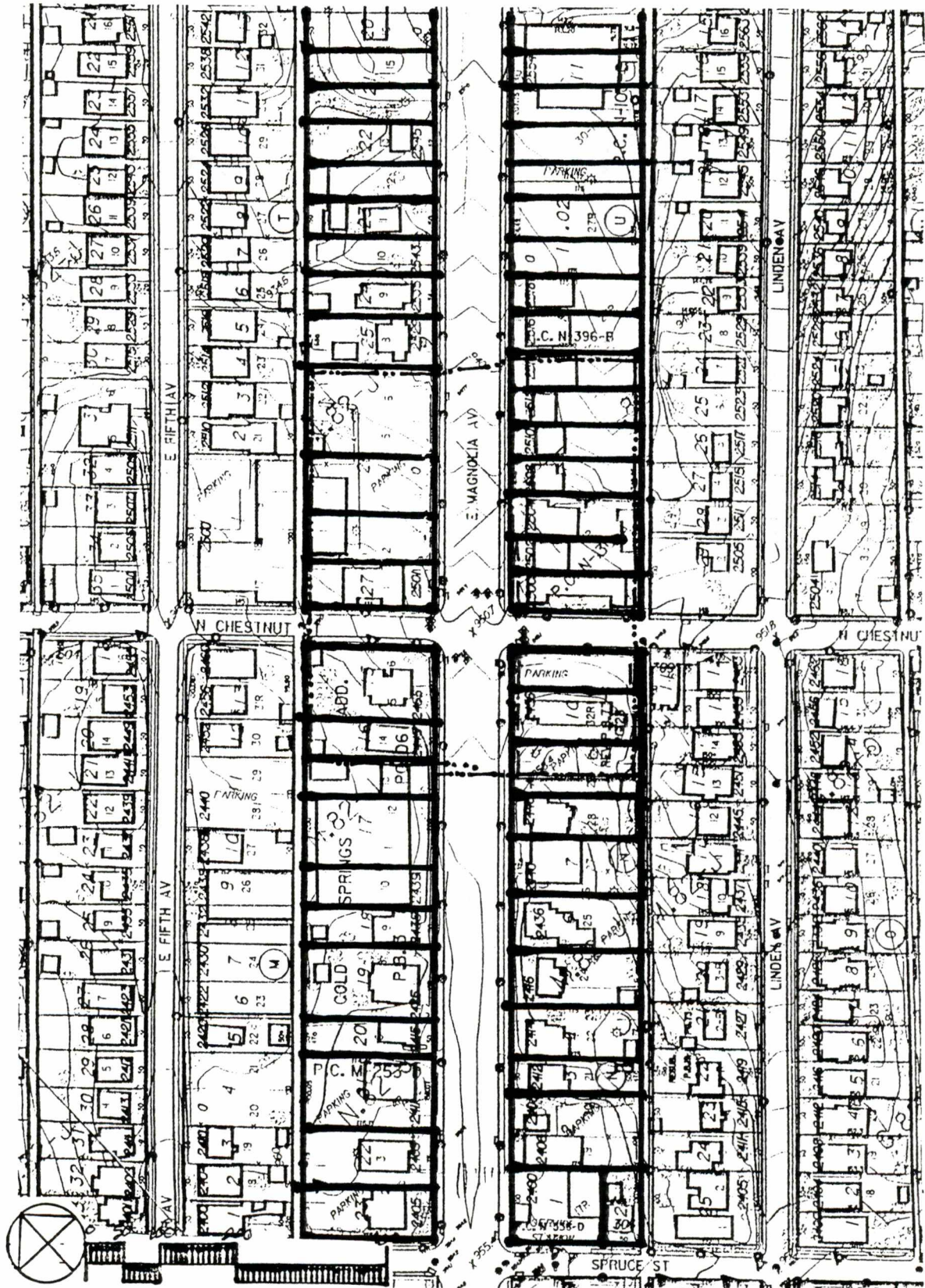
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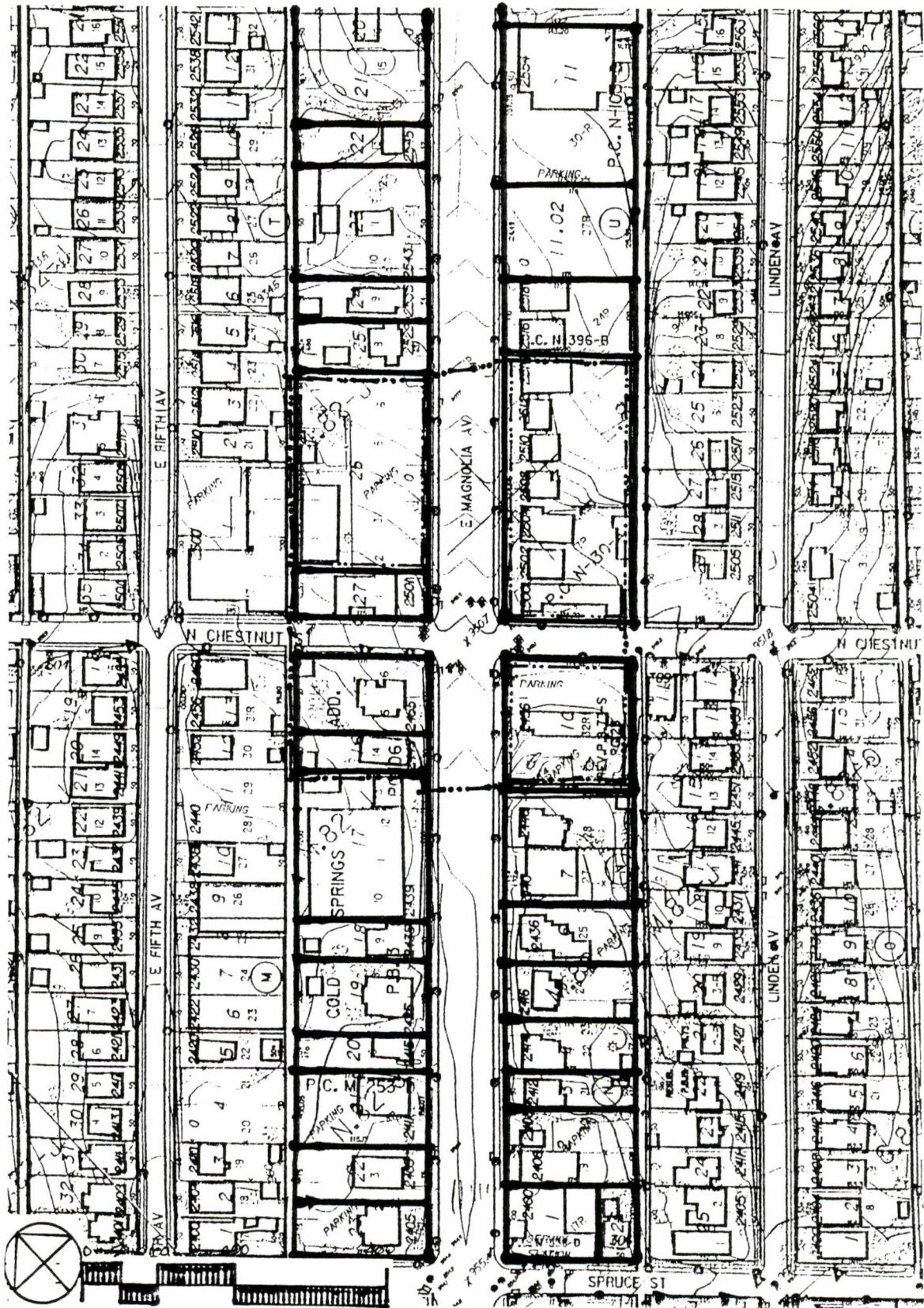
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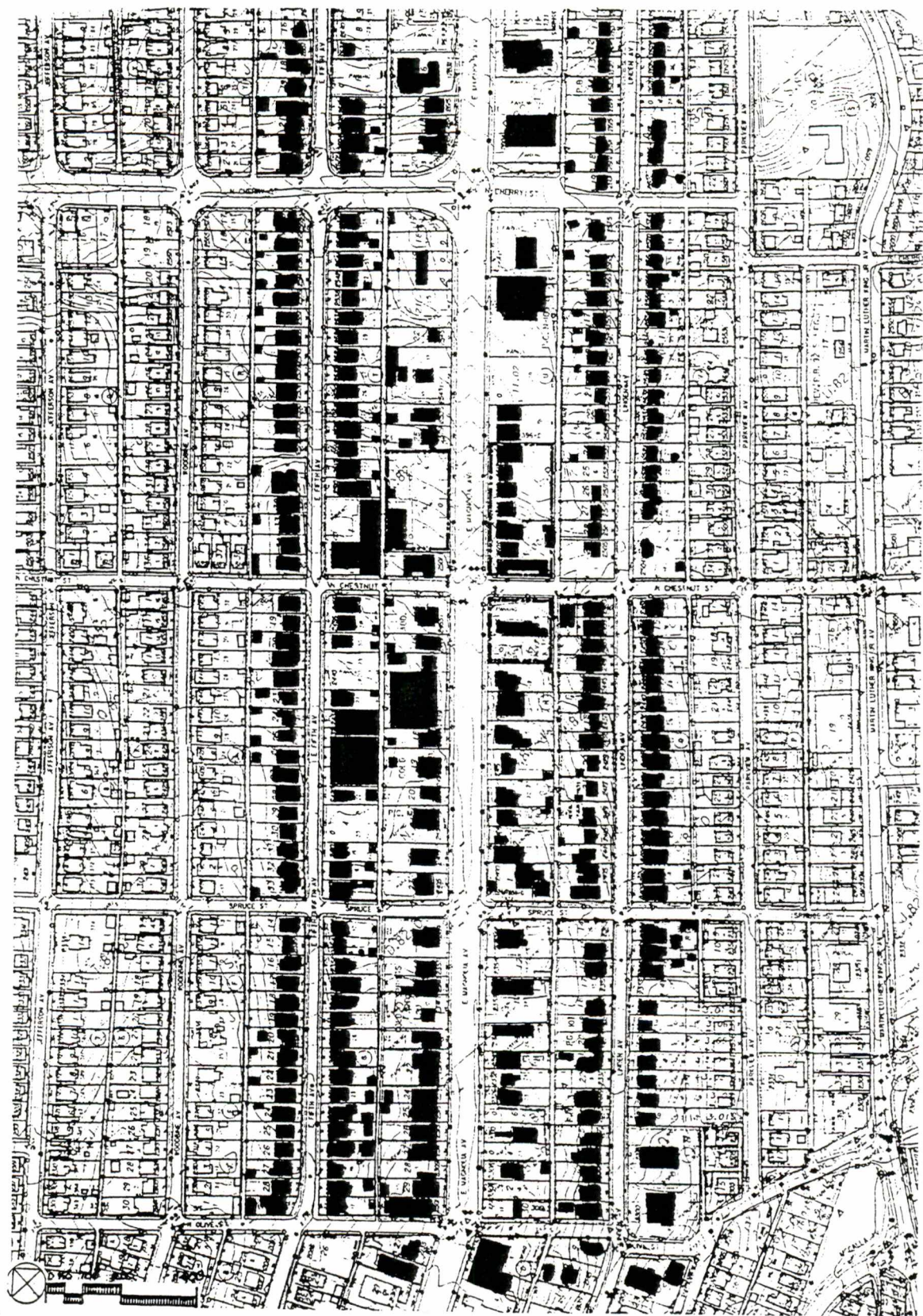
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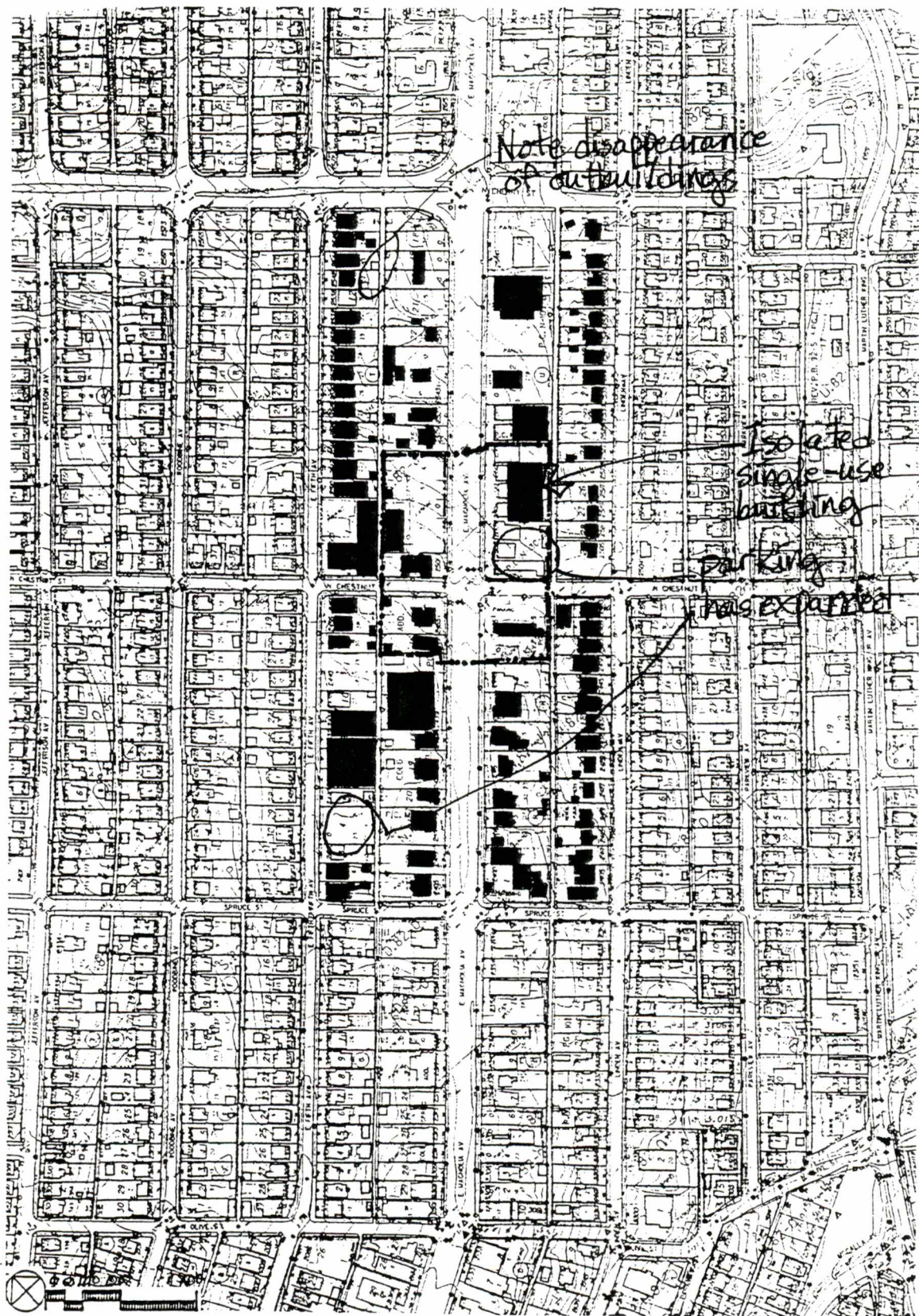
A6.8 Platting, 1924.



A6.10 Platting, 1996.



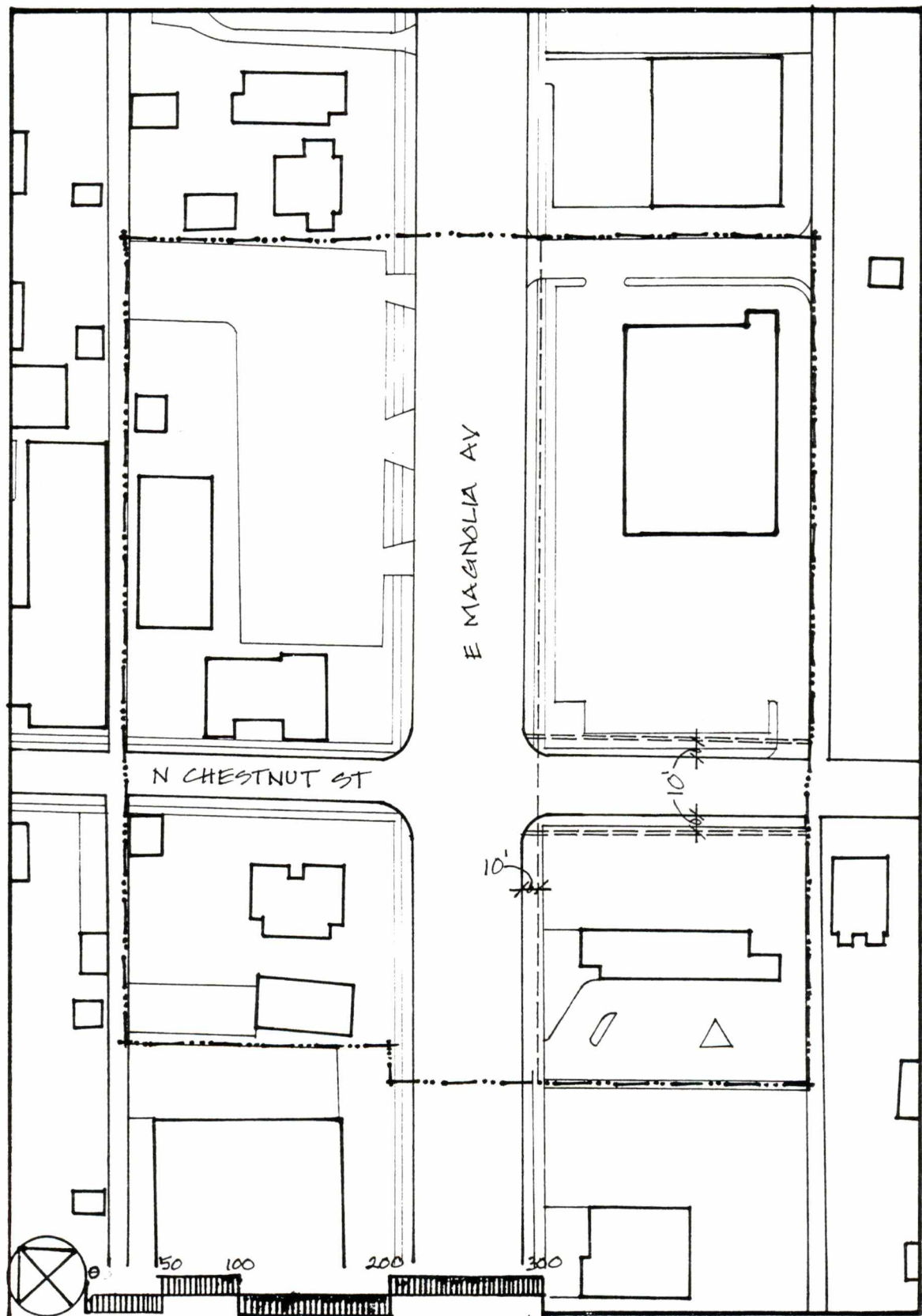
A6.11 Figure-ground, 1981.



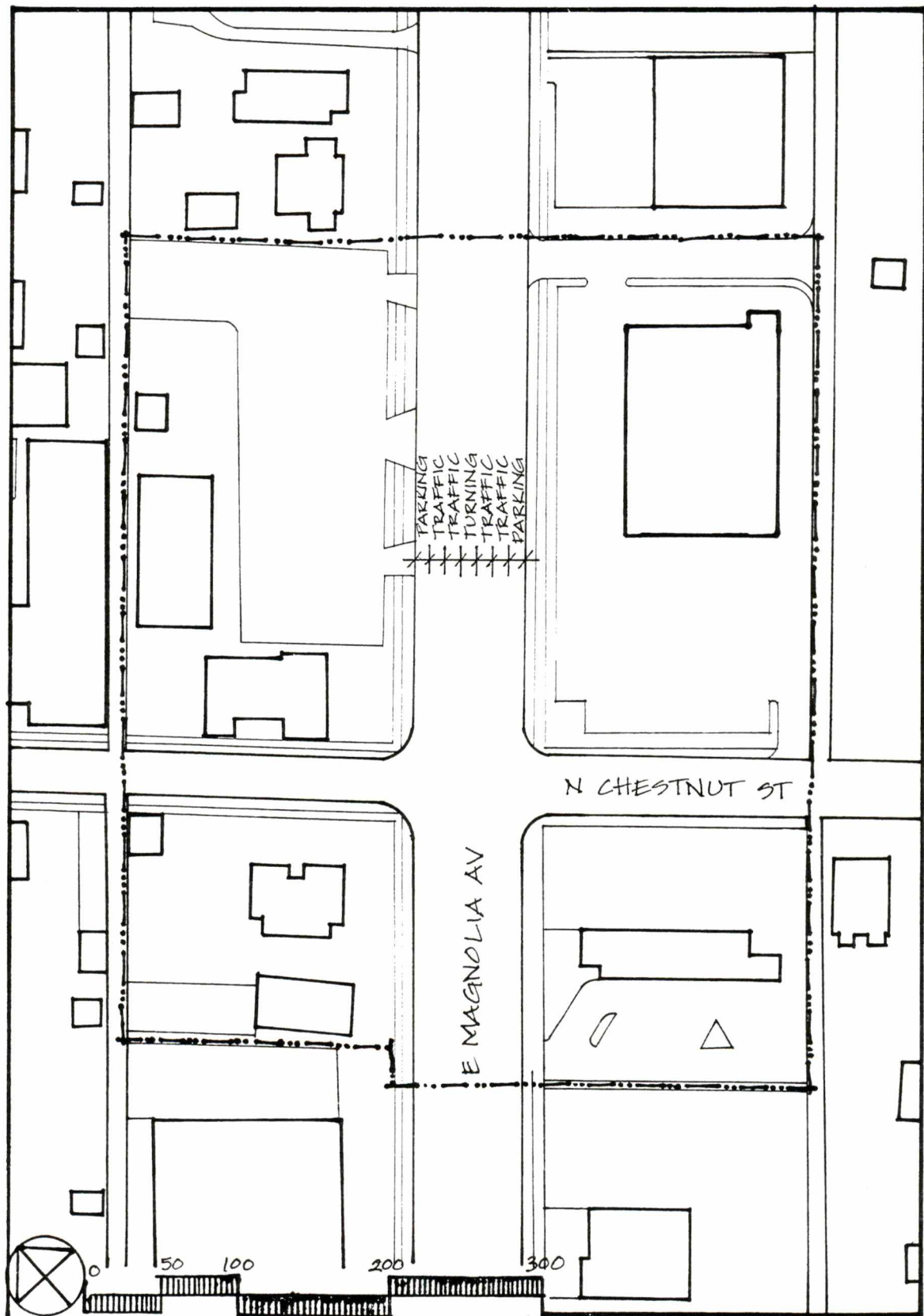
A6.12 Figure-ground, 1997.



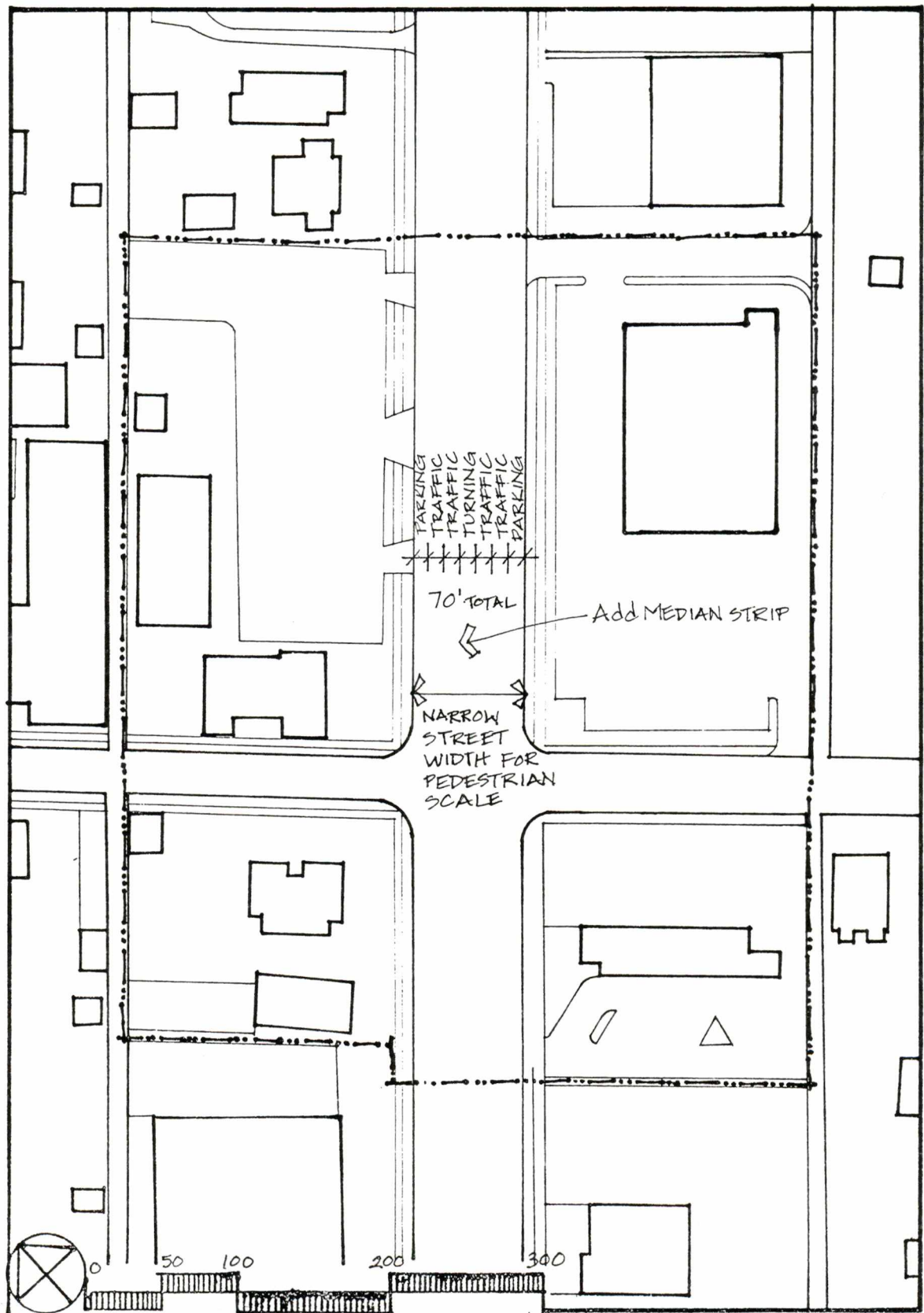
A6.13 Setbacks.



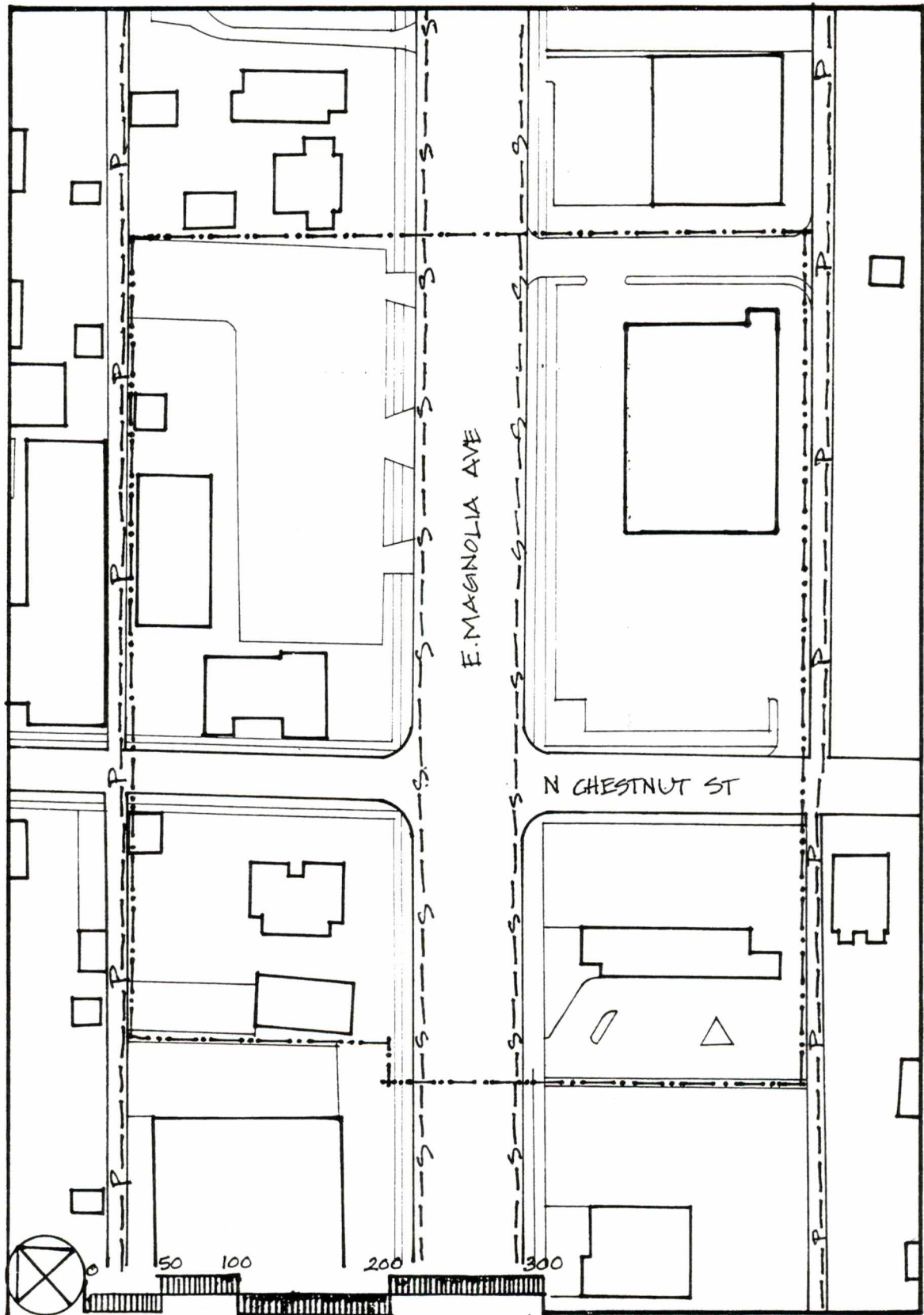
A6.14 Setbacks - Design Response.



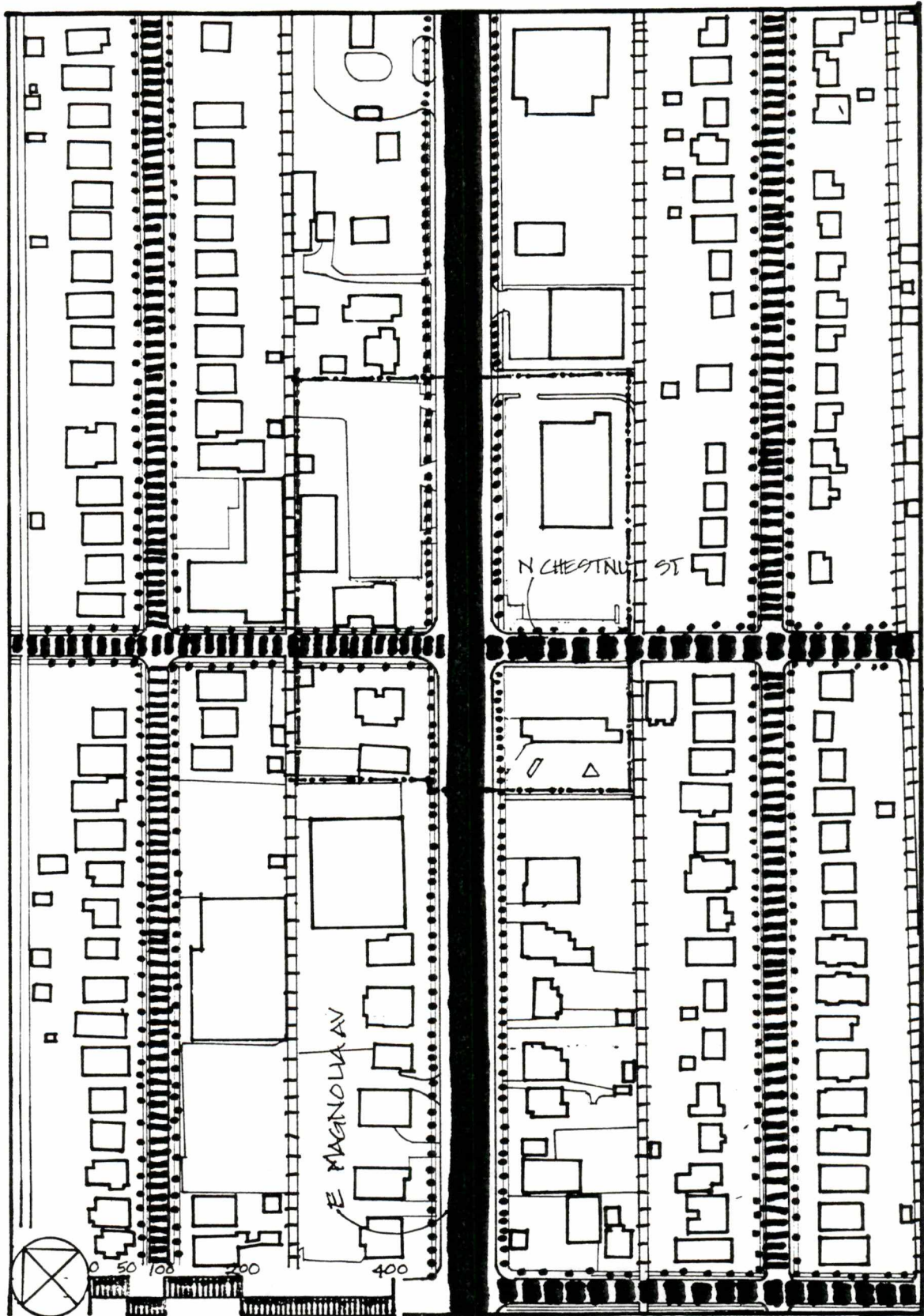
A6.15 Traffic Lanes.



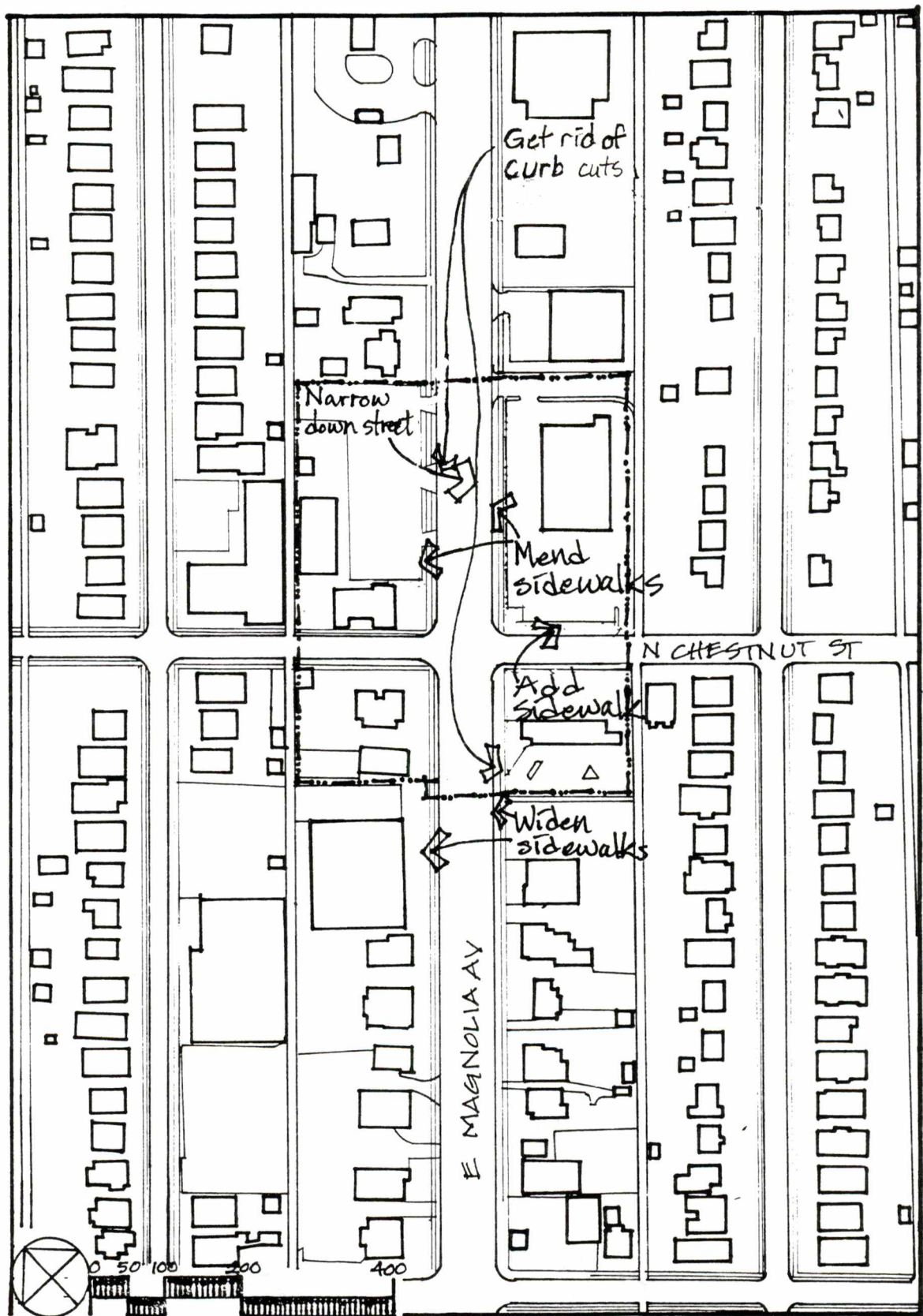
A6.16 Traffic Lanes - Design Response.



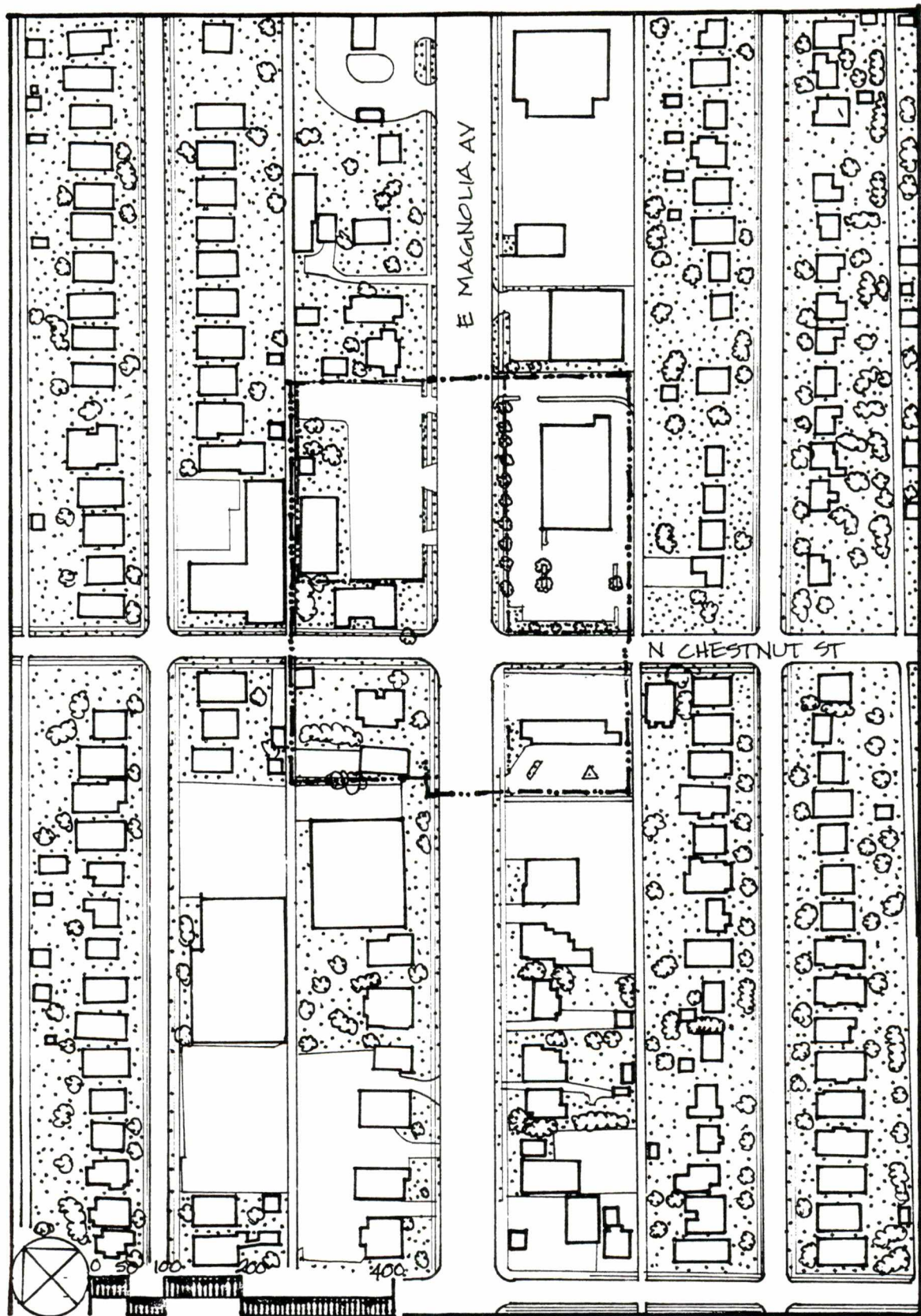
A6.17 Power/Telephone/Sewer.



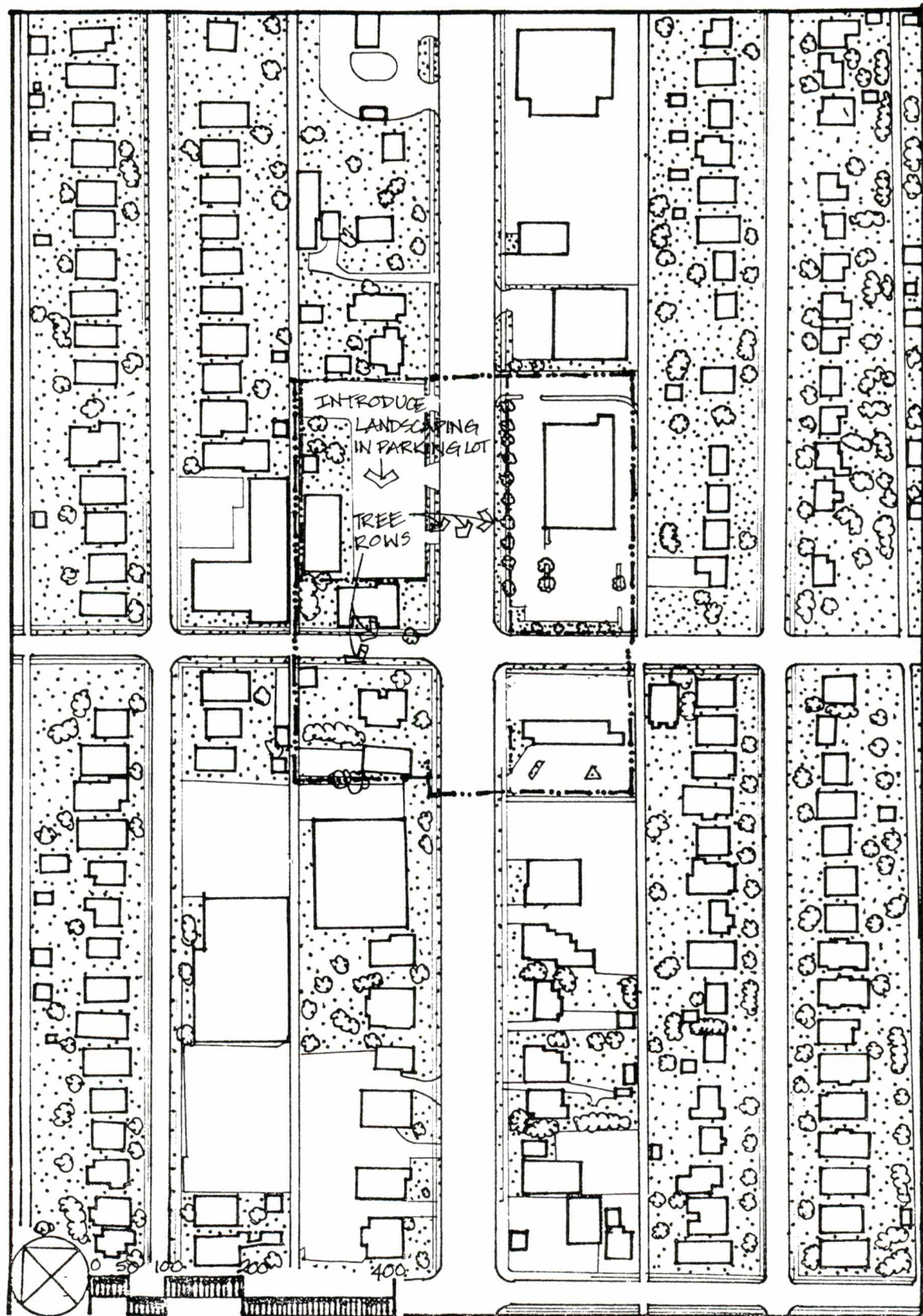
A6.18 Pedestrian/Vehicular Circulation.



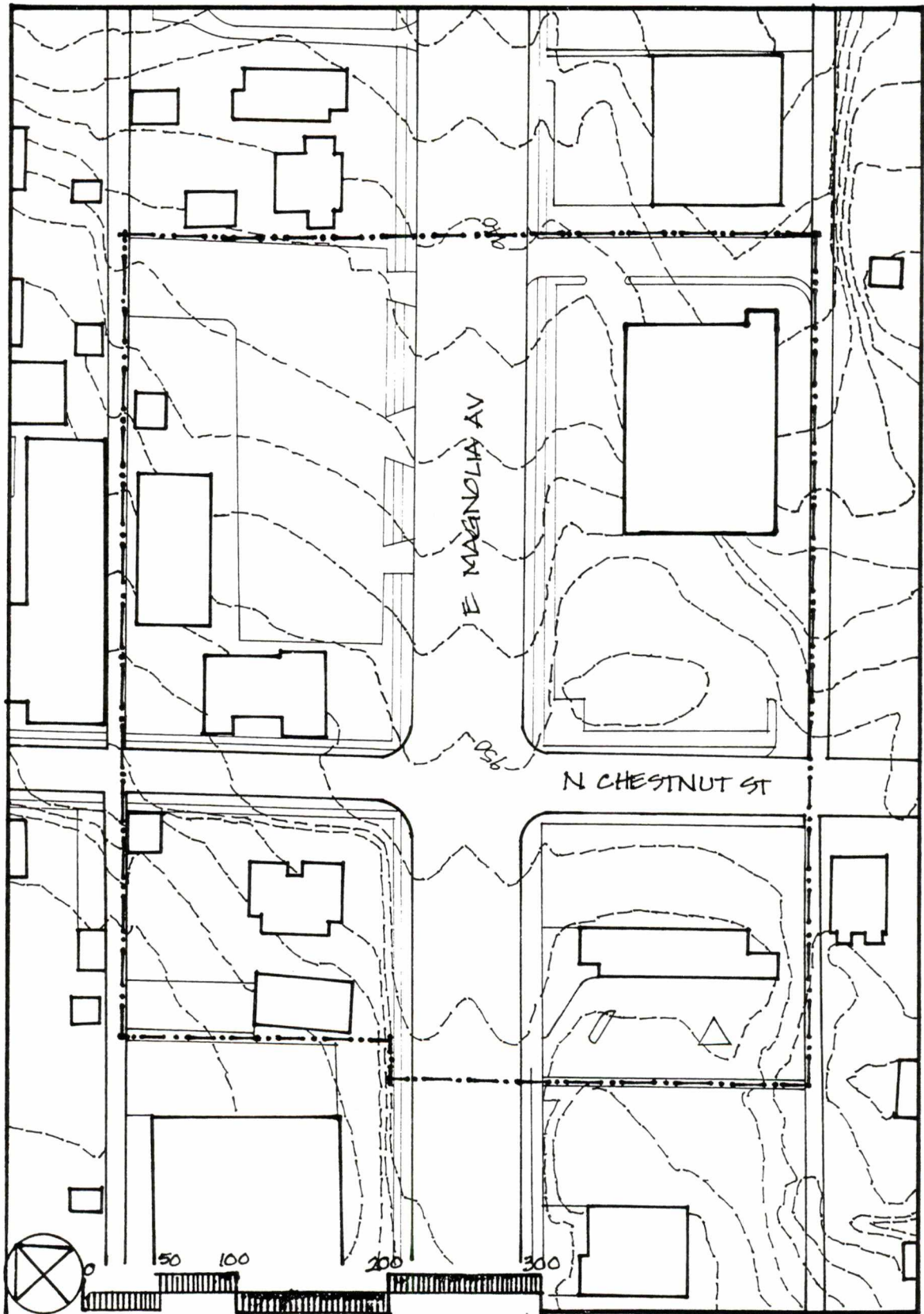
A6.19 Pedestrian/Vehicular Circulation - Design Response.



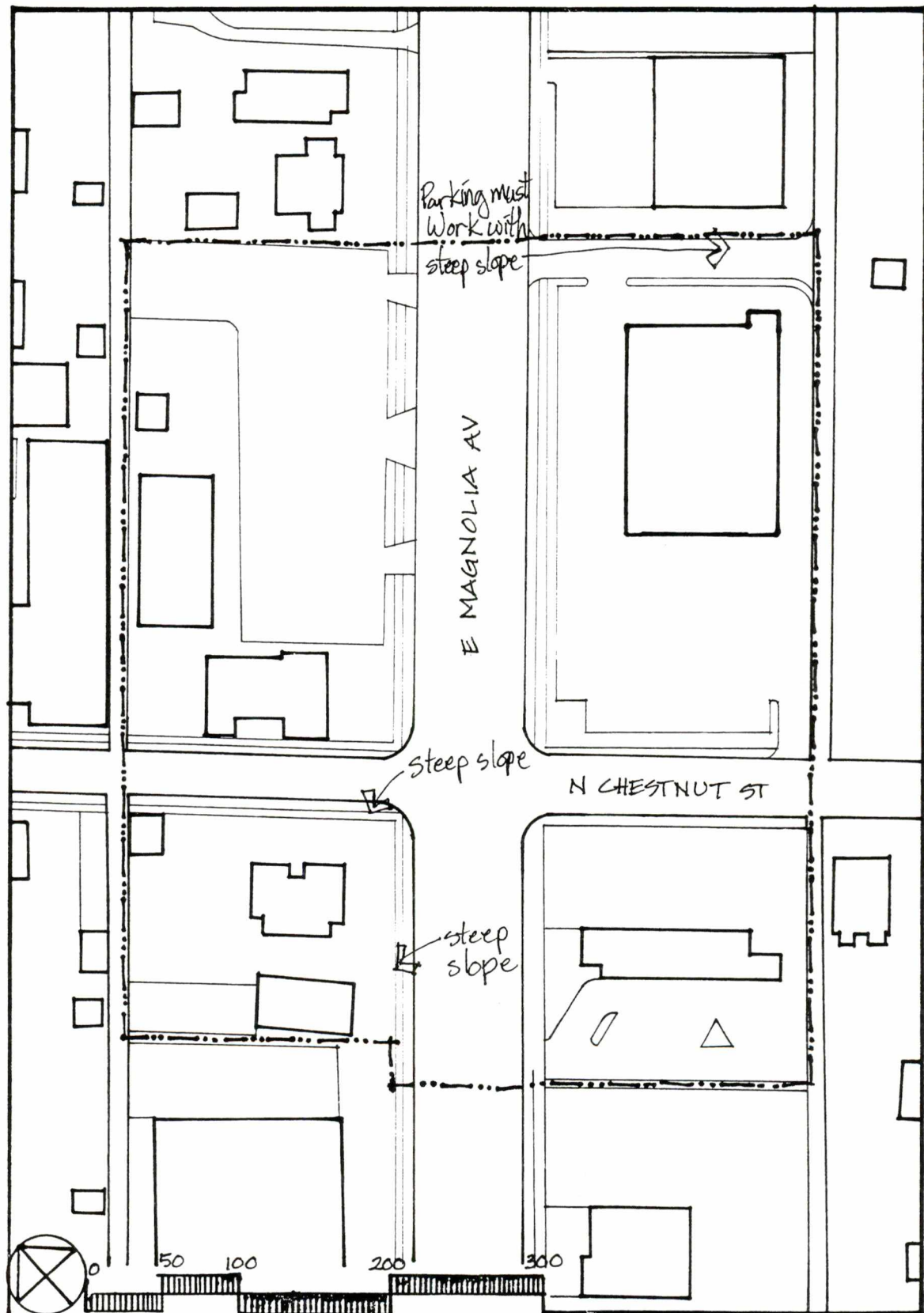
A6.20 Vegetation.



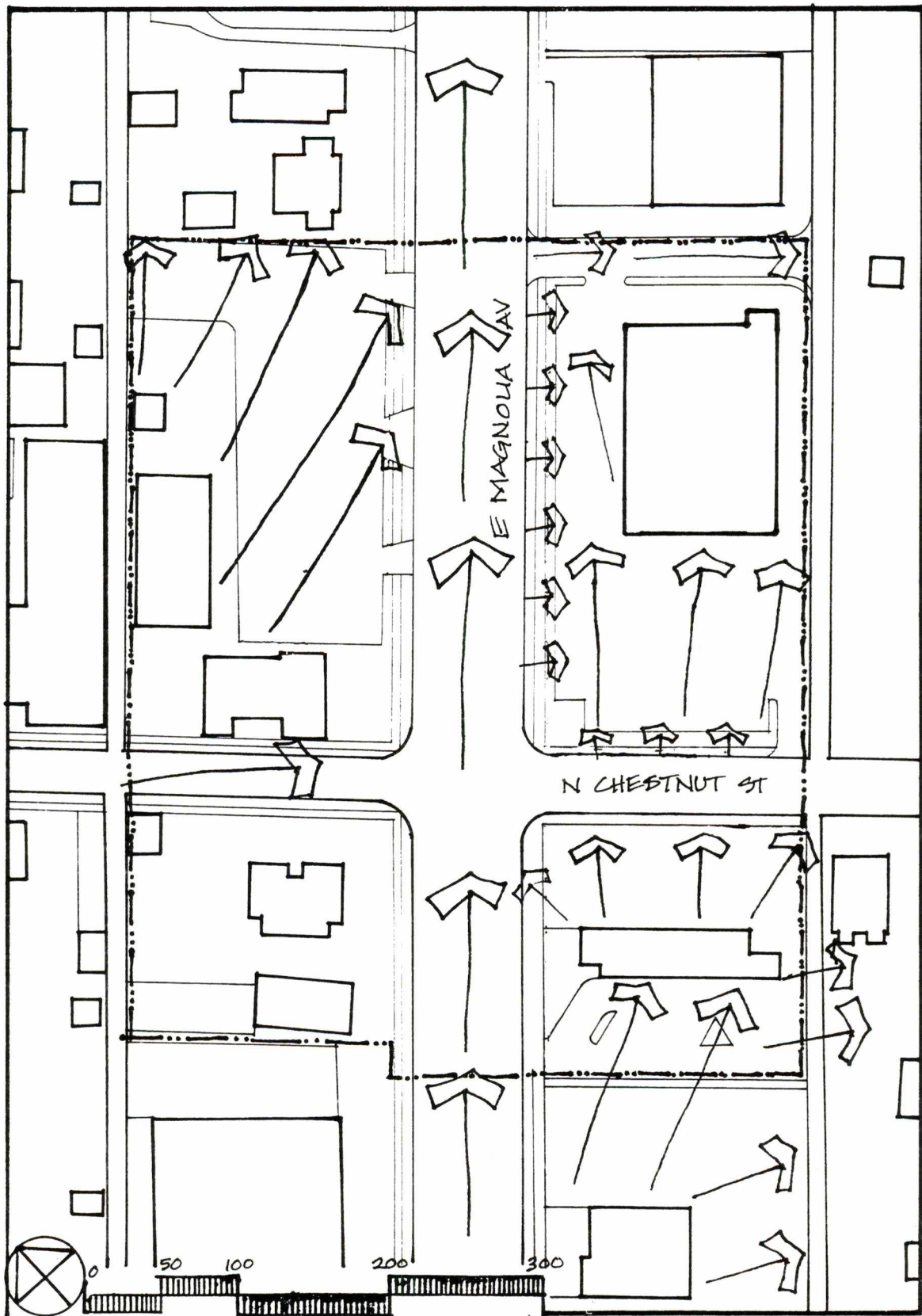
A6.21 Vegetation - Design Response.



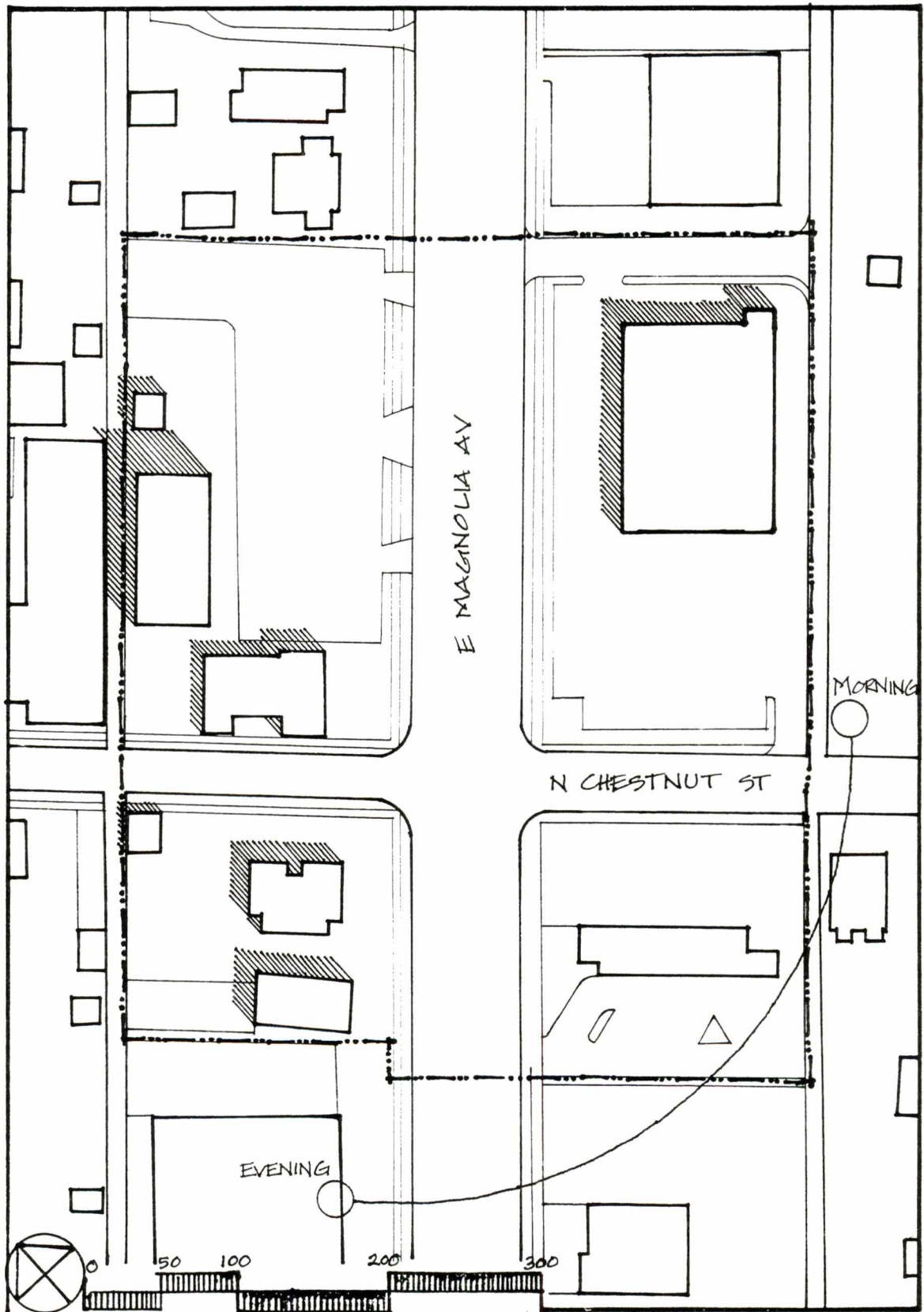
A6.22 Contours.



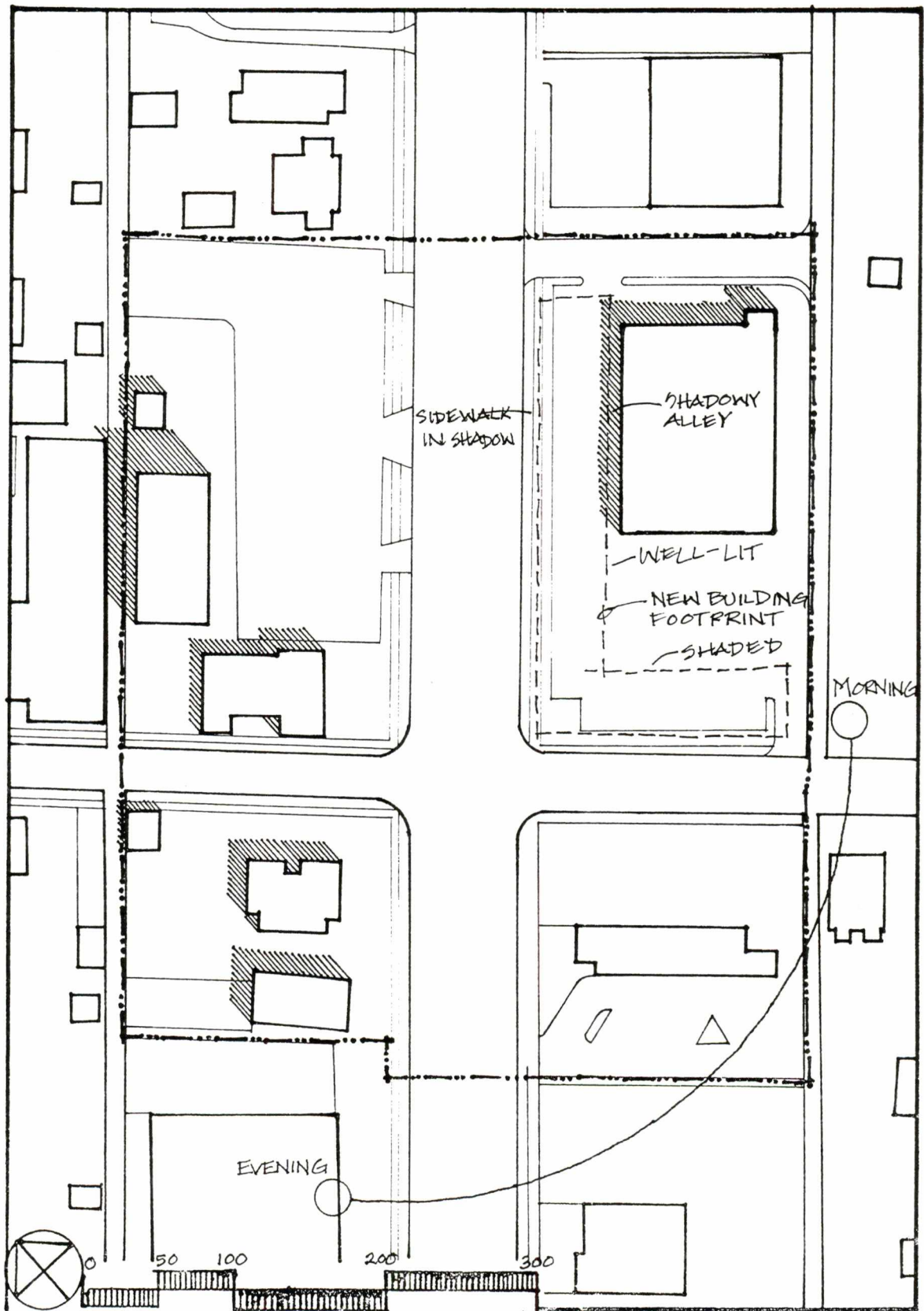
A6.23 Contours - Design Response.



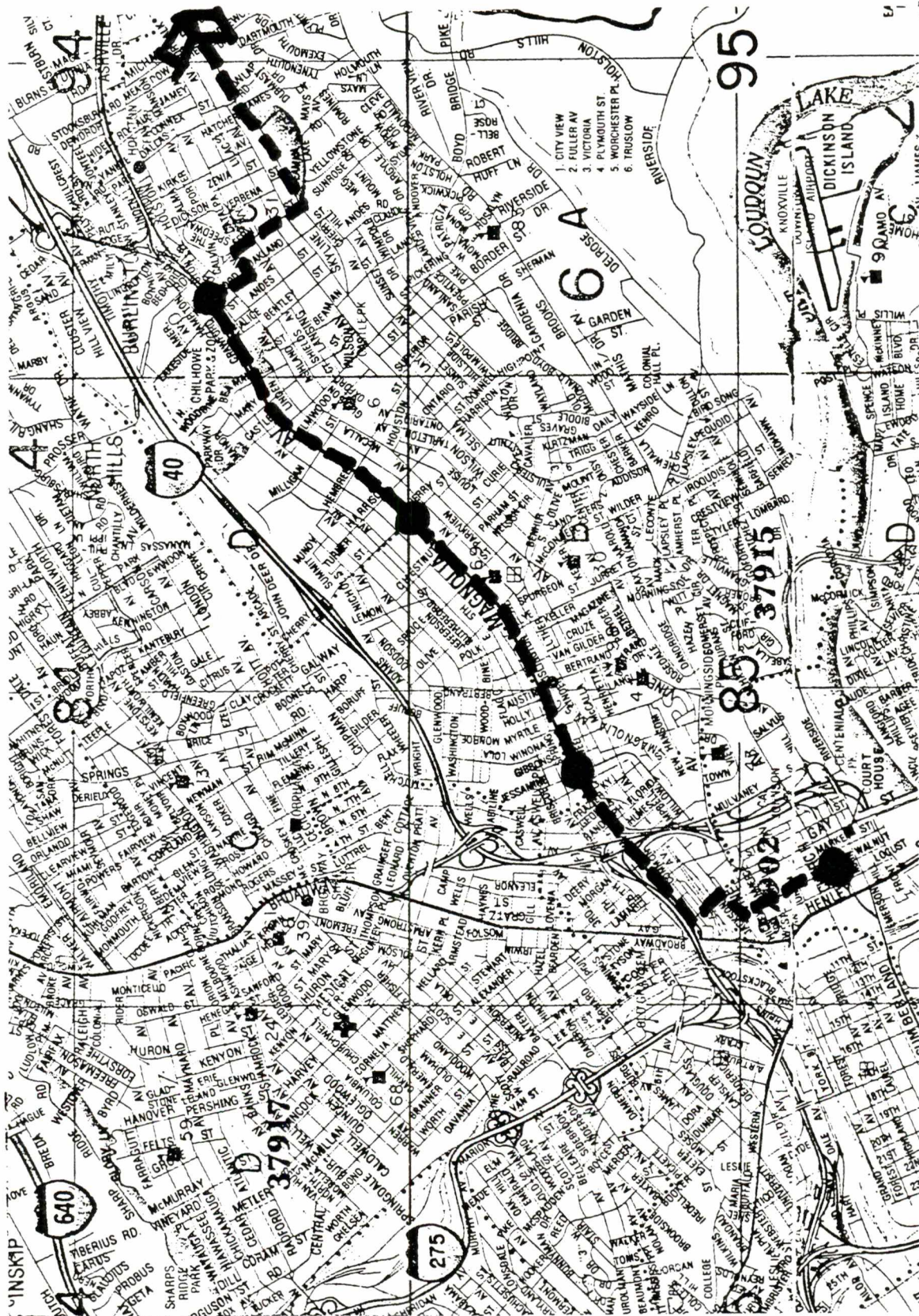
A6.24 Surface Drainage.



A6.25 Sun Path.



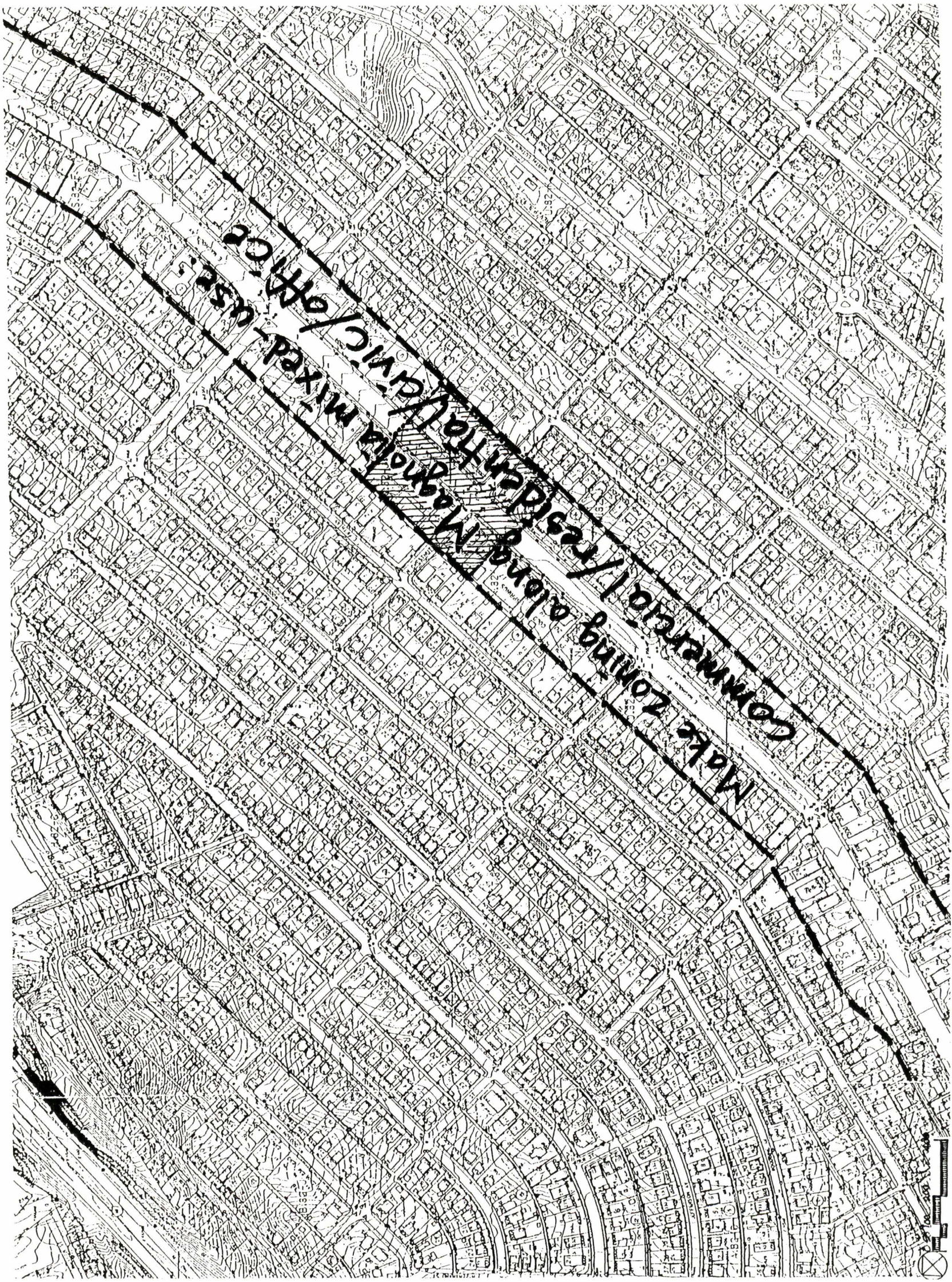
A6.26 Sun Path - Design Response.



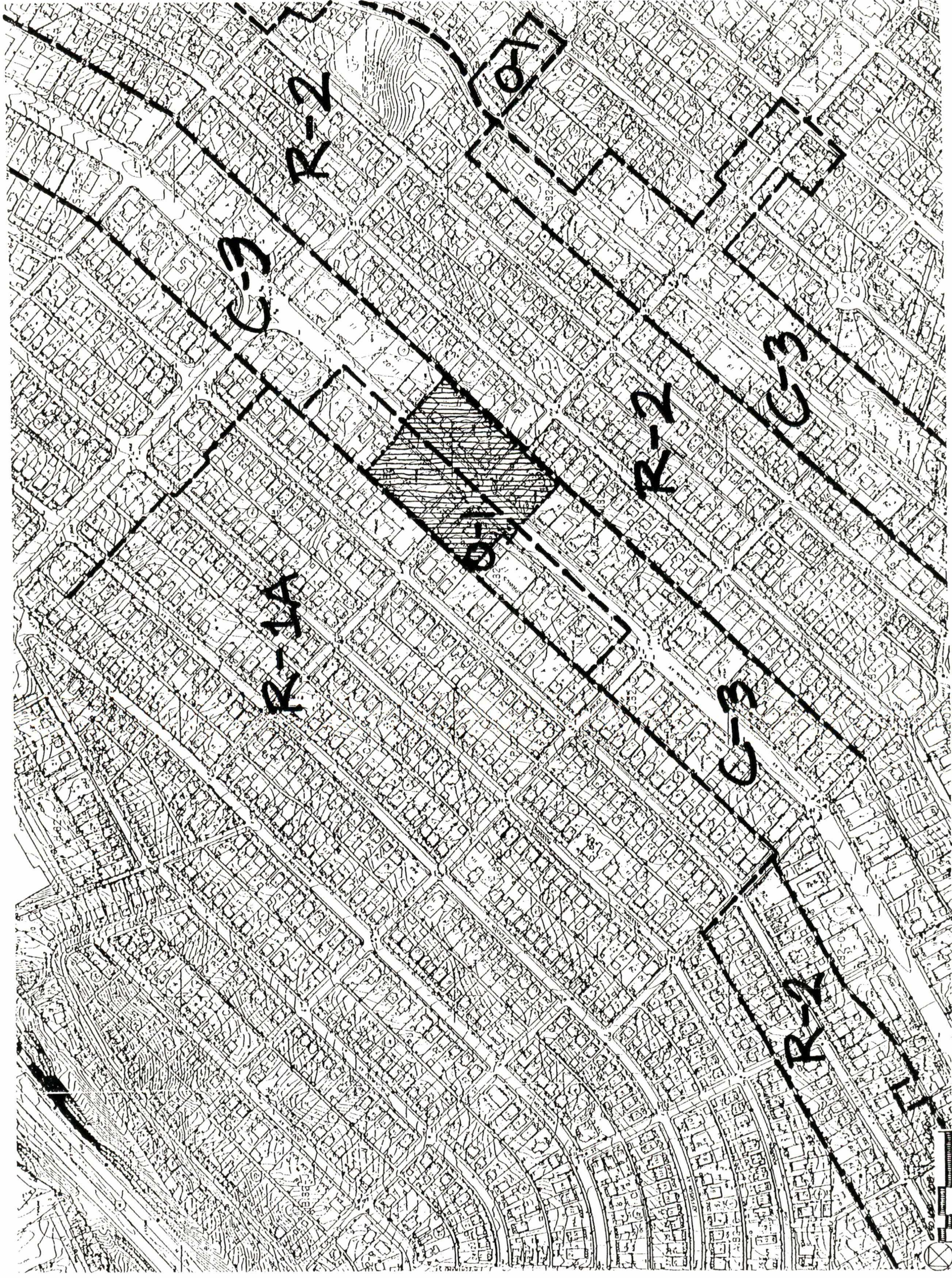
A6.27 Public Transportation.



A6.1 Location/Block/Quarter-mile radius.



A6.6 Future Zoning.

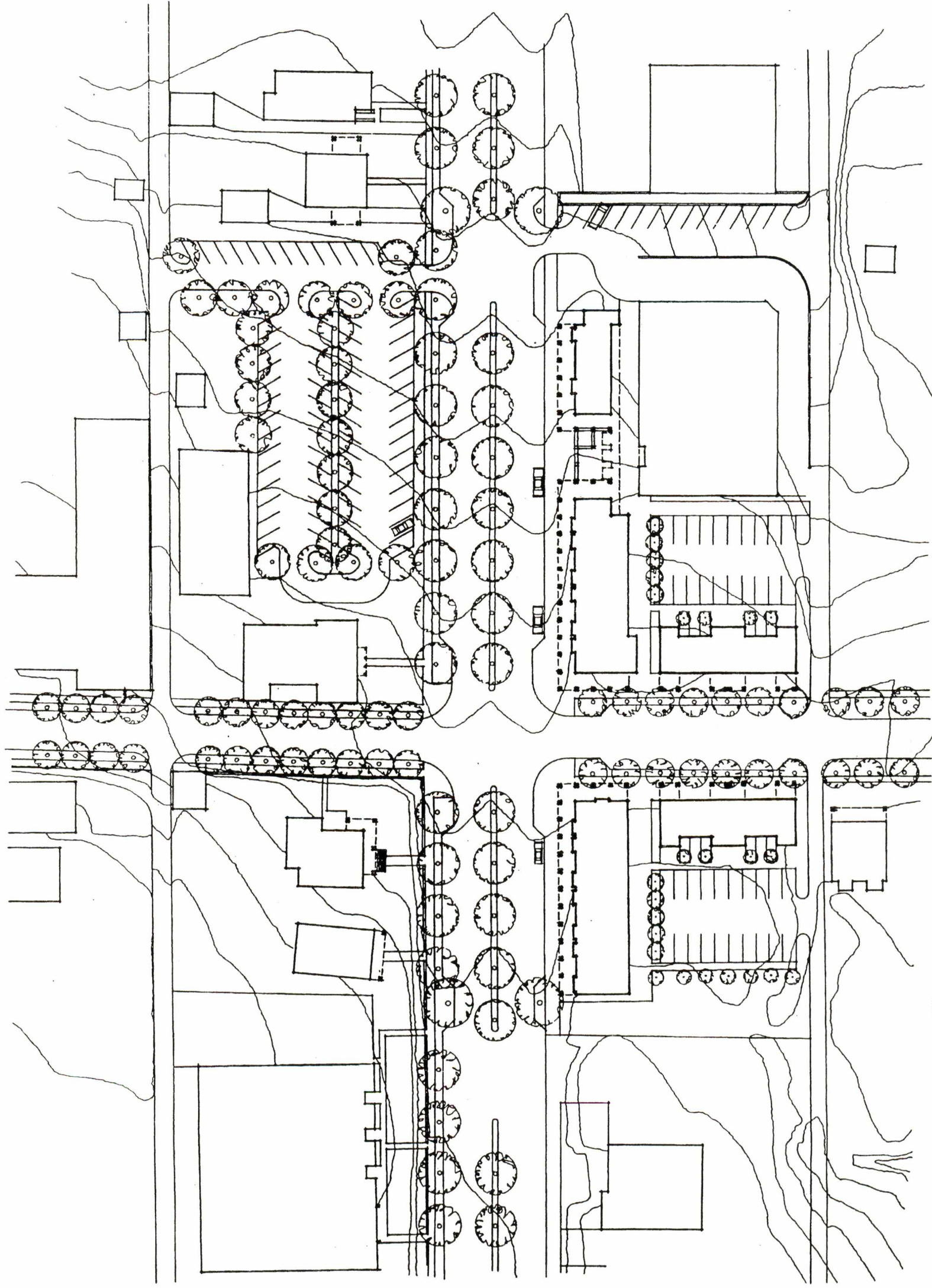


A6.5 Existing Zoning.

Appendix B

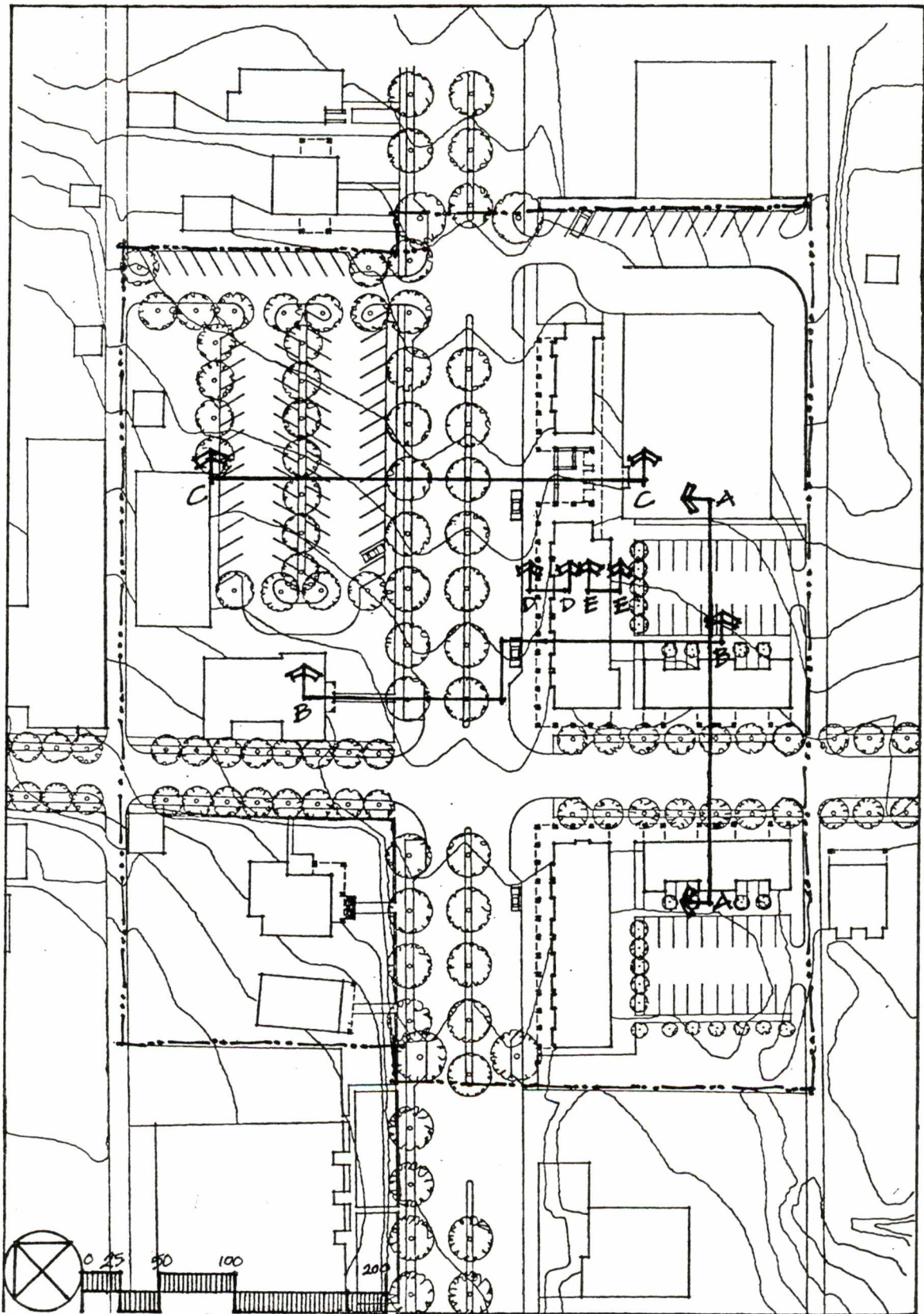
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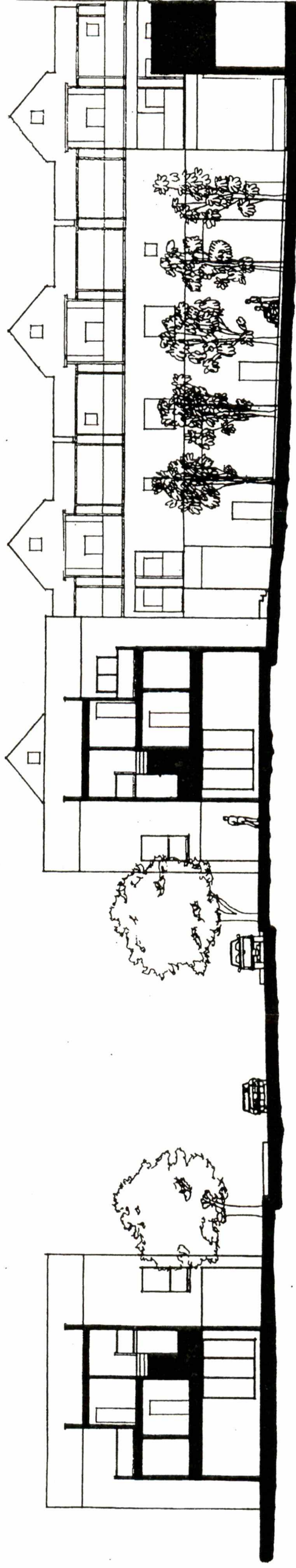


B8.1 Site Plan
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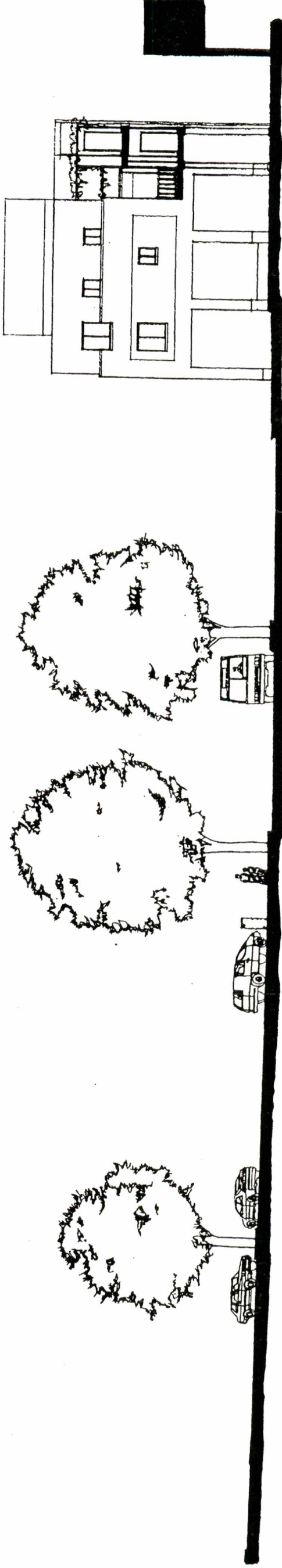




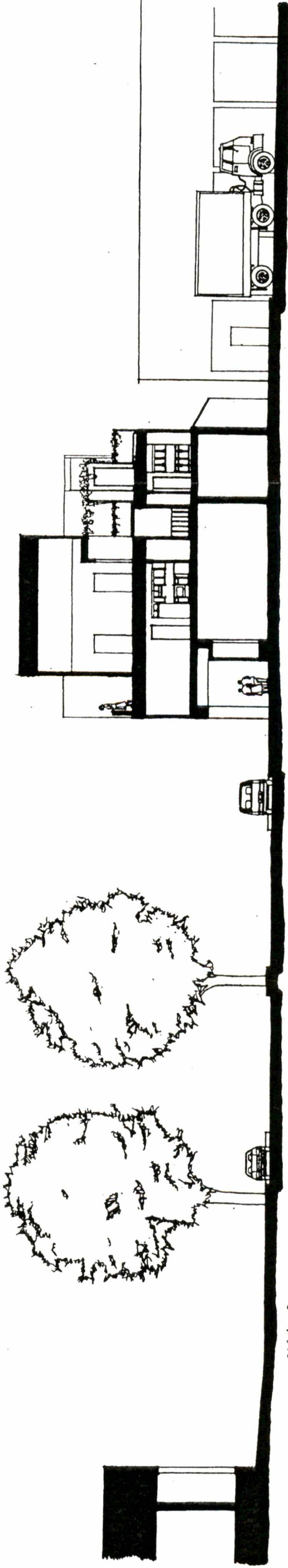
B8.2 Locations of Sections



Section AA - North Chestnut Street
Scale: 1/8" = 1' - 0"



Section CC - Magnolia Avenue
Scale: 1/8" = 1' - 0"



Section BB - Magnolia Avenue
Scale: 1/8" = 1' - 0"



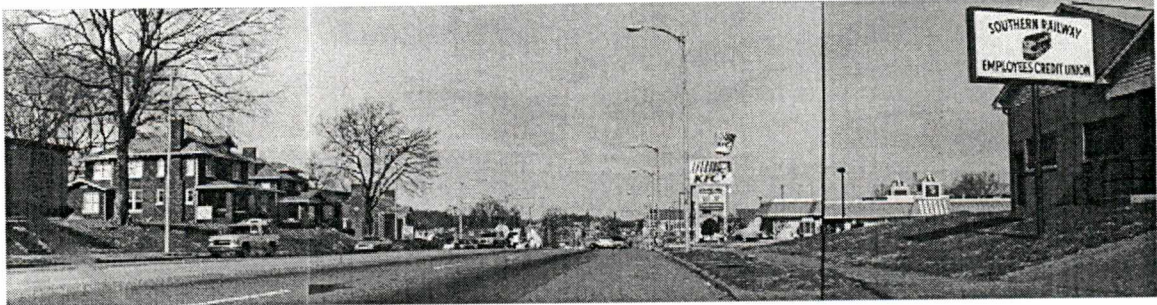


Fig. B Magnolia Avenue facing northeast

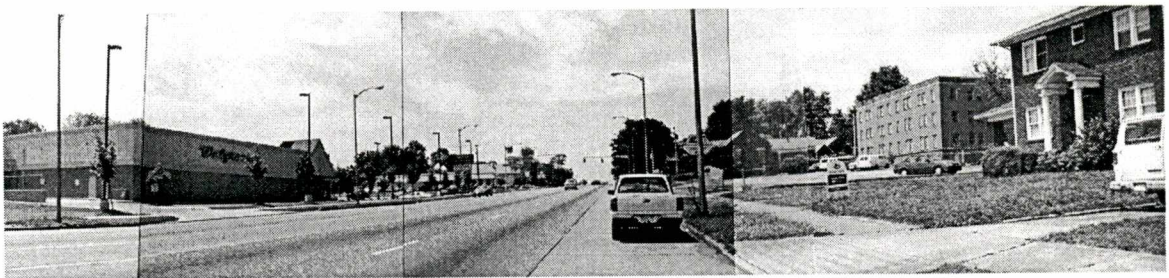
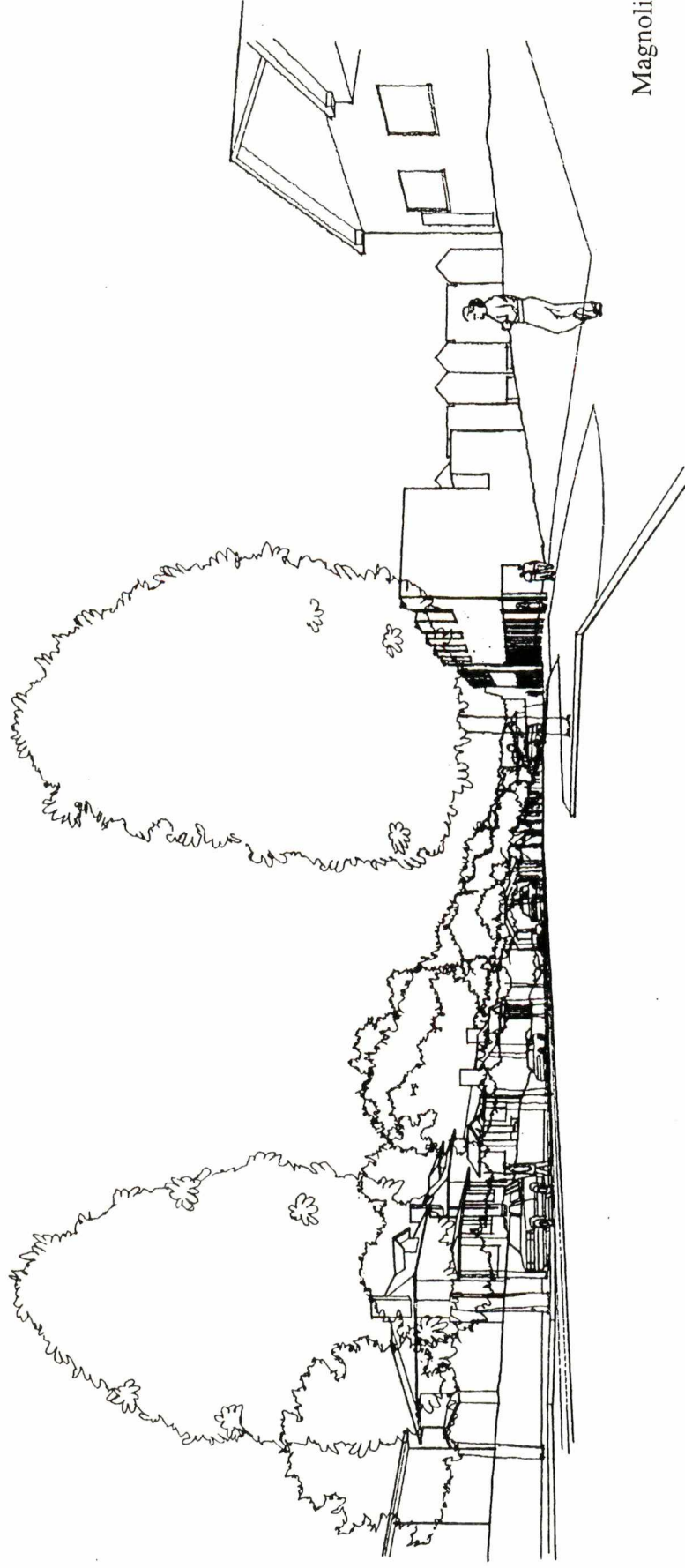
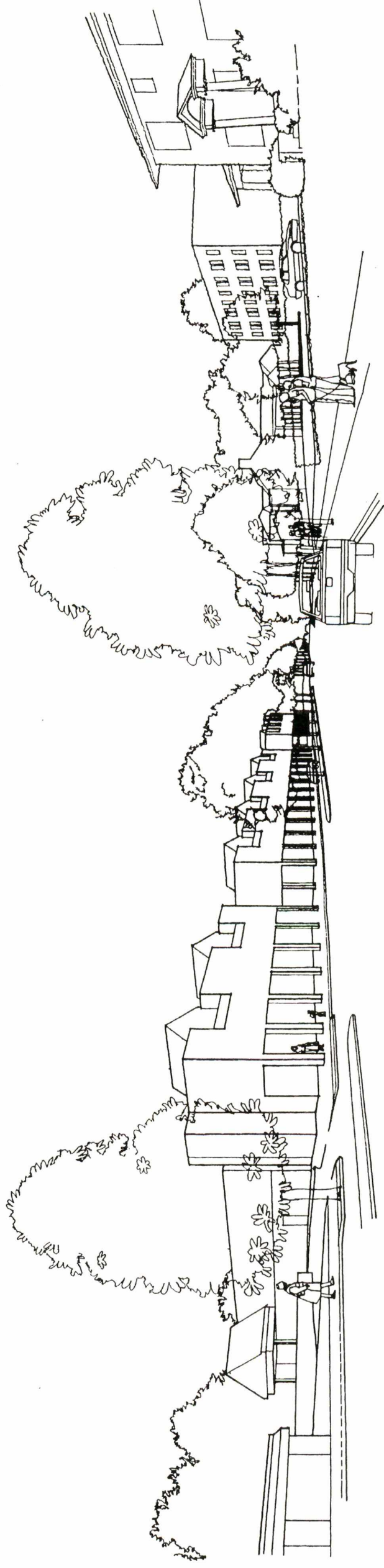


Fig. B Magnolia Avenue facing southwest



Magnolia Avenue facing Northeast



Magnolia Avenue facing Southwest

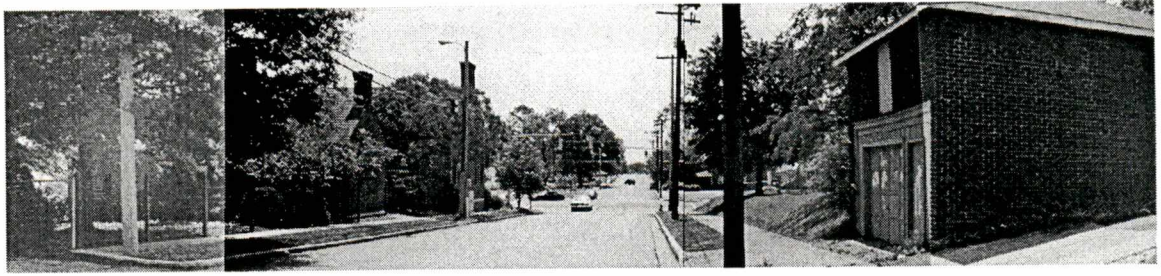


Fig. B North Chestnut Street facing southeast

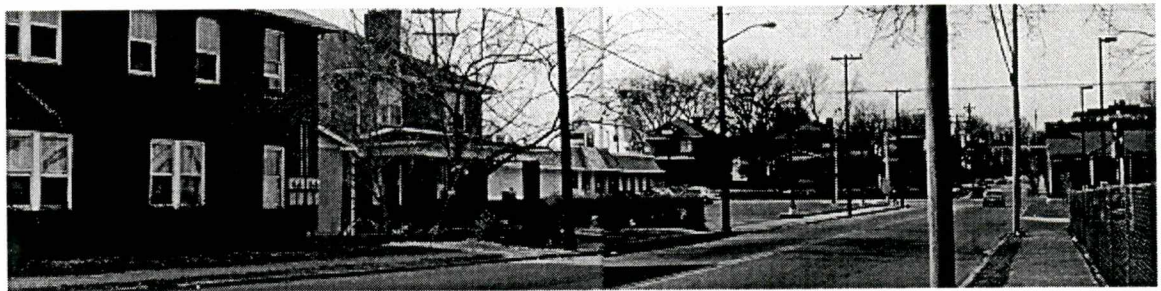
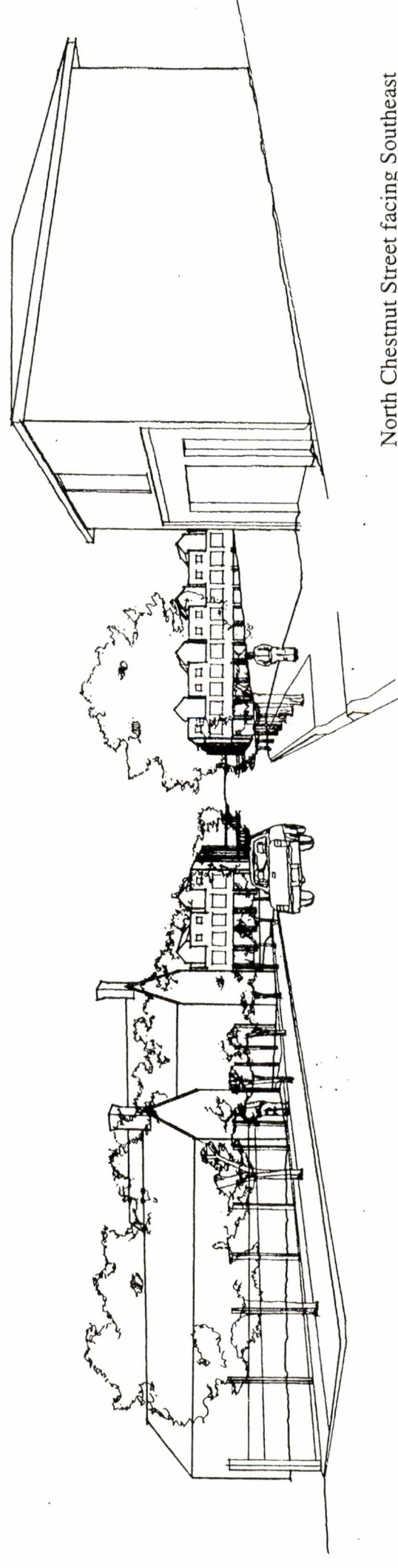
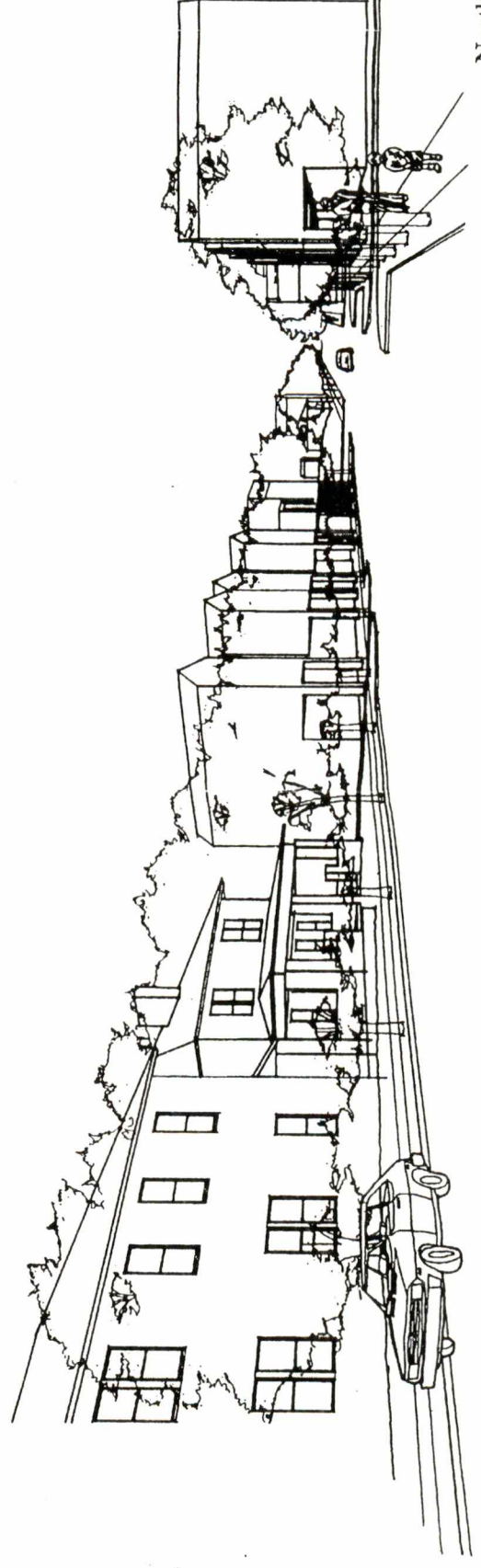


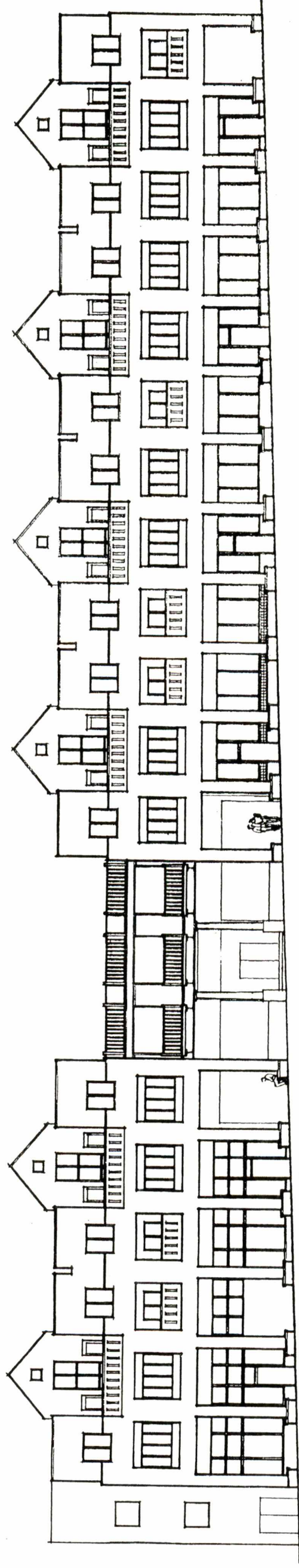
Fig. B North Chestnut Street facing northwest



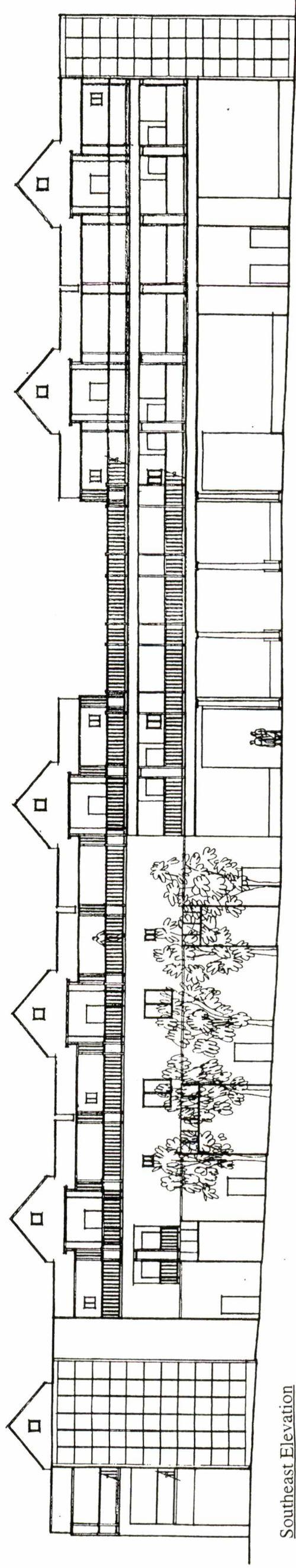
North Chestnut Street facing Southeast



North Chestnut Street facing Northwest



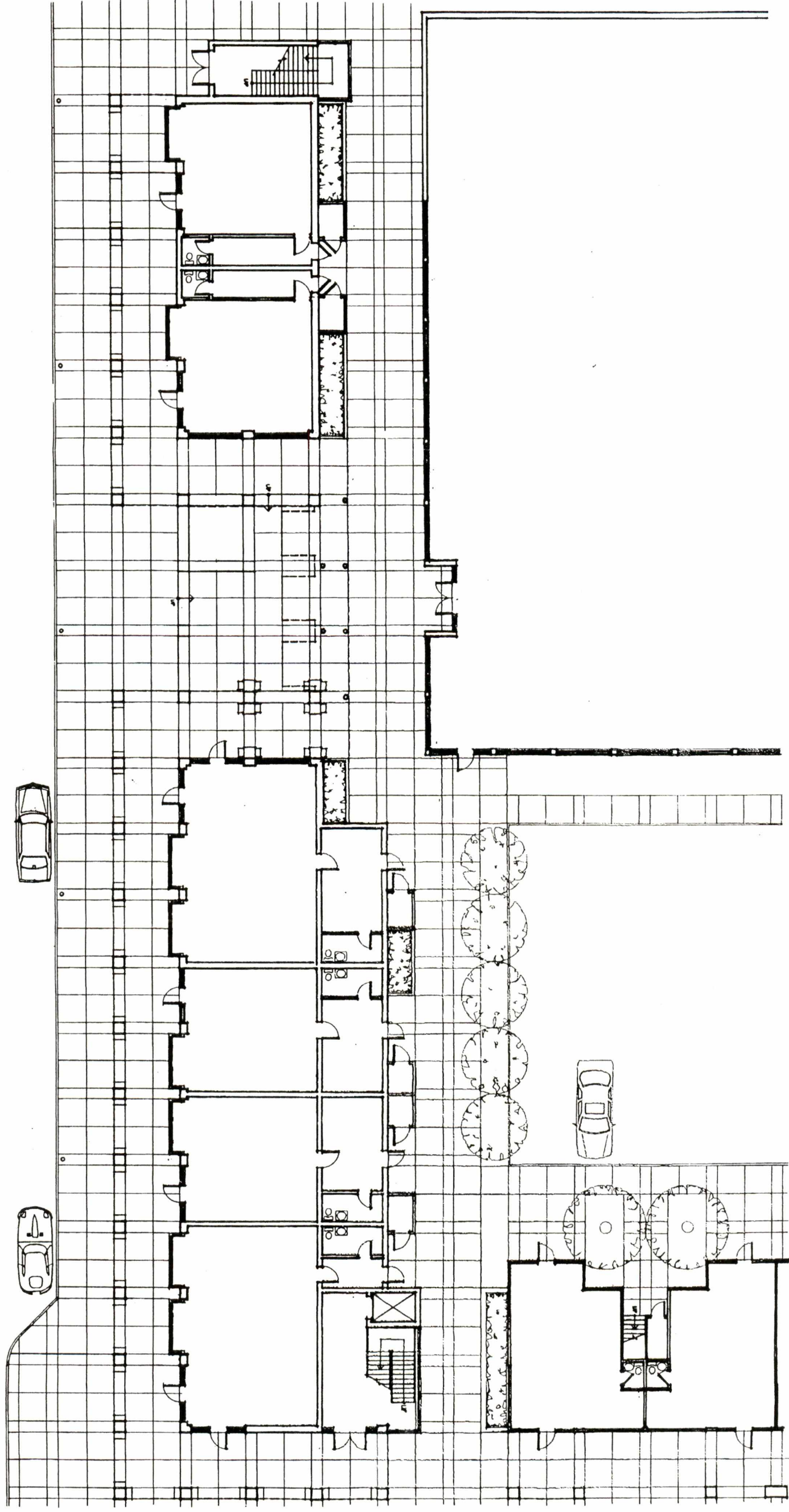
Northwest Elevation
Scale: 1/8" = 1' - 0"



Southeast Elevation
Scale: 1/8" = 1' - 0"

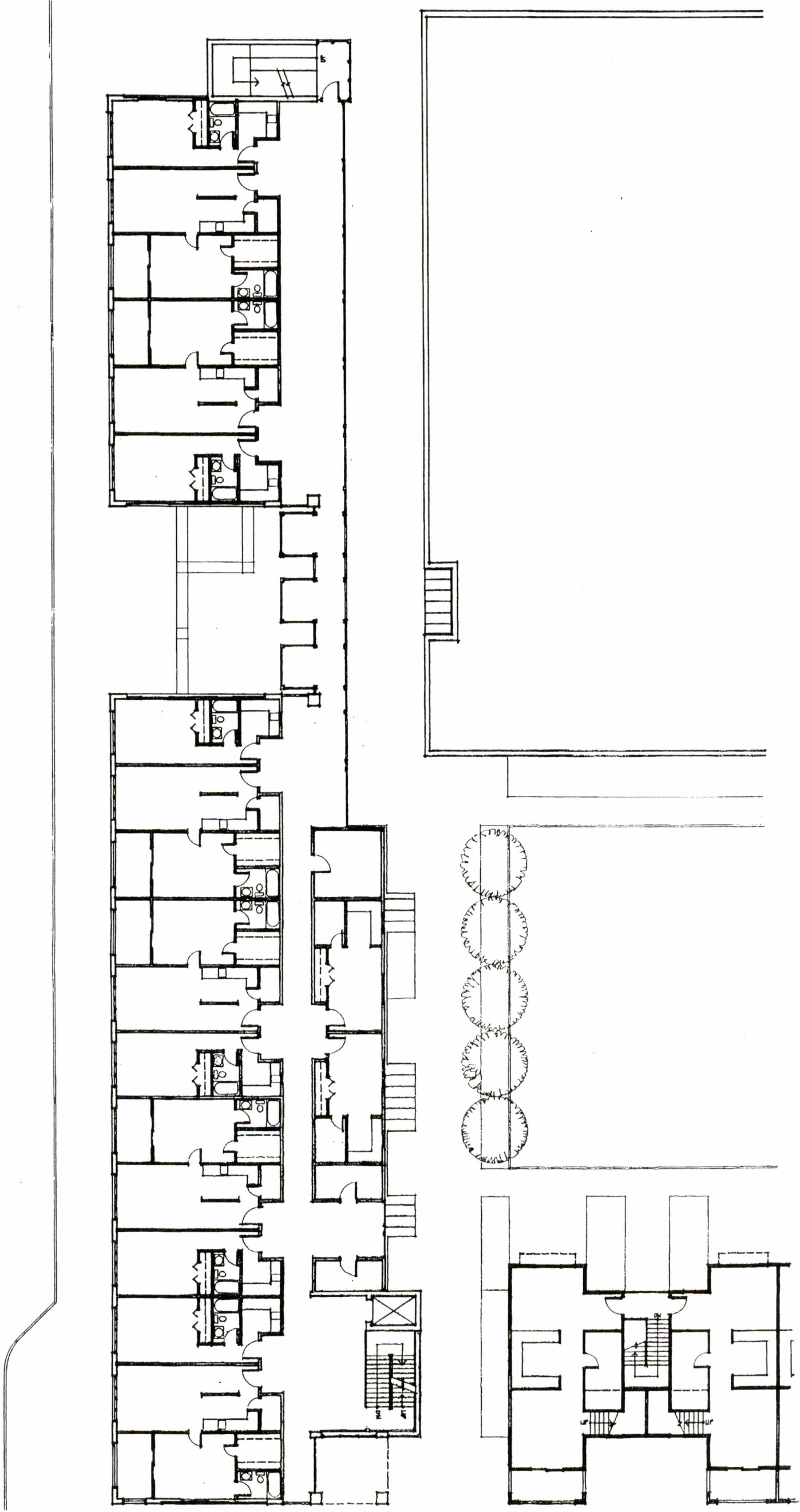


B8.8 Main Building Elevations

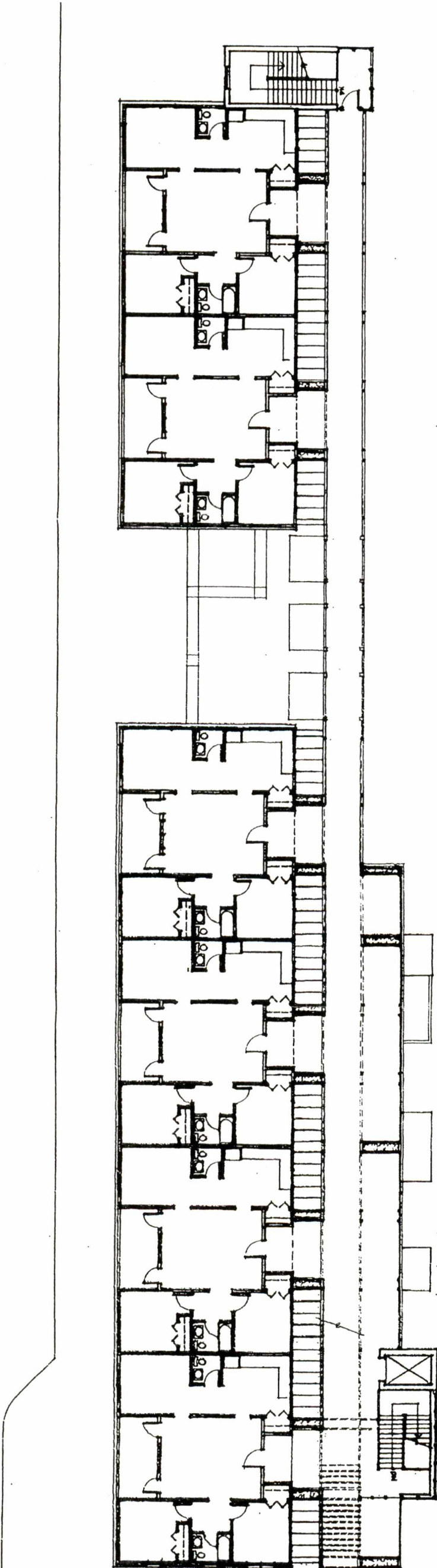


B8.9 Main Building - First Floor Plan

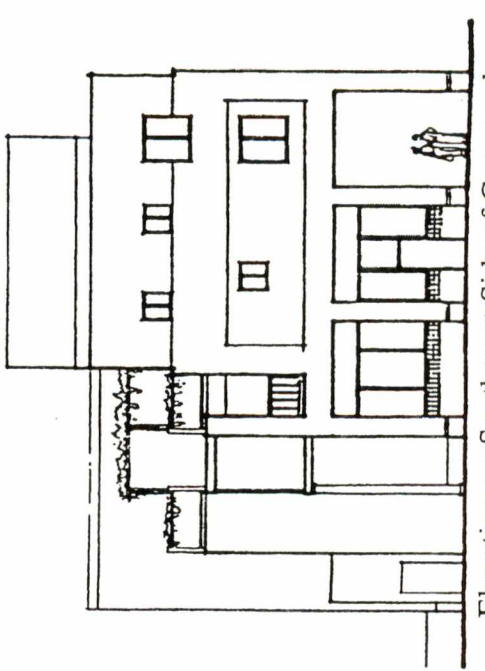




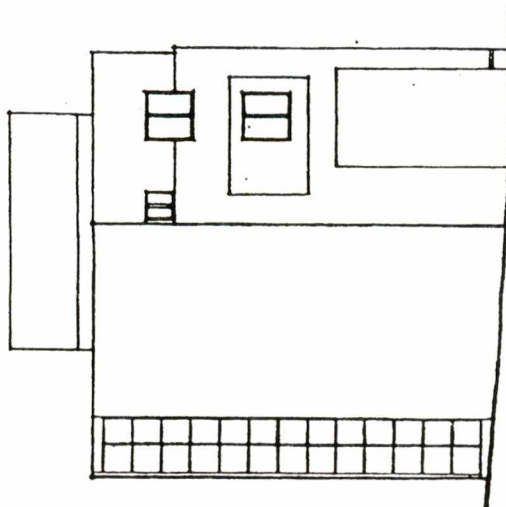
B8.10 Main Building - Second Floor Plan



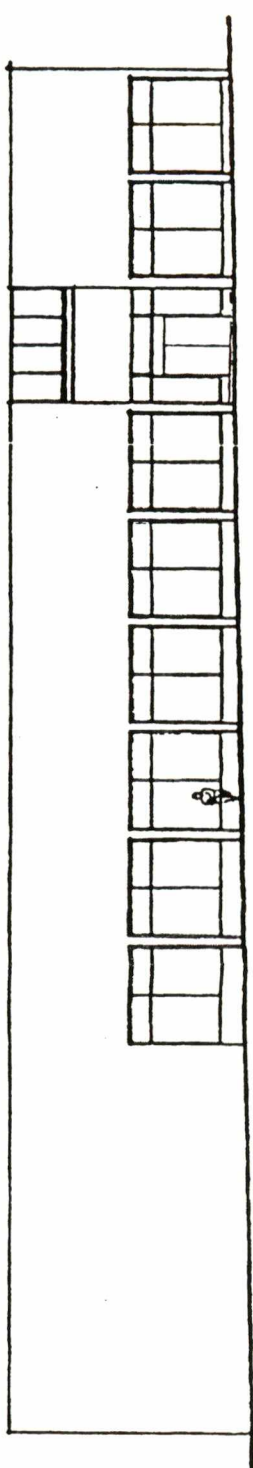
Third Floor Plan
 Scale: 1/8" = 1' - 0"



Elevation on Southwest Side of Courtyard
 Scale: 1/8" = 1' - 0"



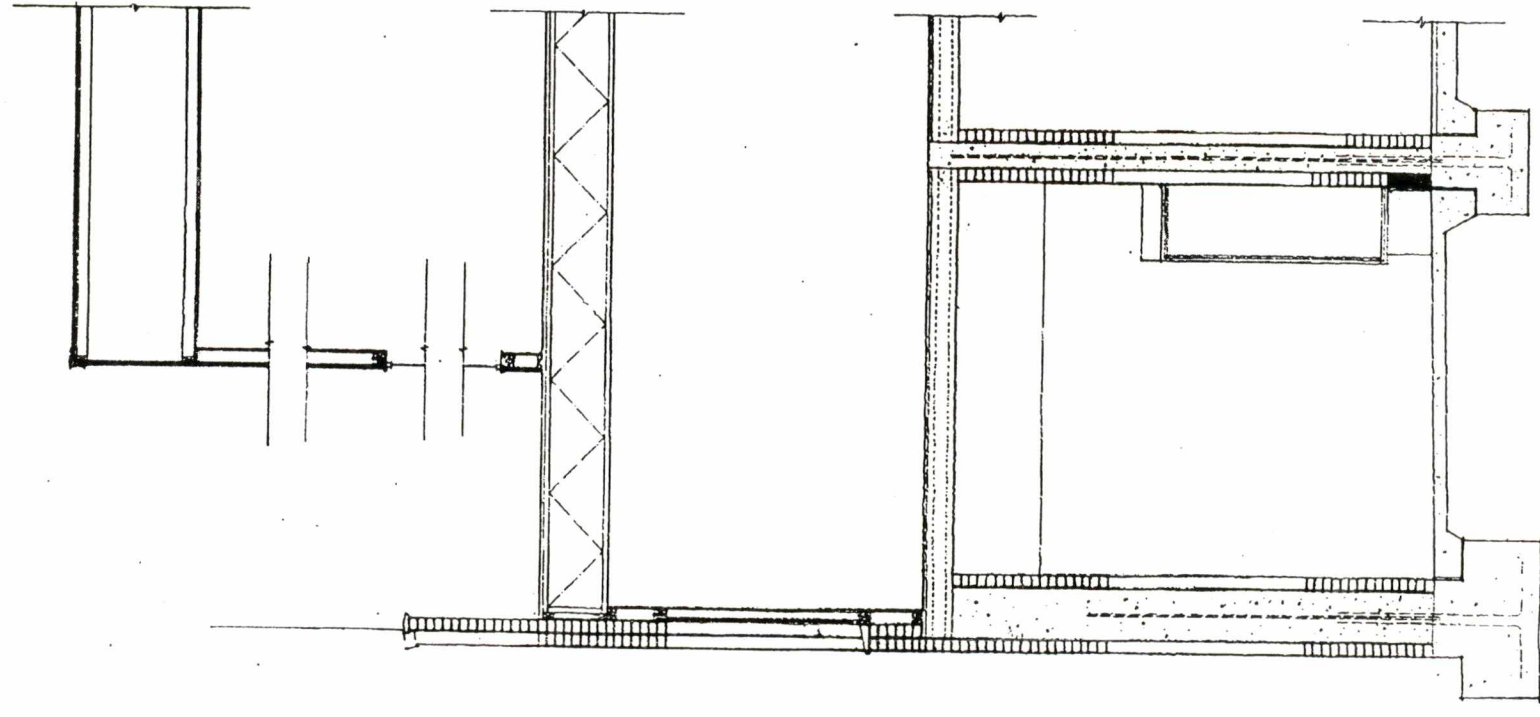
Elevation on Northeast End of Main Buildings
 Scale: 1/8" = 1' - 0"



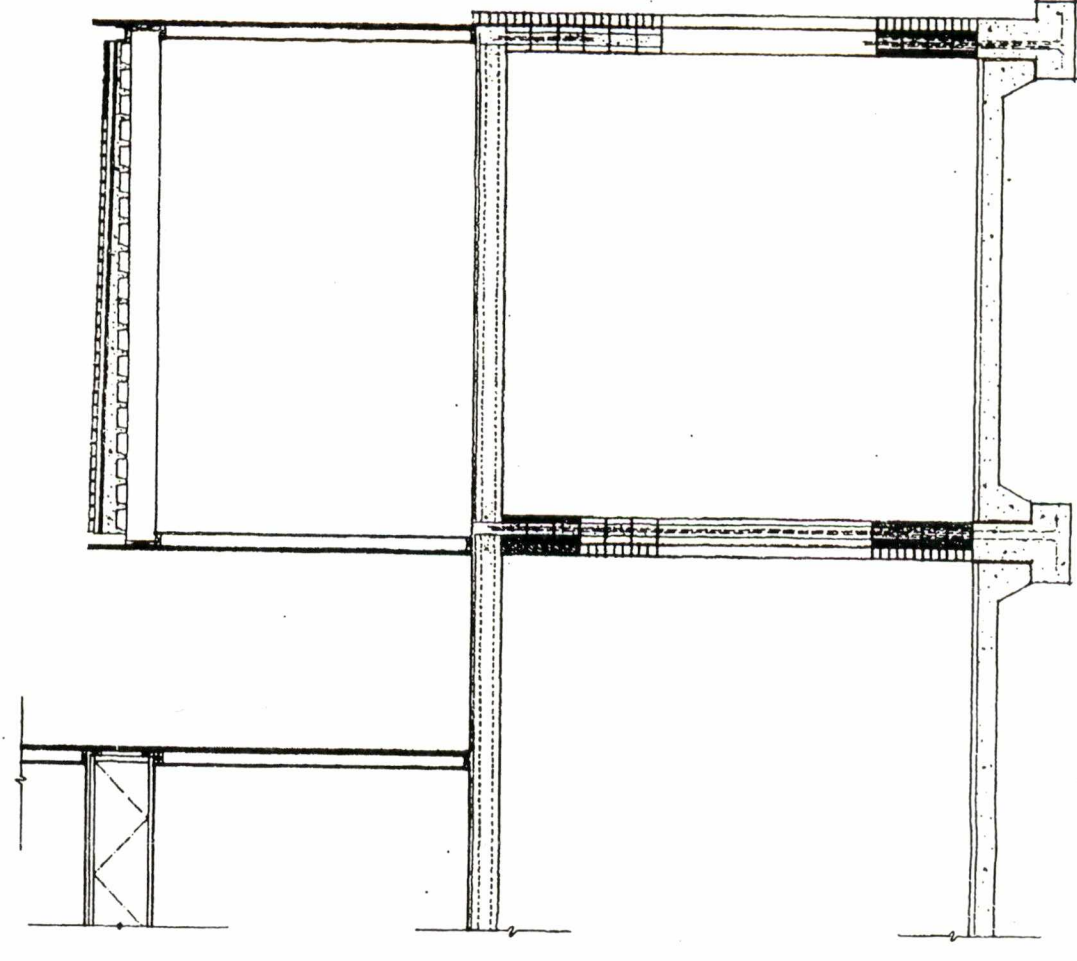
Walgreens Elevation facing Pedestrian Alley and Courtyard
 Scale: 1/8" = 1' - 0"



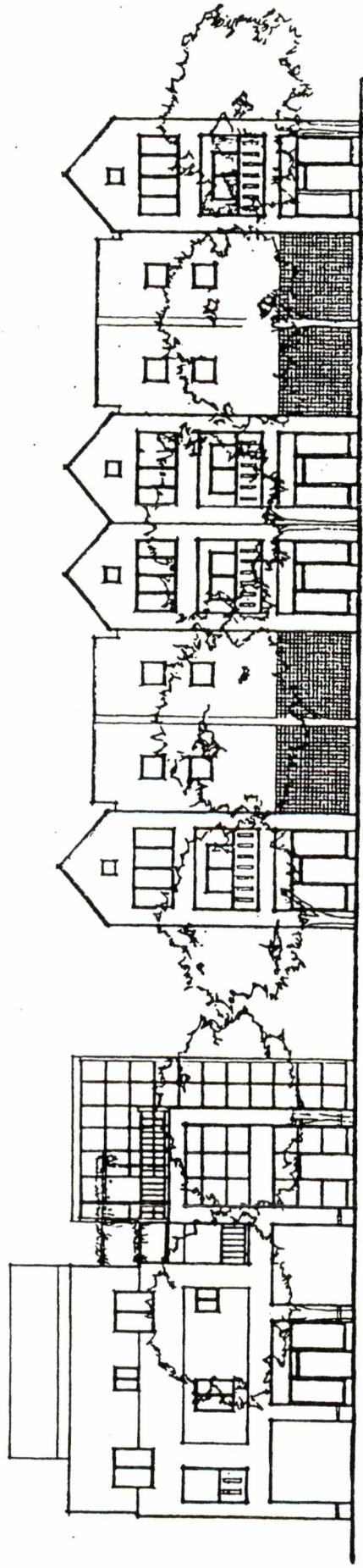
B8.12 Main Building Wall Sections



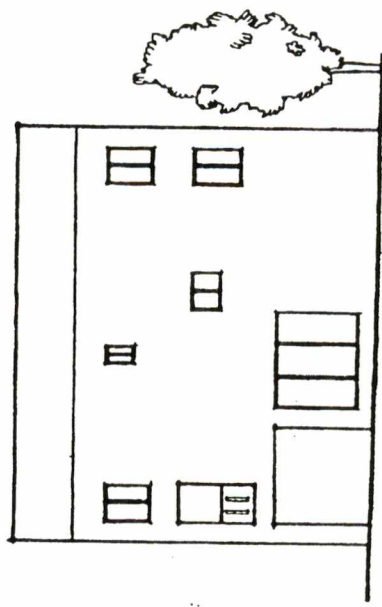
Section DD - Main Building - Front Wall
Scale: 1/2" = 1' - 0"



Section EE - Main Building - Rear Wall
Scale: 1/2" = 1' - 0"



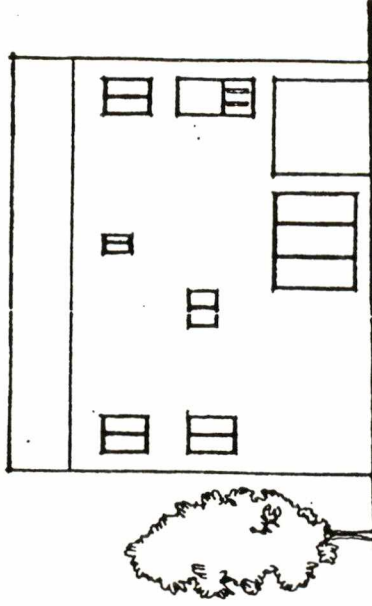
Northeast Elevation
Scale: 1/8" = 1' - 0"



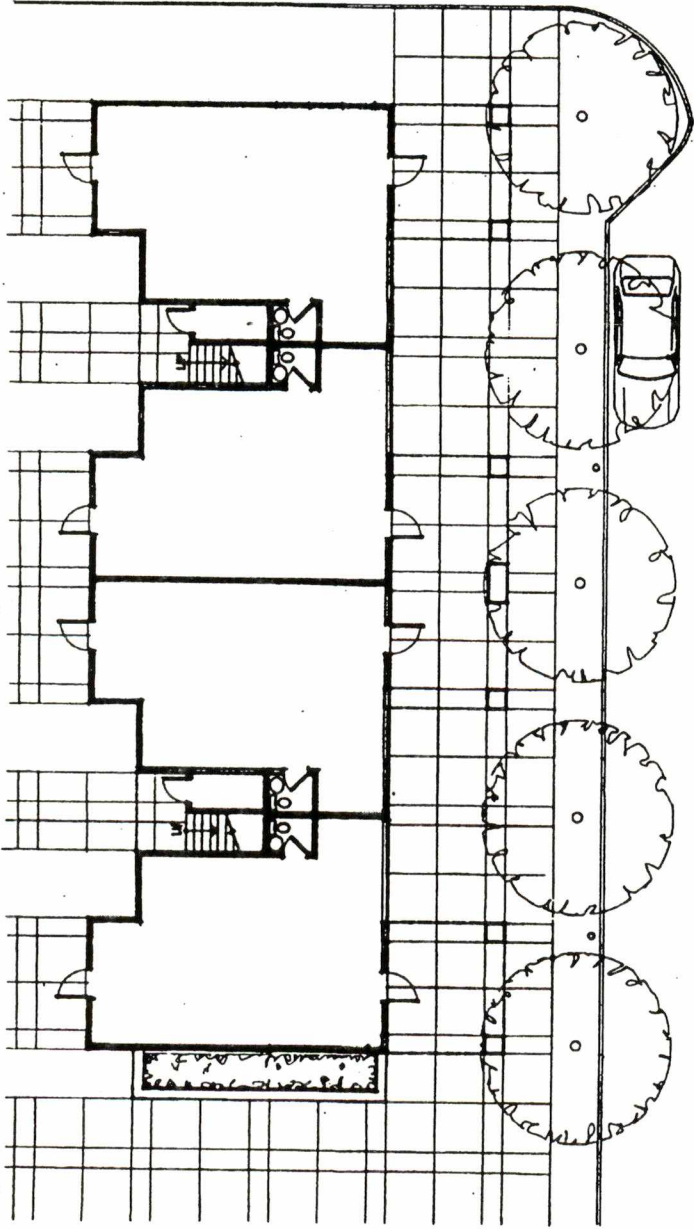
Southeast Elevation
Scale: 1/8" = 1' - 0"



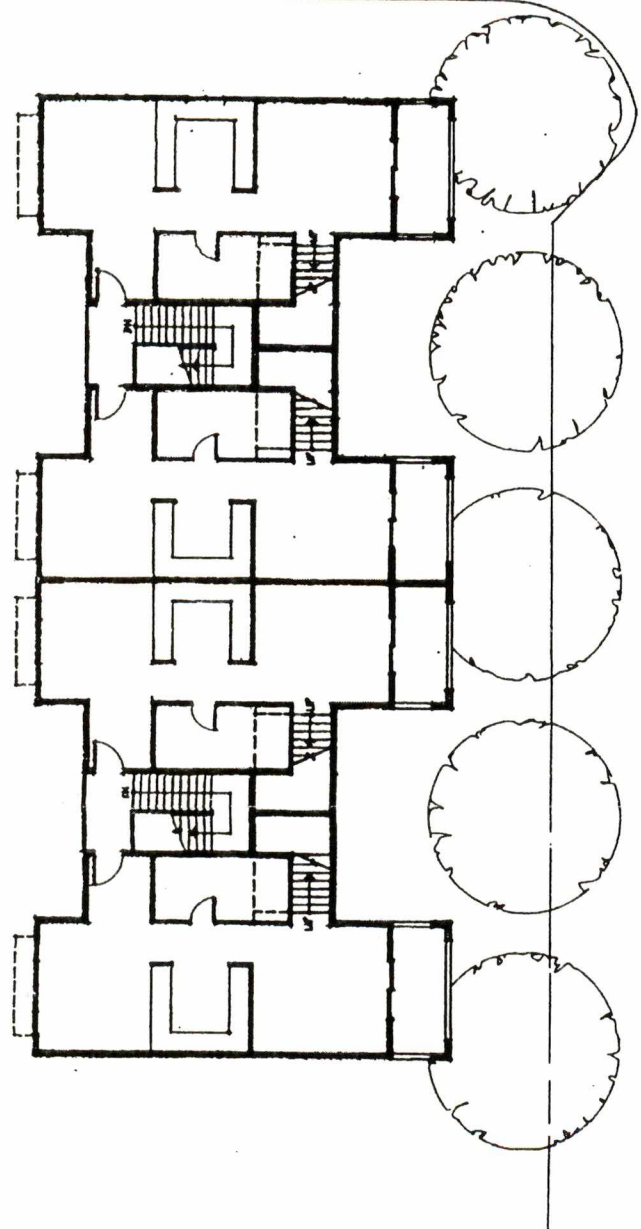
Southwest Elevation
Scale: 1/8" = 1' - 0"



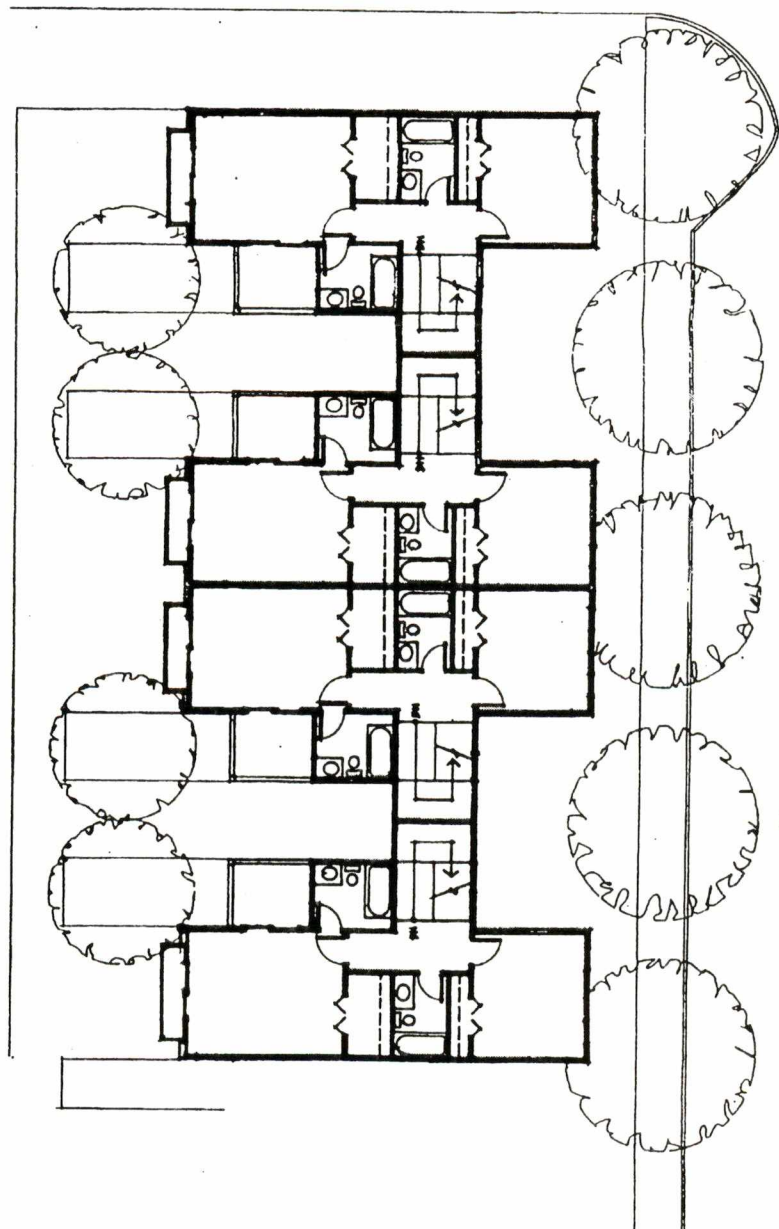
Northwest Elevation
Scale: 1/8" = 1' - 0"



First Floor Plan
Scale: 1/8" = 1' - 0"



Second Floor Plan
Scale: 1/8" = 1' - 0"



Third Floor Plan
Scale: 1/8" = 1' - 0"

