

THE IMPACT OF DESIGN UPON URBAN INFILL DEVELOPMENT

by

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ABSTRACT

Within the context of the contribution that urban infill development makes to urban wholeness, this thesis examines three specific sites in the city of Charlotte, North Carolina. The thesis tests the impact upon these sites of certain environmental design theories and principles developed primarily during the twentieth century. Subsequently, it examines what effect the infilling of these sites has upon the urban wholeness of the surrounding city.

DEDICATION

This thesis is dedicated to the Common Good brought about by Urban Wholeness and to Christopher Alexander whose work illumines both of these concepts. His writings catalyzed my interest and informed my studies.

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PREFACE

This thesis deals with some of the visual and functional aspects of urban infill development. Infill development is construction in a previously empty or abandoned area that is surrounded by existing occupied development. The visual and functional aspects of infill are embedded in a group of tightly interacting systems that form the built environment. These systems are always involved in both the decay and fracture of certain urban portions, and their restoration to wholeness by infill development. It is against the background of these systems that this thesis must be understood. I have grouped the relevant systems under the following headings:

Regulatory, comprising federal, state and local tiers of dependent and independent laws.

Political, dealing with government styles and relationships among governments and with the governed.

Political-economic, dealing with the intimate interactions among capital and entrepreneurs, markets, and governing agencies. This includes the taxation system.

Socio-economic, in which ethno-cultural, work, and income patterns of societal groups and the built environment have mutual influence.

Planning and Design, which operates within the framework of these other four systems, being at times supported and at times thwarted by them.

The work of the **planning and design** system relates most closely to the thesis topic. The thesis deals with revitalizing blighted pockets by infilling them with structures for business and commercial purposes and their functions, and the privately-owned, publicly accessible spaces between them. Both spaces and structures are to answer the current needs of local users and visitors. The impact of the design (rather than planning) function of this system will predominate in the thesis. The focus is on both the contents of the built infill itself and the physical and functional linkage to the surrounding city portions.

The remaining listed systems relate to the thesis as follows: All urban action occurs within a **regulatory** climate which, in the United States, must always be remembered as changeable. One of the strongest influences upon the design and planning functions is zoning. "The legal powers of zoning have enabled . . . segregation of people and activities in the American City" (A.Loukaitou-Sideris, 1996). Both the amount of skill and effort required to effect change, and the degree of enforcement of existing laws affect the subject of this thesis. So does the **political** style of government which fosters the element of policy discontinuity

caused by relatively brief terms of office. Gestation time for many large-scale urban planning and design projects between concept formulation and project maturity often takes decades and this political discontinuity can disrupt carefully planned projects. The salient **political-economic** obstacle to infill efforts notable in the United States, as compared to certain European countries, is the not uncommon long-term abandonment of land and structures. Its impact upon the choice of my thesis topic is great and immediate. Although only introduced into the thesis conceptually, it is too relevant to leave out¹. The fact that neglect and abandonment can be so lucrative to land owners that they favor its continuance has a deleterious effect on another group within our society which is confined by its **socio-economic** status to living among these blighted environments².

With this background and context established, chapters one and two, Introduction and Literature Review, locate my thesis among other studies of urban problems and opportunities.

¹ Knox 1995 p. 131, when discussing “Land Owners and Morphogenesis”: “Landowners stand at the beginning of a chain of key actors and decisionmakers. . . . The main influence that landowners can exert is through the imposition of their wishes as to the *type of development* that takes place, and, indeed, whether it takes place at all. Some owners hold on to their land for purely speculative reasons, releasing the land for urban development as soon as the chance of substantial profit is presented. That can have a considerable effect on the morphology of cities, not in the least way that plots tied up in speculative schemes act as barriers to development.”

² “It is also time to change tax policies that too often make a parking lot on the site of a demolished building more profitable than keeping the building in operation.” Barnett 1995 p. 236

Chapter 1

INTRODUCTION

The source of my research question is my reaction to blighted areas in a mid-size east-coast city where I lived until recently. Every day for years, I passed a certain weed-filled lot with a small, vacant, boarded-up structure on it, located along a major busy road near my neighborhood. Often I had visions of beautiful ways in which small services needed in my neighborhood could be provided, right here, while at the same time restoring life to this blighting dead spot in the urban fabric. Alexander³ sees such visions as necessary if a city is to heal its blighted areas containing decay and lack of healthy function.

“Within the piecemeal process⁴, if each act of construction is going to contribute to wholeness, then the main thing . . . is that this act must grow, naturally and directly, *from what is there already*” (Alexander, 1987, p. 58).

My vision seemed tantalizingly achievable until I learned at a public meeting of the planning board that, among other issues, there was no time limit for how long owners may keep property unoccupied and unmaintained. There was also no positive design concept or guideline that the city had established to encourage this type of infill development, only proscriptive zoning limitations.

This situation is not an isolated occurrence. My own visits to other cities such as New York and Philadelphia, and to Newark, Trenton, Elizabeth, and Camden corroborate the findings of Suchman & Sowell that “[i]n many cities across the United States, once-vibrant neighborhoods are pocked by parcels of vacant land . . . or are left with structures that have deteriorated or been torn down” (1997, p. 1). Both the pervasiveness of this problem and the extent of its damaging impact, described in the next chapter section, indicate urban blight is worthy of research. The complete range of this problem includes many factors that exceed the scope of this thesis, for example the real estate issue of land acquisition. Therefore, I focus on only one aspect of blight remediation: the design implications for infill development, including closely related pre-design issues. This is accomplished by assessing

³ Christopher Alexander, a professor at the University of California at Berkeley, has his own design practice and has contributed seminal, humanistic design concepts since the 1960s –including perhaps his most famous book “A Pattern Language.”

² See Chapter 2, Literature Review.

the current functioning levels of three redeveloped formerly blighted or declining sites in light of design and pre-design theories that were, or failed to be, implemented there.

BACKGROUND

There are many reasons for urban decline, many forms in which it occurs, and many ways in which it is addressed. The decline sequence, nature, and effects of lingering blighted areas are complex and much agreement exists about conditions contributing to these. There is less agreement, however, about prevention or solutions, none of which are simple. A discussion of the decline sequence, the nature of blight, and solutions or approaches to prevention follows. Together these phenomena form the background against which design impacts upon infill (remediated or redeveloped blight pockets) should be understood.

Conditions Contributing to Decline

The conditions contributing to urban decline can be local, state-specific, national and or global. Trancik (1986) and Attoe and Logan (1989), among others, have analyzed large underlying political, sociological, economic, and technological developments that have influenced urban decline in the United States. A more detailed reference to their work is made in Chapter 2, Literature Review.

A rather specific pattern that often forms blight pockets in residential districts – perhaps to be infilled later – can be observed at close range: When owner occupancy shifts to tenant occupancy with absentee landlords, such a cycle often begins. The earlier movement of manufacturing from northern to southern states, where cheaper, non-unionized labor was available, was a frequent underlying cause of such shifts. Then followed the movement of manufacturing to other countries that, in addition to having yet cheaper labor, require less expenditure for environmental protection. With the movement of available jobs, adequately paid skilled workers are displaced from their original job locations and vacate their owner-occupied housing stock, which gradually loses demand, and thus value and quality. It becomes rental housing during the ensuing periods of high unemployment. Landlords of such housing stock, as Anthony Downs points out, choose to live in a socio-economic environment of their own financial class, and are thus “absentee landlords.” This is a condition which fosters building neglect, especially when “structures have been converted to higher-density uses than those for which they were designed” (1981, p. 64) – a blight-inducing element. In other words, they are subdivided, and thus made more crowded and

prone to excessive wear. The downward spiral is compounded by “Differential Code Enforcement by Neighborhood” (Downs, p. 48): The now overcrowded, very deteriorated, thus undesirable, housing stock is rented to the poorest population segment. Landlords, to adjust cash flow against expected future losses, fail to invest enough rental income in building maintenance. Often, cities fail to hold such absentee landlords to housing code maintenance standards for fear that such expensive maintenance demands might encourage landlords to abandon those structures because of the falling profits. The under-maintained buildings become dangerous and unhealthy. This, together with a “mismatch between the limited job skills of people left in the inner city and the highly skilled, postindustrial jobs that cities now offer” (Hudnut, p. 155), may lead to depopulation. There is a lack of reachable job sites for the low-skilled, car-less workers able to afford only such inner city areas. In such cases, blight is caused by the shift from a well-functioning arrangement (living near one’s job, as occurred in the early 1900s) to a non-functioning one: living where there is no job.

Another cause for residential obsolescence is increase in wealth of some population sectors. People with rising incomes, and concomitant rising demands in housing size and quality, often choose to move to “a better neighborhood” – based on certain perceptions presented by Downs (1981): “Upgrading through movement [rather than renovation] is by far the predominant mode.” This is often followed by a “presumption in the minds of many higher-income households in older areas that their neighborhoods would eventually be occupied by poorer households” (p. 43). The real-estate principle that renovation beyond neighborhood quality risks a financial loss at resale time is an added motive to move when one’s wealth increases. A group perception phenomenon evolves at times, causing one residential economic stratum to vacate a neighborhood as its members leave to join others elsewhere who they perceive to be more like them. Vacancies ensue that, in turn, affect real estate sales negatively and begin neighborhood decline. The term “white flight” adds a racial element and describes one such example.

Another cause for city portions losing their viability is functional obsolescence and its relationship to renovation cost in non-residential buildings. This is a larger problem than that which occurs with residential obsolescence; it is more difficult to resolve and often results in lengthy abandonment. In contrast to homes that may remain residential but pass through various phases of occupancy type, manufacturing buildings are tailor-made for particular processes. When those processes are radically changed, no longer carried out at such locations, or discontinued entirely, often no prompt reuse is found. When the original

building function has become obsolete, the zoning at that location still remains and both zoning and the urban fabric surrounding the obsolete industrial or commercial building are very slow to change in response to new demands. Decisions about conversion, renovation, or demolition in such an unpredictable environment are complex, therefore also slow. There are also many old structures in which the current building function could continue but the renovation to achieve currently required life safety, maintenance and work environment changes (exit stairs, building climate control, etc.) would cost more than a new suburban building, which is often taxed at a lower rate. Thus, both functional obsolescence and the lack of renovation funds often cause urban building abandonment, and the ensuing ripple effect of lost tax revenue for the city.

Some factors fostering urban blight and abandonment are less obvious, and external to the location affected, but no less powerful. There can be spillover effects from national and global economic changes, often entailing major population movements (above); environmental changes such as flooding from recent excess development upstream; or the loss of formerly desirable and compatible surroundings. All these situations can contribute to a decline of an urban neighborhood.

Nature And Effects Of Urban Decay

Now that we have examined some basic causes for urban decay, a short description of it, and its results, follows. Decaying urban pockets are a psychosocial blight upon their environment and surrounding occupants, and a drain on the public budget because of tax revenue loss and expenses for increased police activity. We know these blighted places harbor and support crime and disease. Many also waste existing, usable, or repairable infrastructure, which sits idle while more is built and paid for with public funds in new areas of expanding sprawl. The decaying areas are generally unoccupied or seriously under-occupied and often contain abandoned structures and/or brownfields⁵. They constitute a fracture in the previous wholeness of urban fabric. The great number of sites in this highly damaged condition and their negative impact on their surroundings makes their remediation a matter of great importance.

⁵ Land ecologically damaged by pollution.

Importance and Methods of Prevention and Remediation of Urban Blight Pockets

This thesis will focus on infill development of three small-scale urban sites (1-3 blocks), where decline had earlier occurred. Redevelopment of demolition sites or abandoned properties is capable of remediating conditions of blight and thereby restoring or even enhancing and increasing urban wholeness and coherence. To make remediation a lasting success requires an understanding of many factors, which are discussed in this thesis. Already such understanding exists and has been put to use in many European and American cities that are lively, in healthy condition, and do not subject their occupants to the deleterious effects of lasting urban decay.

One example of an effort to relieve blight has been achieved in New Jersey where a “Rehabilitation Subcode” was recently adopted. This set of regulations is a separate version of the NJ statewide building code, modified to allow more affordable implementation. The Innovation in American Government national award, which this subcode has just earned, highlights the importance of renovation affordability in reducing abandonment. Another approach toward blight prevention is taxing the structures on a lot and the land at separate rates, as discussed in Chapter 2. When owners are not penalized with subsequent higher taxes for improvements, and even maintenance, abandonment and negligence are discouraged.

Where cities have “strategic visions” regarding both the pacing and general design aspects of infill development, the greatest obstacles to restoring urban wholeness are removed (Accordino and Johnson, 1998). W. H. Hudnut III (1998) of the Urban Land Institute states that such visions must be pro-actively and thoughtfully formed, communicated, and advanced by a “vigorous . . . civic and political leadership” that “collaborates . . . and embraces diversity” (p. 11). Visions are not master plans expressed in rigidly permanent graphics, but rather they show a direction and intention of future performance, sometimes including appearance or ambiance. When such visions can respond flexibly to changes in market and population numbers, and to user (not only developer) preferences, rather than establishing a strict code of design features or styles, visions support urban wholeness. Cities with such vision plans are better equipped to retain coherence when dealing with the complex relationships among public and private entities that are involved in infill development. The infilling of the three sites studied in this thesis reflects the Economic Development Vision of the city of Charlotte. The visions of some cities contain design guidelines expressed in their city comprehensive plans – for instance, the town of Blacksburg. Lynchburg, VA, has adopted a “Traditional Neighborhood Development

Ordinance” applicable to both large redevelopment and infill projects. It addresses goals but not specific details regarding zoning, street patterns, multi-modal transportation, and public open spaces.

For historic comparison and understanding, it is important to distinguish between this current effort at visioning and the methods of the 1960/1970-style government-subsidized urban renewal projects, which were primarily aimed at replacing existing housing that was considered “substandard.” This entailed large-scale demolition, occupant relocation, and frequently a total break with the surrounding urban fabric – including both building forms and styles, and circulation routes. Such projects performed much like a huge prefabricated object set down without relationship to its surroundings that had grown gradually and under individual ownership. During urban renewal, visioning was not involved. Projects were generally planned and designed collaboratively by the government and developers, who received financial inducements in the form of favorable purchase prices of “slum clearance” lands that had been condemned for just this purpose. These projects were planned without user input or participation – one reason being that the users had not arrived yet. They were seldom the now-displaced people who had lived there before. Garvin (1996), looking back at such projects and their top-down process of coming into being, found that at that time there were “very few situations in which government subsidized redevelopment is the proper mechanism for fixing the American City.” Now, a different, more incremental infill process predominates (Barnett 1995), which is closely related to Alexander’s “piecemeal” approach, explained in Chapter 2, Literature Review. Some of the economic conditions that empty urban areas occur gradually. If demand for new and different uses can be identified for smaller vacated locations as they arise, the infrastructure that may still be in place can often support their use as renewable development sites, thus supporting the remediation of blight pockets.

RESEARCH QUESTION

Because of the great societal damage and disadvantage of blight, efforts to correct this condition are worthwhile research subjects. When replacing blight with infill development, the design task is one of the many work components. If cities had more precise data about the impact of certain infill design and linkage⁶ strategies and factors, they might be encouraged to formulate the valuable visions discussed above. It is for the purpose of

⁶ Functional, morphological, and spatial connective relationship.

contributing such data that this thesis examines the impact that design factors have had on the sites in this study. To that end, I have identified the following basic research question for application to the study sites:

Which design factors⁷ support a high real estate occupancy rate and a lively, non-threatening public space?

High occupancy rates and a heavily used, publicly accessible space perceived as non-threatening are just two among many possible indicators of urban health. Evaluating the impact of specific design and linkage factors upon the state of the chosen infill sites is the central task of this research. Although the potential nature and effect of such factors have been described by other researchers, authors, and designers, discussed in Chapter 2, my own research will establish if and to what extent application or omission of these design factors has affected the status of the three study sites regarding the chosen dependent variables.

THESIS ORGANIZATION

This thesis is divided into five chapters entitled Introduction, Relation to Recent and Current Literature, Methodology, Findings, and Implications.

Chapter 2 (Literature) presents related work by specialists in urban design, planning, architecture, and landscape architecture. It summarizes their writings on pre-design and design issues relevant to this thesis.

Chapter 3 (Methodology) describes how the research in the thesis was undertaken. It describes how information was obtained and the criteria used to derive the independent and dependent variables that answer the research question. Further, this chapter describes how the field observation and fact-finding was undertaken for three urban infill projects in Charlotte, North Carolina. The information is presented in the form of correlative chart matrices, maps, graphics, photographs, and narration.

⁷ Components of the design of space, structural masses, and their internal and external relationships.

Chapter 4 (Findings) describes the results of the research undertaken as part of this thesis. The key independent variables are the morphological elements identified in the literature review, such as design of open spaces and structures, visual linkage and linkage of pathways, and functional relationships within sites and at surrounding borders. The key dependent variables in this inquiry are security and liveliness of the public spaces, and occupancy rate of the structures, identified for each site. Both independent and dependent variables are presented in detail and then summarized and analyzed for patterns and relationships. The conclusions drawn from this analysis answer the research question.

Chapter 5 (Implications) discusses the general meaning of Chapter 4 by comparing the answer to the research question with design theories discussed in Chapter 2, the Literature Review. Design theories that were applied at the sites and shown to have favorable effects are identified and may be of interest to urban designers. Certain implications about infill development in general are also drawn from specific conclusions regarding the research sites.

Finally, I examine if factors other than design need to be sought to explain the successes or failures of any sites. The thesis ends with identification of especially urgent, unanswered research questions in design and planning of urban infill that this study has uncovered.

Chapter 2

RELATION TO RECENT AND CURRENT LITERATURE

This chapter presents the cumulative thoughts of authors whose work is relevant to current infill development. Their concepts are explained in this chapter and then used as the independent variables in the following chapters that address my thesis research questions. The discussion is divided into topics or “issues” and ends with “Literature Implications,” which show how the research and findings of this thesis relate to the authors’ writings.

Because most authors dealing with design also touch upon aspects of planning, underlying pre-design (planning) issues are discussed first. Planning and design are inseparably linked, with zoning situated between them as the most spatial work done in planning offices. Underlying, and addressed prior to, the infill design phase, the pre-design issues comprise: how and where to accommodate growth; thinking regionally versus locally; public/private cooperation in financing and decision making; planning goals; density; and, finally, the process and sequence of pre-design public or user participation. These issues may suggest causality for failure of a development to thrive when the failure is not readily attributable to design decisions that were made.

The primary topics central to the research question – design concepts, theories, philosophies and methods involving public participation, the piecemeal process, wholeness, and morphology – are discussed next.

The objective of most of the authors is to show how to appropriately repair breaches in the urban fabric and how to prevent them in the future. Only one cited research report (Brown, 1999) deals with the direct relationship between design and economic success.

PRE-DESIGN ISSUES

Theories on Urban Decay

In order to strive to avoid future decay of some urban sections, it is helpful to recognize past causes for decline. Such knowledge supports successful infill planning. Trancik (1986) considers urban blight pockets as some of our “lost spaces,” and lists five major factors that have contributed to their existence:

“(1) An increased dependence on the automobile; (2) the attitude of architects of the Modern Movement toward open space; (3) zoning and land-use policies of the urban-renewal period that divided the city; (4) an unwillingness on the part of contemporary institutions – public and private – to assume responsibility for the public urban environment; (5) an abandonment of industrial, military, or transportation sites in the inner core of the city” (Trancik, p. 4).

He explains that car dependence triggered massive highway construction that fractured the fabric of many cities, altered the nature of existing street systems and disturbed the morphology of open space with parking lots. The modern movement, most intense between 1930 and 1960, is contrasted with ancient urban space design where “streets and squares are carved out of the building mass, giving direction and continuity to urban life and creating physical connections, meaningful places” (Trancik, p. 4). He observes “the design of freestanding buildings” stand in spaces that “are rarely designed” (p. 8). They are “floating among parking lots and roadways” resulting in a “loss of a collective sense of the meaning of public space” (p.10). First, single-use zoning, and then large urban renewal projects of the ‘50s and ‘60s did away with the former pattern of multiple overlapping uses within a single territory; and its assets of security-supporting, extended- use schedules and copious and diverse public space use. Public and private sectors sharing responsibility for the public space could hold the urban fabric together. But large, business-image-promoting private developments are most often not integrated into the surrounding morphology and “[t]he result is a patchwork quilt of private buildings and privately appropriated spaces usually severed from an historical context” (Trancik, p. 17). Finally, the relocation of many public and private facilities, discussed further in another subsection of this chapter, often leave spaces “lost.” They linger for years or even decades among the more vital parts of many American cities, before eventually being infilled. Attoe & Logan (1989, p. 21) list the following eight points, some of which totally agree with Trancik’s, some they have added, and others are results of the decline factors Trancik mentioned.

- “Loss of housing and employment from the city center
- Exodus of retail activities from the center
- Increased use of automobiles because of inadequate public transportation
- Congestion, inconvenience, and reduced environmental quality because of automobile traffic and parking
- Abandonment of outdated and inadequate buildings and facilities in the older city center in favor of newer facilities elsewhere

- The association of downtown with environmental deterioration and undesirable social groups – derelicts, the poor, those who are different from most middle-class Americans
- Cost and difficulty in assembling land for development
- Deteriorating and costly infrastructure.”

Growth Management

This relatively recent term describes a governmental response to development pressures that often prefers urban infill to suburban sprawl as the location for building. Certain factors shown by Trancik and Attoe & Logan are among the contributors to the forming of urban blight pockets. These are the problems of crowding, chaos, development outpacing planning, the moving of markets and labor supply, and the instability of governmental urban support, which sometimes changes with election results. When unchecked by government, developers often choose locations for expansion according to the largest and most prompt financial advantage with a minimum of administrative oversight or constraint. These are generally properties at the urban periphery. The principle of urban growth boundaries, adopted by some municipalities emphasizing community benefit, establishes physical limits for the spread or sprawl of development. Such boundaries can encourage re-direction of development growth to disused or underused urban centers, which takes the form of redevelopment or infill.

“Deserted buildings and neighborhoods are evidence of tragic loss, but they also represent opportunities. Their location and services could be valuable assets, because land that has a current real estate value of almost nothing is equipped with water, sewer, gas and electricity services that would cost a lot of money to duplicate in a greenfield⁸ location on the urban fringe” (Barnett 1995, p. 145).

The urban boundary concept is based on perceiving towns and cities as unique organisms with central foci, optimal density, borders, and localized societal functions. According to a report in Planning Magazine on the fourth Congress on New Urbanism in 1996, urban infill was one of the three focus subjects. The New Urbanist charter, signed at that occasion by 200 design and development professionals, adopted the principle that strategically planned and designed infill is one of the devices for implementation of urban growth boundaries. Peter Calthorpe, described by his fellow architect Douglas Kelbaugh (1989) as an “urban futurist,” also writes that overall growth (onto undeveloped land) should be limited and,

⁸ In this context, greenfield means land not previously built upon.

where possible, be steered toward existing locations that can be redeveloped and already have infrastructure. Particularly because, as Calthorpe notes, our “[s]ettlement patterns . . . are becoming more and more fractured” (1994, p. XII). Infilling disused locations with uses currently viable can restore wholeness (see Glossary and section below).

“The best utilization of existing infrastructure and the best opportunity to preserve our open space will come from infill and redevelopment. . . . Over the last 30 years urban infill and redevelopment has been a prime objective for most cities. There have been some successes but many failures” (Calthorpe, 1994, p. XIII).

But burgeoning suburban sprawl can be interpreted as evidence that many developers do not have downtown redevelopment as a “prime objective,” preferring the less complex and more promptly profitable suburban setting. For that reason some municipalities offer downtown development incentives. Creative controls through differential taxation, mentioned in 1, are presented by Accordino and Johnson (1998), and Thomas Gihring (1999), as follows: Two conditions pointed out by Accordino and Johnson in their work on the blighting effect of lasting abandonment, appear to be mutually reinforcing: a “minimal level of taxes charged on such properties”⁹ (urban revenue loss), and the fact that most cities neither reward nor positively encourage high-level property maintenance or property upgrades. Rather, real estate taxes added for maintenance, improvements, and upgrades sometimes discourage owners from performing these. These taxation methods are part of the explanation for the tenacity of blighted areas in many American cities. A two-rate real-estate tax system as a discouragement to lasting abandonment is another creative strategy (Thomas Gihring, 1999). It establishes a lower tax rate for the structures than for the land on which they stand.¹⁰ Where this is applied, it would be a financial disadvantage for the owner to leave the highly taxed land vacant at length. Building renovations would not be “penalized” with a tax increase as they are now, but instead rewarded. This is a complicated financial device that may, however, be fruitfully applied in order to encourage infill development. Regarding municipal growth management efforts, Calthorpe writes that

² Report to The Commission on the Future of Virginia’s Cities, p.2.

¹⁰ The Southern Environmental Law Center states that “other parts of the country [use this device to] discourage holding land idle in urban areas.” The reference is to the common practice of localities raising real estate taxes for owners when property renovations and improvements have occurred. SELC further states, “Under the split-rate tax system, owners who improve their property are not penalized.” (Smart Growth in the Southeast, p. 15).

various attempted “strategies are falling short and additional means to advance urban infill are needed” (1994, p. XIV).

Regional Governmental Coordination

In the case of Charlotte, NC, both the remarkable growth rate in several directions and the overlapping land use of the City and Mecklenburg County require maximum possible coordination among all the public agencies involved. A portion of Charlotte’s rather extensive public transit system, for instance, reaches out into certain county residential areas, with schedules emphasizing the typical work-week commuting hours. Some authors see regionally based governmental coordination and financial cooperation as the appropriate way to develop growth, including infill, especially in those locations that are failing for many market and social reasons. Although Jonathan Barnett’s writings, in strong contrast to Christopher Alexander’s, reflect a practice of urban planning and design within current governmental patterns, he developed and advocated the concept of regional governmental coalitions. The purpose of these would be to establish a comparatively equitable financial balance between large-system contributors and large-system beneficiaries. Compared to the major, very practicable body of his work this is one of his most problematic recommendations. The problem is this: The great benefits and equitability that can be gained from this governmental adjustment occur in the long run and lastingly, whereas the legislators and politicians who must approve such changes in taxing and spending patterns seek instant, provable results to help them stay in office, and perhaps get re-elected. Despite the major difficulties of implementation, the potential advantages of regional land use management and administration are also embraced by the former government researcher, Peter Calthorpe.

Public/Private Partnerships

Although the three study sites used in this thesis are primarily private ventures, the City had considerable involvement during rezoning (where required), planning, and the permitting process. These were the occasions to familiarize the shopping center developers with the city’s design visions. In many very successful urban locations, an extensive financial public/private partnership has achieved remarkable stability for large infill projects of various, and sometimes mixed-use, types. This can occur together with or in the framework of regionally cooperating government entities, or without them. In that process, the financing, decision-making, and ongoing management of an infill project constitute a joint venture. Ideally, the government partner can also function as a moderator among the private

sector parties. “[W]hen private investment is guided by a strong public policy for urban space, it can help shape this space in a positive way...One of the strategies of urban spatial design is to promote this interaction of public and private interests” (Trancik, pp. 231, 232). Such partnerships have led to “entrepreneurial centers” (Barnett) in several cities. Some mixed-use entrepreneurial centers have re-attracted people who have a choice where to live, to inner city locations, helping to solidify thinning urban fabric and re-using existing infrastructure. Trancik states: “The integrated approach recognizes that the city is a continuum, that it will change over time as a result of a multitude of public and private decisions. There is no master plan cast in stone” (p. 230). Responding to such changes is one of the tasks of the built-in and on-going private-public partnership processes advocated by Trancik and Barnett on behalf of infill development.

Infill Content

In addition to regional planning/finance synergies and public/private partnerships, other urban infill strategies have been needed and pursued, with varying degrees of success. All my research indicates that the content (use group: commercial) of a site is of critical importance. This proved true for the study sites in this thesis. The significance of the nature of infill content is a subject discussed by Professor Kent A. Robertson (1995). Among revitalization strategies he considers commendable and frequently proven successful are pedestrianization (also, Barnett); moving shopping centers indoors; historic preservation; office development; transportation strategies; and “Special Activity Generators,” which include sports, entertainment, public markets (Spitzer, 1995), and convention facilities. In addition, he notes cultural and educational activity centers (Roanoke’s Center in the Square would be a perfect example) and explains that “[a]dding to the downtown housing stock provides patrons for downtown businesses (as Barnett above), makes working downtown more appealing, adds activity to downtown streets on evenings and weekends, and creates a greater sense of security.” These concepts replicate the earlier findings of Jacobs (1961) and Newman (1995) and agree with theories regarding the value of overlapping use time schedules, high use density, “surveillability” (Newman), and “eyes on the street” (Jacobs). Trancik recommends conversion of currently dysfunctional streets and parking lots into public open spaces relevant to present infill uses. Landscaping, bicycle facilities and, for business and commercial areas, on-street parking in close proximity to street-facing entrances, ease access and create a comfortable environment and lively user inter-actions (Southworth, 1997; Calthorpe, 1993).

Planning Goals

Robertson (1995) observed results of the following, frequently used, strategies he considered as being somewhat uneven. This may be explained by the large number of factors acting upon success or failure of diverse urban locations. He offers an “Agenda for Downtown Development.” Here, in addition to his infill content recommendations, he lists planning goals that directly influence design: 1) Maintain high density levels; 2) Do not “suburbanize” downtown; 3) Emphasize historic preservation; 4) Maintain and/or develop true civic public spaces; and 5) Develop and enforce strict design controls on new development” (the town must have a vision of what to build and where, not only a zoning ordinance of what not to build). This last agenda item strongly agrees with the theories of Alexander and Barnett. Finally, Robertson also recommends a high level of street activity. This includes carefully balancing street shopping facilities with enclosed malls which can “drain vitality from the image of downtown” (pp. 430-436). Underlying all these recommendations is an understanding that the planning of infill content must meet current basic socio-economic needs of the specific area. And if it does, infill can be expected to act as a development catalyst upon neighboring districts (Barnett). Preferences about the amount of involvement the urban planning office should have with urban design ranges from “minimal” (Alexander) to maximal or overlapping, as in Barnett’s view, which considers the design/planning functions to be richly synergetic.

Density

Shown as important above, density must be understood as an essential spatial, linkage, transportation, and economic criterion in infill development. In the case of the thesis study sites, City density patterns surrounding each shopping center needed to be understood, and then considered as one of the independent variables determining site status. In William B. Shore’s “Recentralization: The Single Answer to More Than a Dozen United States Problems and a Major Answer to Poverty,” we find links among poverty, transportation, the environment, and culture, all of which are also linked to density. Shore shows how urban density has the virtue of reducing automobile dependency and its far-reaching economic and environmental effects by making public transit more possible. According to a 1977 U.S. Department of Transportation study by Pushkarev and Zupan, “The main elements of centers-and-communities – a strong downtown and a residential gradient around it – are the two conditions that most stimulate use of public transit.” One of the benefits of transit cited here is “[m]obility for those who can’t drive.” And cultural activity can only be supported by a critical amount of population density. (Shore, 1995).

Public Participation

The degree to which user, or public, participation occurs in getting infill development under way varies greatly. Determining if such participation occurred at the earlier planning stages of the three projects I researched allowed me to assess participation impact on each project. When public funding is involved, user participation must legally be solicited, beginning with needs assessment, and must continue throughout the design phase. In privately funded projects, planning and design practitioners differ widely on the method, extent, and timing of public involvement. Among the urban designers positively seeking public participation are Lawrence Halprin, Anton Nelessen, Kevin Lynch, Christopher Alexander, Stephen Kaplan, Jonathan Barnett and Anastasia Loukaitou-Sideris. Architect Peter Eisenman, who appears to consider some of his buildings and their surrounding spaces primarily as opportunities for personal artistic expression and only secondarily as facilities for the users, does not seek public participation during the design process; and planner Andres Duany does not consider the public qualified to make truly impartial recommendations. He prefers to deal with the public through their elected officials.

DESIGN ISSUES

After showing some styles of public participation used during the design process, some urban design methods, philosophies, and theories are discussed. Below I describe the concepts of the “piecemeal process” (also called open-endedness and incrementalism), wholeness, and morphological theories and applications as taken from the literature.

Public Participation

In a discussion of user involvement, Loukaitou-Sideris (1996) made important distinctions between an urban designer’s “nominal client” (building owner) and the “substantive client” (building and public space user). She drew attention to the tense triangular relationships among the differing interests of the designer, the substantive client, and the corporate (owner) client. One of the important research questions of this thesis is if user, or “substantive client,” involvement at the design phase occurred in the case of any of the three study sites. How the answer to this question relates to the following theories is stated in Chapter 5, Conclusions.

The design professional may or may not feel obliged or able to balance the corporate client’s and the public’s maximal benefits. The power structure in this arrangement,

Loukaitou-Sideris observes, often succeeds in “social filtering” and “manipulation of user behaviour” (Loukaitou-Sideris, 1996, pp. 98, 99). The design implication is that the user (substantive client) may be less well served than the owner. Further, she distinguishes between public participation and “collaborative design” (p. 98). The two participation styles can be illustrated by the writings of Alexander and Lynch. An extreme example of the collaborative style – considered by Loukaitou-Sideris as more user empowering than mere participation – appeared in Alexander (1987). He stated: “[I]t is the process above all which is responsible for wholeness . . . not merely the form” (p. 3). Aside from the rule that each project “must grow, naturally, and directly, *from what is there already*” (p.58), he considered all potential stakeholders as participants capable of envisioning what ideally should be built next when infilling an urban environment. They would need to use a three-dimensional model of existing surrounding structures and the spaces to be infilled, or actually make on-site decisions. Such visioning is “*more accurate . . . than any intellectual process*” (p.58). Although he had a complete understanding of how planning and urban design are generally done in the real world, he strongly disapproved of the process and especially the results. He considered the results of sweeping design decisions made by government committees and their often distant consultant corporations as incapable of producing the desired wholeness and “alive” quality of projects because they lack the necessary visions expressed in a step-by-step (“piecemeal”) process that consults local users. Two designers who have used three-dimensional scale models with movable elements for public visioning sessions are Stephen Kaplan and Anton Nelessen. Kaplan learned that for non-professionals, blueprints are cognitively inaccessible, and Nelessen agreed. Nelessen, in addition to the use of models, assisted future inhabitants with a photographic series, the Visual Preference Survey™ of neotraditional appearance styles. The design choices in his case were somewhat limited, but Kaplan’s were open. Where Alexander believed the users are capable of having specific design visions (exactly what should go where and in which sequence), Lynch preferred to only chronicle, as a reference, the recorded public perceptions of and behavior in the places affected in a potential project. Then an “image analysis” and “behavior diagram” was made and used as indirect design guidance. “Using this analytical background but not limited thereby, the designer could proceed to develop a visual plan at the city scale,” (Lynch, 1960, p. 116). Although this was before the time of widespread and legislated public participation, he did suggest that “clients . . . must be able to watch the process and to intervene in it” (1960, p.287). Barnett has made strong use of public participation during the project development period. This is extremely labor-intensive for the public and administration alike. Because of the heavy public time investment and personal involvement, Barnett’s very pragmatic project

development processes assure ongoing local project support, cultural diversity, and staying power. Trancik stated yet an additional form of participation, and at a different phase of the project: implementation. When a designer has performed orderly, comprehensive, and elaborate design steps leading to an optimal design, the implementation of the design often encounters obstacles, delays, and changes. Compared to the design phase, implementation can be a lot less orderly, swift, predictable, and coherent. This is where strategy must include “flexibility, collaboration [with public requests], . . . incremental actions, and the willingness to accommodate modification and change [of the design]” (p. 229). The participation recommended by Trancik during design consisted only of “exposure” to community groups (p. 231), but actual involvement with experts in related fields. A comparison with Alexander’s work can be made here, especially with regard to the piecemeal approach of infilling. Trancik applied this only in the implementation stage, as needed by circumstances. Alexander, who advocated design and even building collaboratively with the user, applied it at the outset, as a kind of gradual, incremental design/build method. Each believed the result will thus be whole or coherent and of positive effect to surrounding town portions.

Piecemeal Process

There is a growing realization that the rate of change in American cities appears to be increasing. The design and planning response to this phenomenon is increased flexibility, adaptability, and “open-endedness” in decision-making (Lynch: “open-ended order”). Incrementalism – or the “piecemeal process” of development, to use Alexander’s expression – is a way to implement this response. “[I]nner city areas and older neighborhoods may gradually transition to new and more intensive uses” (Calthorpe, 1993, p. 50). In agreement, Loukaitou-Sideris (1996, p. 91) stated: “a meaningful place is never completely built.” She recommended providing “structures that can easily be altered, spaces amenable to reuse, adaptation, and transformation.” This replicates the pragmatic method of Barnett (1995) who, throughout his practice, has been designing and planning with a long-range view towards change and built-in flexibility, including buildings and public spaces that can adjust to overlapping and future uses. Lynch (1960) was motivated by the same understanding of the constant motion in which cities find themselves, and stated: “There is no final result, only a continuous succession of phases” (p. 2). In contrast to striving for the final, spatially rigid geometric design of some urban master plans of previous centuries, Alexander and Moudon reflect the ephemeral nature of incremental changes at the local level typical for urban areas, or even villages, that have remained alive. See Figures 2.1 and 2.2.

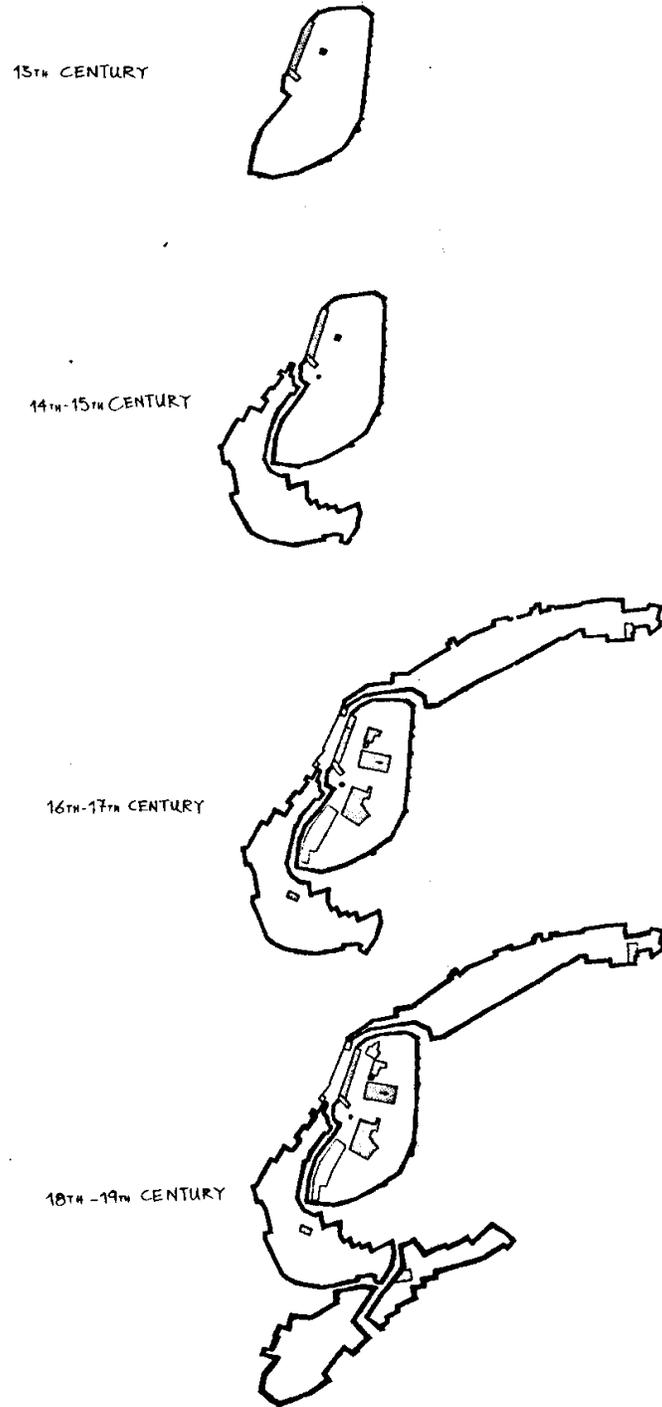


Figure 2.1. Growth of a Hill Town

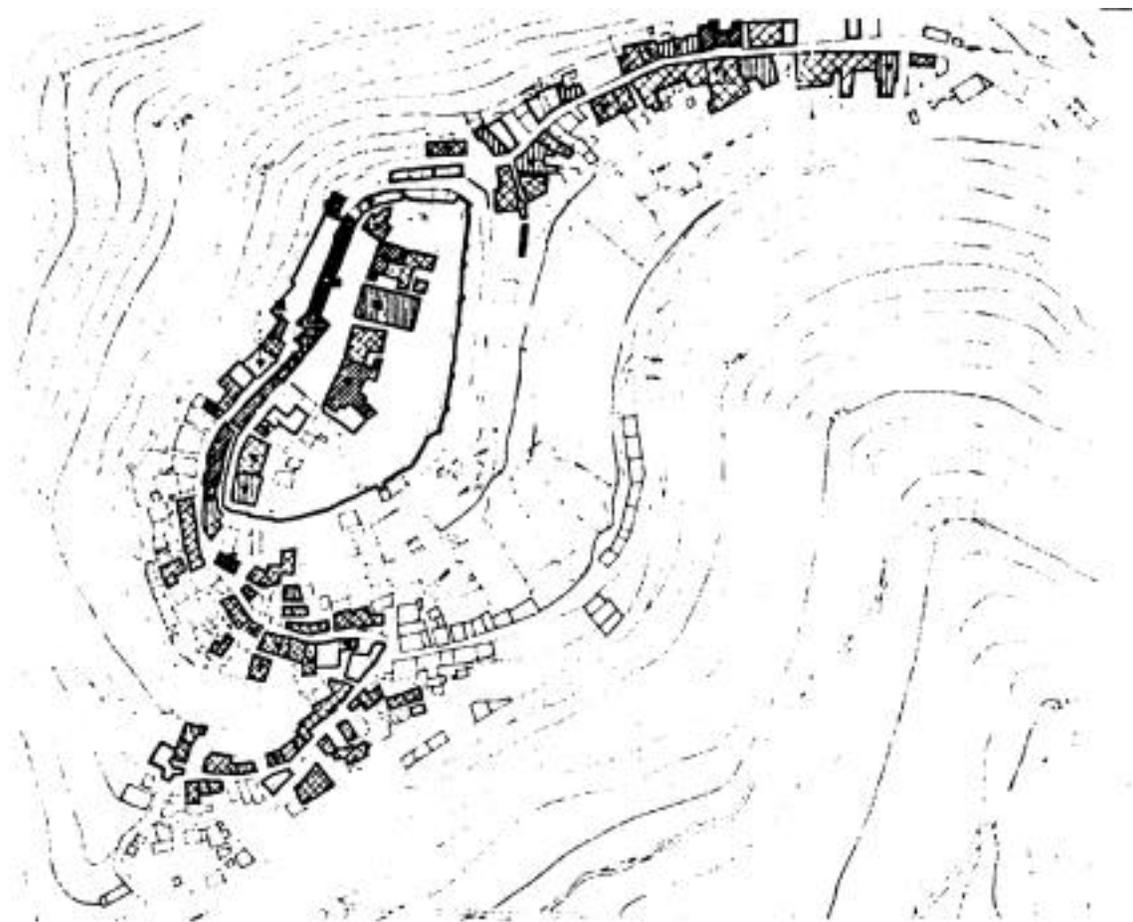


Figure 2.2. Growth of a Hill Town,
Alexander (1987, pp.12, 13).

20, Filarete's plan for the city of Sforzinda (from Codex Maglia Beccianus) is an enduring symbol of humanist order. It assumed that all human situations were susceptible to rules that ensured a hierarchical, well-ordered city.

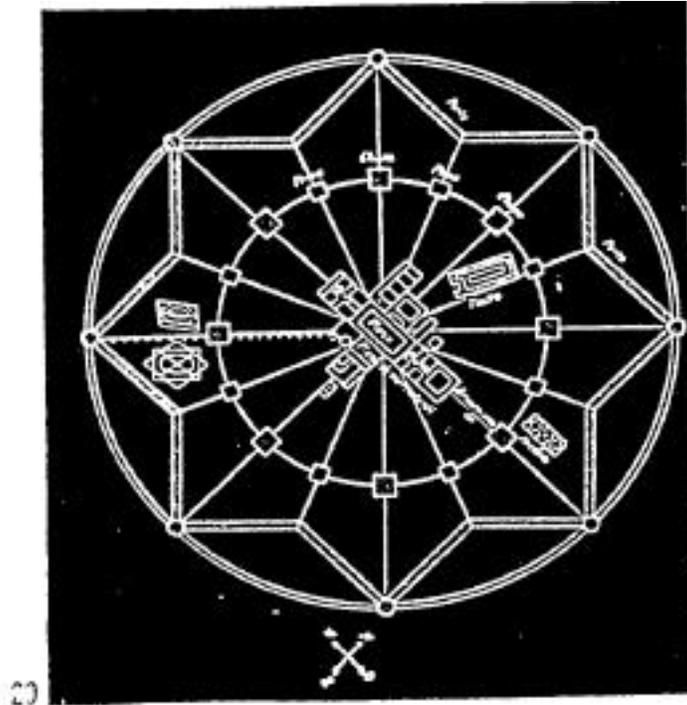


Figure 2.3. 15th Century Plan for Filarete Italy,
Rowe and Koetter (1975, p. 78).

Moudon wrote (1986, p.133): “[T]ransformations of environments are the result of necessary interactions between people and their surroundings.” She considered this an incremental, ongoing, “positive and healthy process” instead of an indication that earlier work was not done “correctly.” Rather, constant adaptations to the present were observed as naturally occurring. Alexander has taken the incremental development style to almost mystical levels, driven by his overriding rule of striving for wholeness – which, in his work, has both the meaning of having been healed and of being complete – at least for the present moment. “[E]ach new whole which is a building project, must at the same time also help in the formation of certain larger wholes (the urban structures) which will be created gradually . . . by the accretion of individual acts” (1987, p. 245). Thus, these constantly progressing increments are assigned the additional duty to heal and enhance the surroundings in which they are embedded. In this theory a function and effect beyond mere satisfactory infilling is expected. Alexander, Barnett, and Attoe agree that this function is potentially catalytic, adding life and value to the immediate and even more distant urban environments.

Wholeness (also see Glossary)

In this context, cohesion resulting either from developing sensitively in the incremental way, or from infill development that sensitively repaired a previous area of urban blight, constitutes wholeness. If wholeness has been achieved at the shopping centers will be discussed in Chapter 4, Findings – although it is a perceived quality difficult to measure. Most planning/design efforts are made with the goal of achieving a well-functioning urban “organism” (Webster: “an individual constituted to carry on the activities of life by means of organs separate in function but mutually dependent; any living being”). Two contrasting approaches to this end can be compared: the first is a top-down method in which a specialist prepares a drawing of a complete physical city master plan all at once. It is intended to be permanent and for gradual or immediate implementation – examples include the designs of Filarete for Sforzinda (see Figure 2.3), of L’Enfant for Washington, D.C., and of LeCorbusier for Chandigarh, India. The second is the incremental method (described above). The first method is strongly associated with rational order and control that lends itself to rigid geometric expression. In it, natural features such as topography and waterways are either not acknowledged or appear as a disturbance of land use designs composed of many identical geometric subsections. All design implementation is pre-destined in such plans. This method seems to imply that the behavior of social groups is either static or entirely predictable for extended periods of time. It has no provision for user participation or future use adaptations and accepts no guidance from two potential morphological determinants: the habitational history and the natural environment of the location. On paper, it gives the visual impression of completeness and perfection but is quite distinct from “wholeness,” a term which first became noticeable in the design professions around 1960. To achieve a well-functioning urban organism by the second approach, inclusion of public participation and incorporation of morphological information in the design process is considered essential to providing wholeness (Alexander, Carr, Lynch, Mingo, Toth).

“[U]rban design, of all existing disciplines, comes closest to accepting responsibility for the city’s wholeness. . . . [I]t is the process above all which is responsible for wholeness . . . not merely the form” (Alexander, 1987, p.3).

The repair and new growth of a city’s wholeness “emerges from the specific, peculiar structural nature of its past” which has “internal laws” that “govern what emerges next” (p. 10). Further: “visions [of people at the locality] are necessary for producing wholeness” (p. 58), and “[e]very increment of construction must be made in such a way as to heal the city”(p. 22). Thus, infill that is carried out according to his “rules” promises to

produce wholeness. This theory was presented again more recently: “The infill process . . . preserves the physical fabric of an urban neighborhood” (Virginia Commonwealth University Department of Urban Studies and Planning, 1998, p. 10). Wholeness appears as the phenomenon to which morphology lends form.

Urban Morphology (also see Glossary)

This term describes a process by which natural earth features and manmade structures with the open spaces between them evolve over time. It also has a cultural dimension: the roots and traces of the habitational history of a place. Most recent and current authors agree that man-made and natural morphological roots are among highly important design determinants for redevelopment (Trancik’s “place theory”). Therefore this subject receives considerable attention in the following chapters of the thesis. Some authors disagree whether the structures, or the spaces between them, are what drives, determines, or causes the spatial outcome. Trancik (p. 77) speaks of “ambiguity” in this regard. Alexander’s belief that “buildings explicitly become the creators of the urban space” (1987, p. 66) can be weighed against Moudon’s “space as a design tool” (1986, p. 131). Here Moudon considers streets and other public open areas as a sort of armature upon which to structure the arrangement of buildings when designing some new or infilling urban portion. Further she states: “The concept of spatial structure has many useful aspects . . . it forces designers to link . . . city and building design and to spell out relationships among the several scales in any built environment” (p. 131). Scales in this context refer to “grain” or size of component parts – namely, the buildings and the spaces between them. Urban development is described as having texture, which can be fine-grained or large-grained, meaning of a small or large scale. Contrasting examples are ancient towns having short blocks structured along narrow streets and pierced with alleys, compared to “large-grained” modern urban superblocks, containing hotels and convention centers, along wide streets and with no vehicular or pedestrian interrupting passages. Our perception of and response to the built environment is based on our body’s spatial relationship to the sizes and shapes of the buildings and spaces around us, and to the cultural significance of scale and proportion. The ratio of building height to street width is an aspect of scale that has great and immediate impact upon human response regarding enclosure or exposure. Environment-behavior studies (EBS) have been conducted by Alexander, and by Rapoport who wrote: “Design consists of making human and environmental characteristics congruent with each other” (p. 245). It is essential to note that, in particular, Rapoport, Alexander, and Lynch were motivated in some of their writings by humanistic considerations whose detailed implementation is beyond the scope of this thesis to measure. Briefly, if implemented, these considerations would be: whether people

actually feel 1) instantly oriented, 2) in no way alienated, and 3) enclosed in a pleasantly scaled outdoor public space that encourages human communication when using these shopping centers. This thesis must limit itself to using the commercial stability of the shopping centers as indicators of whether people like them. Obviously, the necessity and limited choice in using such centers for one's daily needs – true for all three – requires that users put some of these humanistic considerations aside. The only traces of humanistic amenities addressed in the thesis are the parameters of personal security, legibility, pedestrian and bicycle linkage, and outdoor seating. These are only limited glimpses into the field of environment/behavior studies.

There are diverse cultural traditions regarding space responses (Hall). There are also “pan-human characteristics” (Rapoport), which include, for instance, basic desires for privacy, intimacy, guidance through identification and spatial legibility, and places for socializing. All cultures exhibit such characteristics and develop design solutions for them that satisfy those basic desires in similar though locally-specific ways, which Alexander calls “patterns.” Alexander and Rapoport believe optimal human comfort and behavior is supported when construction has satisfied these pan-human characteristics. At the infill sites I researched, the primary impact of morphology is evident in the human use of the outdoor spaces.

1. Spatial Applications

The placement of a built environment in urban space for the sake of display or geometric decorative value (Eisenman, LeCorbusier), versus designing it to support human activity (Lynch, Alexander, Barnett, Jacobs, Southworth, Moudon, Rapoport, and others) are two rather opposing philosophical directions. The former focuses on the physical element (a thing) whereas the latter focuses on “the behavior to be supported” (Lynch, 1971, p. 26), a spatial arrangement in service of a human function. On a large scale, formation of a legible urban image and reference to the human scale can occur if a location contains the following elements: path, edge, district, node, and landmark (Lynch, 1960, p. 46). For smaller-scale spatial applications, great attention is given to the morphological element of “indoor/outdoor fusion” (Trancik, p. 225), such as a sheltering colonnade. “Entrance transition resolves a conflict among inner psychic forces,” states Alexander (1979, p. 248). And “[s]paces vary in effect by the way in which they are entered” (Lynch, 1962, p. 195). How legible and discernible the entrance and store type are for a driver compared to a cyclist or pedestrian (Lynch, 1962; Rapoport), for instance, is an important design issue in strip shopping centers. Unmistakable legibility of entrance location, public/private progression (Cullen p.184), and other smaller and more intimate aspects of the built

environment affect human behavior and comfort as proven by environment-behavior studies (EBS). Examples of such studies by Alexander (1966) and Lynch (1971) are described in Chapter 3. Calthorpe (1993) identifies sufficient sidewalk width, street trees, and awnings in commercial areas as providing an “intimate shopping environment” that encourages lingering to consider merchandise and mingle with people. Sucher (1995) also finds the direct and close placement of commercial buildings in relation to their sidewalks of critical importance, both to commercial success and customer satisfaction. Density – shown above as a pre-design planning, economic, and transportation issue – also has the morphological aspect of affecting the shape of public space and the resulting human response. The “clear form”(Shore, p. 496), which retail development can have in dense city settings, becomes possible when open space between the buildings is understood as having a positive shape and functions of its own (Moudon, above), as compared to the shapelessness typical for suburban sprawl-style retail development. A direct relationship between the shapes of spaces and the financial success of a shopping environment was researched by M. Gordon Brown in 1999. Although morphological concepts in this case were applied to an enclosed shopping mall, the elements and human effects, even at this smaller scale, resemble those of urban design. Brown’s finding that “design affects real estate value” (p. 189) relates to my central thesis topic. He developed a system entitled “spatial syntax” in which, for the first time, spatial shapes such as bounded spaces, convex areas, axes and relationships among them in a mall’s circulation system were classified and tabulated such that quantifiable evaluation of their commercial impact was possible. This device in turn allows for the examination of correlations between internal mall morphology and store rental and vacancy patterns. “[F]acilitation, . . . altering the accessibility of the object” (as in entrance and identification morphology above), configuration, and “symbolization, . . . the association of meanings with the object, . . . the encoding of persuasive messages” (p. 190) – also known as “semiotics” in design theory – are established urban design principles applied to the microcosm of the enclosed mall in Brown’s study. This means, simply, that by arranging spaces in a legible way, the customers researched in Brown’s report could very promptly find the stores and merchandise they wanted.

2.Security Provisions

In the discussion of urban morphology, perceived and actual security in the urban open space is strongly related to surveillability from the adjacent buildings and the space itself (“Crime Prevention through Urban Design,” Newman, 1972). This is achieved by avoiding architectural, topographic and planted visual barriers and unlighted areas. “[V]isibility is important in order for people to feel free to enter a space” (Carr, 1992, p. 144). In addition,

windows must be directed at such spaces (Jacobs, 1961; Newman, 1973) from which, together with a good number of pedestrians outside, the tenants would normally notice unusual activity. This is because tenants become familiar with their visual territory (Newman, 1995) and the general appearance and behavior of shoppers, and may therefore note disturbances. Electronic observation devices installed by some building owners, and police patrol services are considered non-design secondary security support services. However, the presence of police can actually suggest a sense of risk and potential danger whereas there are “subtle ways designs can provide a sense of safety” (Carr, p. 150). During the times stores are closed and therefore shopkeepers, pedestrians, and bicyclists are mostly absent, there are not enough people present to notice abnormal occurrences. Handicapped and elderly people in particular are assured by a “feeling of safety provided by passersby” (Carr, p.122). Overlapping use schedules, which keep empty hours at a minimum, can be generated by mixed-use building occupancy such as office or residential spaces above first-floor commerce and the addition of restaurant, bar, or entertainment uses (Jacobs, Barnett). In small-scale infill development, the rezoning effort to accommodate, for instance, residential space above commercial, often deters developers from achieving such desirable 24-hour human presence. But at all three study sites, restaurants provide notable expansion of the limited use schedule that the stores alone would provide.

3. Linkage

“Large-scale linkage systems” contribute to “creating comprehensible urban form” (Trancik, 1986, p. 112). This statement agrees with Lynch’s earlier work (1962), which was later developed further: “Once a readable space is established, it has a strong emotional impact on the observer. The intimacy or constraint conveyed by a small enclosed space and the exhilaration or awe of a great opening are universal sensations. Even stronger is a transition between the two: the powerful sense of contraction or release” (Lynch, 1971, p. 192). Guidance through spatial identification provides comfort and assurance and even enjoyment to people in the public space. “Accurate orientation gives us a sense of comfort, safety and territoriality” (Sucher, 1995, p. 45). Although the most common meaning of linkage denotes a longitudinal, sequential pathway – “determinant lines of force” (Trancik, 1986, p. 106), “sequences of space” (Trancik, 1986, p. 108), visual and circulation axes (Brown, 1999) – another meaning of linkage exists in the literature. Some linkages are longitudinal, but not necessarily pathways, such as district edges or borders, also called “seams.” One of the New Urbanism Charter’s recognized and adopted goals for infill development in 1996 was perfect edge linkage to its environment (Bressi, 1996). A related but larger application was indicated by Lynch (1971): “The site planner cultivates the habit

of looking beyond the boundaries of his site to study the patterns of his surrounding community.” Toth (1999) and Mingo (1997) concur. Here the reference is to connection and harmony with morphology of the surrounding open space and structure placement. In her discussion of the nature and functions of urban space, Moudon identified an actual communicational linkage, consisting of wayfinding, orientation, and comfortable spatial understanding, between such morphologically meaningful urban spaces that are beautifully formed and located, and the public moving through them. However, the most ideal uninterrupted and legible flow of car and pedestrian circulation sometimes fails to be built because of the fact that “[t]he circulation system is the most expensive feature of site development” (Lynch, 1962, p. 129). All forms of circulatory linkage (pathways) at the three study sites are illustrated and analyzed in Chapter 4.

Other meanings of linkage, besides pathways, have to do with the nature of transition, contextualism, or continuation, such as carrying style or typology and scale from existing surroundings to a newly infilled area. This can include the application of semiotics. Sucher (1995) states that “the new building should . . . respond to the buildings that surround it” (p. 101). This would achieve contextualism. The most abstract and yet very potent form of linkage, related to the previous two, is that of morphological historic roots (see below). Such roots would normally contain semiotic elements and support keeping a sense of place. Many of these various dimensions of linkage are absent in most infill development. A very common reason for this is economics. The immediate and long-term humanistic value of the psychological effects of comfort, spatial legibility, and harmony in the built environment (Alexander, 1966; Lynch, 1971; Sucher, 1995) is generally disregarded, and the related research and design work is unfunded. Developers may be under the sometimes erroneous impression that implementing such work is always more costly than building with total disregard to it.

4. Historic Implications

As urban life progresses through decades and centuries, true continuity of a sense of place can be achieved by a response to underlying geographic and historic morphological elements of the location (Mingo, 1997). The current shape of human settlements is derived from earlier habitation patterns. These, in turn, were formed by satisfying needs of human habitation within the discipline of available technology, the local climate and natural features. This understanding “could help promote continuity between an existing environment and new construction within it” Moudon (1986, p.131). Alexander writes: “[N]ew growth emerges from the specific, peculiar structural nature of its past”(1987, p. 10). See Figure

1b. Beyond the uniqueness of place, the pattern of life occurring in a town over periods of time, which generally influences the design/build decisions, is also an essential component of each unique local morphology. A distinction is made between buildings and spaces that are “alive” and those that are not. By way of definition, the “timeless way” of building “brings order out of nothing but ourselves” (Alexander 1979, p. 3). The meaning here is that this life comes from the continual involvement of “ourselves” as it is imprinted on the built environment. This is how “the evolution of the structure of place”(Trancik p. 228) can occur.

Some specific methods for expressing historic continuity are observing an earlier scale, proportion, and grain whenever a project allows this; and responding to local architectural rhythms and patterns of door and window placements, as well as roof shapes and horizontal building elements such as cornices. “[S]cale, materials, regulating lines, and geometric framework must be examined in order to decide what is to be transformed, what is to be translated, what is to be ignored. They are the means of creating the thread of continuity between what was, what is, and what will be” (Toth, 1999). Expression of the materials used in building is a strong tradition. Although historic materials and certain trade skills might not be currently available, the visible display of good craftspeople’s work continues to bring a cultural human response.

“The more life-giving patterns there are in a building the more beautiful it seems. It shows, in a thousand small ways, that it is made, [sic] with care and with attention to the small things we might need” (Alexander, 1979, p. 134; italics his).

The discussion on linkage in the above section suggests a frequent disregard of historic continuity when infill development is undertaken. For that reason, this design criterion is applied to the study sites in Chapter 4. The effects of regard or disregard of historic continuity upon the shopping centers receive comment in Chapter 5.

CASE STUDIES

“Inner City Infill” (Hermanuz, 1988) is the subject of a collection of winning competitive design proposals and the title of the editor’s introductory essay for them. The annotated illustrations (Figures 2.4 and 2.5) from projects by Secundo Fernandez (# 16, # 18); Dakan, Flebut and Kieffer (#19); and Brian McGrath (#20) illustrate and reflect the theories discussed in Hermanuz’ essay and in my discussion of morphology literature above. These

illustrations show some of the spatial principles underlying my thesis study sites. The principles Hermanuz speaks of deal with, for instance, purposeful re-structuring of the public space when city blocks need to be shortened as part of infilling. As through streets or alleys are added during this process, new complementary uses can be placed along these, and the area serviced by the local government is increased. If strategically chosen, these new uses contribute to the intensity of use in this public space, which, in turn, is a safety asset (annotated illustration #16). Contextualism is achieved in some of the cases by respectful awareness of details of design in older surrounding buildings.

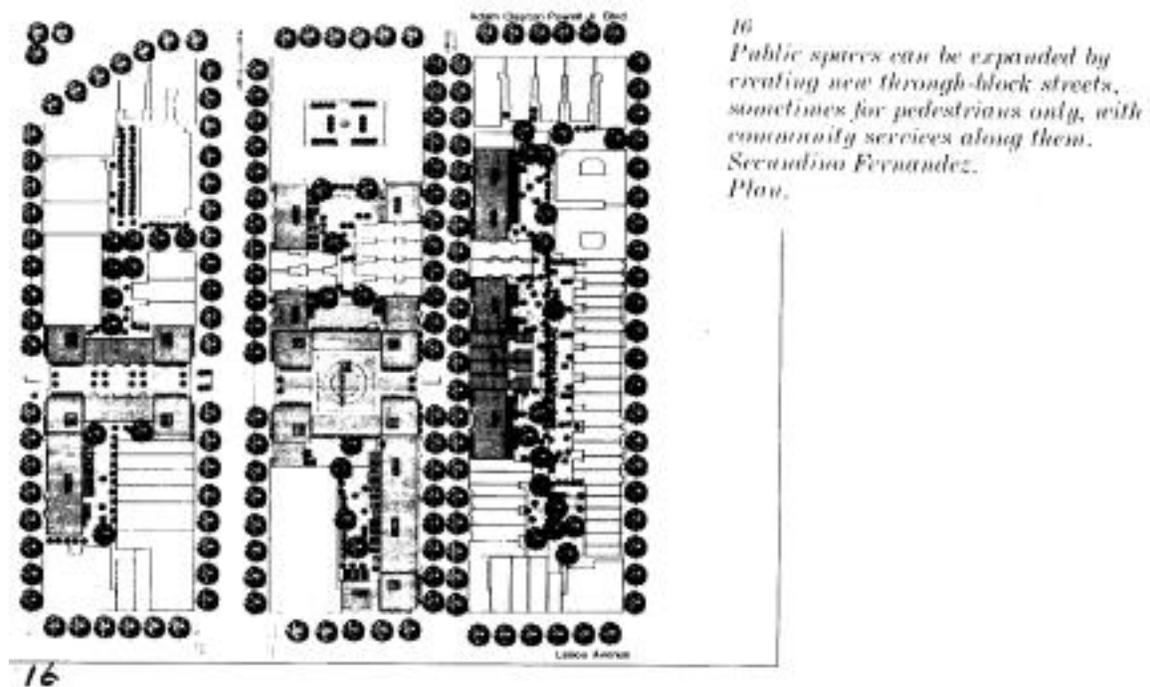


Figure 2.4. Plan by Secondino Fernandez

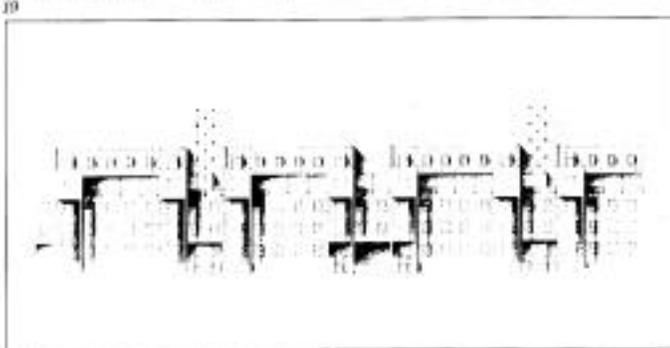
Illustration 16 in Hermanuz Gutman and Plunz (1988, p. 19)



18
Respect of the context can be interpreted literally, although today's construction techniques could only reproduce 19th Century details at a prohibitive cost. Secundino Fernandez. Elevation.



19
Once continuity has been established, typologies new for the area can be introduced: a tower at a prominent corner can be inserted. Kevin Doherty, Daniel Flebot, and Jeff Kieffer. Perspective.



20
The use of a contemporary architectural vocabulary can be appropriate when contextual with respect to the block and its modulation. Brian McGrath. Elevation.

Figure 2.5. Illustrations 18, 19, and 20.
 In Hermanuz, Gutman and Plunz (1988, p. 20)

“Interpretations of stoops and screen walls used to maintain the continuity of the street façade are devices used to renew the architectural expression of old prototypes” (p. 24). Regarding the opportunity, and often practical need, for diverging from the surrounding three-dimensional spatial pattern, Hermanuz has this advice:

“Rehabilitation: creating a new spatial order vs. repeating the past: Potentially, [infill] can transform the spatial order of a partially developed block, creating a hierarchy of spaces different from that inherited from nineteenth-century development patterns. The degree to which buildings to be rehabilitated participate in this new order, how they are transformed, or how in turn they generate new forms, are the keys to the success of the new places thus produced” (p. 31).

LITERATURE IMPLICATIONS

Taking stock of all the writings and practice of the cited and quoted authors, I find a great amount of agreement in their design-related understandings. But some differences exist in theories on the amount and form of project user participation, ranging from indirect involvement by Andres Duany; through public participation during fact gathering, goal setting and concept phases only, for Barnett and Lynch; to actual collaborative design for Alexander. In all cases, the writers believe the best result is achieved by their chosen practice. Those who strive for the quality of wholeness in urban infill development consider public participation absolutely essential to achieving it. Public participation in design and development of the three thesis sites occurred to various, but very limited, degrees. Except where re-zoning or special use variations were involved, it was not legally required. How participation or the lack thereof affected each study site during redevelopment is shown in Chapters 4 and 5 of this thesis.

Chapter 4, Findings, narrates and analyzes how the pre-design issues affected each site, whereas the design issues are primarily documented graphically and analyzed in tables where possible. In the literature, with the exception of the Brown report, I have not found any work that directly addresses my research question (the thriving of commercial infill as affected by urban design). The question is located within the larger and more general subject of urban design that the authors address. The research subject and sites can be considered small specific applications of some of the relevant theories. Some data applicable to other similar infill projects is thereby generated. These include the finding that a morphologically acceptable but not historically faithful retention of surrounding architectural patterns can suffice when complete historic reproduction is not affordable (Duany, Nelessen). The design theories presented in this chapter also provide the structure for evaluating how infill changes have affected circulatory and visual linkages. A more abstract implication of the literature that could inform entrepreneurs considering infill development, is the circular relationship between people and the built environment. Rapoport, Knox, Barnett, and Alexander lead us to understand that the sequence of user input, project development, and human response to a built environment can be seen as an ongoing dialog. The literature suggests that supporting urban wholeness when undertaking spatially comprehensible urban infill development is a desirable response to people's need for wholeness in their lives.

Chapter 3

METHODOLOGY

This chapter explains the method and sequence of investigating design impact upon infill development, and the reasons for the way the research was conducted. It shows how all gathered data was arranged to find if there are causative relationships between the infill design decisions and the economic stability and liveliness of the open space of each infilled site. The study was made operational by an orderly separation of data into independent and dependent variables. The independent variables are the findings about existing morphology and site implementation of the pre-design and design theories explained in the previous chapter. The dependent variables are findings about the status of soundness at the three urban infill sites. These two groups of variables were then juxtaposed to examine if they relate in a causative pattern. All three study sites are outdoor strip malls in Charlotte, NC. The orderly arrangement of research data into operational groups allows interpretation and leads to implications for infill (Chapter 5). The implications, in turn, may serve future urban planners and designers.

The predominant system of logic I have used is inductive. It emphasizes finding the actual relationships and patterns among the operationalized data, rather than seeking to confirm the theories presented earlier.

APPROACH

Three research sites were chosen that have a similar age, size, topography, infill content, intentional design, and urban surroundings. This ensured exclusion of variables unrelated to the inquiry, such as contrasting terrain or difference in infill use. Reliability of the study was increased by site visits made both on a weekday and on a Saturday. After a brief history of the City, the district, and sites, each infill project was examined in light of the pre-design and design criteria discussed in Chapter 2. The summarized results are then related to the findings on security and liveliness of the open space, and the economic wellbeing of each shopping center as expressed by the percentage of store occupancy. This juxtaposition of the independent and dependent variables was then used to assess design impact.

Among the pre-design and design considerations applied in this research were public participation during planning and design, scale of spaces and buildings compared to human

scale, pathways within sites and to surroundings, and the visual and functional relationship of each site to its pre-existing surroundings. A great amount of specific data gathered in the field and from local sources is presented to document this phase of the research.

DATA COLLECTION

I found no example of a similar research project. Therefore my work is directly based on data I assembled from diverse sources. Some of these sources were discovered at the end of a chain of inquiries. Although I was influenced in my research methods by Moudon, Lynch, Locke, and Babbie, circumstances of this research (except the actual field observation) resulted in a highly irregular, unpredictable schedule for data collection in which the intended orderly sequential steps of information gathering often overlapped. The main reason for this unpredictability was the fact that all of my correspondents were busy working people who had no obligation whatsoever to take the time to reply to my inquiries. Among the more readily available sources were websites for the City of Charlotte and The Charlotte Observer newspaper, both of which provide general, relevant data. Some general labor and crime statistics were gathered from state and federal web pages. These are the only sources that could be considered secondary. The two primary and most direct sources of information were City staff and documents, and my own documented field observation. These primary sources led, in turn, to some others that were equally essential.

City Staff and Documents

After determining what maps, records, and property information would provide sufficient description of the shopping center on each site, the appropriate City office to provide such information had to be identified. Municipal sources included the offices dealing with planning, design, and finance; and the police department. Communications were carried out by telephone, e-mail, U.S. mail, fax, and also in person during a four-day site visit.

Field Investigation

To increase reliability of observations of the dependent variable of site activity in the public space, I made repeated visits and observed each site at a similar time of day, on separate days, under similar climatic conditions. To record findings during these visits, the identical criteria, reflected in Tables 4.6 and 4.7 (Chapter 4, Findings), were applied to each research site. A limited amount of informal inquiry with shoppers and shopkeepers was also utilized. The visual record keeping was done by photography, and all verbal material was recorded

by hand on site. The City's urban designer provided an introductory field survey with commentary at each shopping center.

Other Essential Sources

The shopping center owners, a local real estate research firm, and a local neighborhood development association supplied other needed data.

DATA MANAGEMENT

All data gathered for the thesis was used to answer the research question. For this purpose the data was operationalized by being sorted into two major groups. One group documents the natural and historic morphology of the infill design projects and is composed of the independent variables. The other group documents the current use status of the shopping center infill sites and is composed of the dependent variables. As explained in the section "Approach," above, the independent and dependent variables were then related to establish the extent and nature of design impact upon each shopping center.

Graphic tools for analyzing the data are correlative chart matrices, maps, graphics, and photographs. These are the media that record physical appearance and spatial relationships. Tabulating varying findings for each site in light of identical criteria allows analysis and cross-comparison of design impact among sites. The software Word was used for all tables.

Descriptive and interpretive narration is used for qualitative information that cannot be recorded in tables and graphics. Narration is suitable for the many subtle factors that may influence how people use, experience, and respond to urban infilled places. Narrative is also the only way to describe the conditions under which observations were made and to report a brief history and background of the general area and of each infill site.

Data Organization

1. Independent Variables

This data provides the natural, historic, and manmade conditions within which the infill sites thrive or fail to varying extents. Drawing cross-comparisons among the three sites indicates the type and amount of influence these independent variables had in determining site status. Background conditions influence the meaning of findings and are therefore included. They are the general security, crime, and economic background of the City of Charlotte, its climate

and topography, history, and some of its pertinent planning goals. A narration of these findings serves as introduction and background for the data most central to the thesis inquiry: the independent variables dealing with the pre-design and design issues. These variables are site history; public participation in project planning and design; municipal maps and site plans furnished by owners for each site; parking issues; the functional vehicular and pedestrian pathways in and around the sites – including their distance from major thoroughfare and public transit linkage; topography; zoning; density (floor area ratios); and site contents. This data also includes the design criteria of morphological and architecturally typological compatibility with surroundings; building placement and the shape of the open space itself; site amenities, such as outdoor seating and shade trees; signage and spatial legibility assisting orientation (way-finding) within each infill site; orientation observations at infill borders; and the functional data regarding day and night lighting. Although maintenance is certainly not a design topic, a brief reference to it is included because it is intrinsic to revealing and preserving the original design intent, as well as being capable of enhancing the design implementation.

2. Dependent Variables

The percentage of store occupancy and the lively enjoyment of outdoor spaces unencumbered by security threats are used as the dependent variables and serve as indicators of the effect of the pre-design and design factors used at the infill sites. Occupancy data from a private local real estate research firm and data on crime from the Charlotte Police Department for the radial area of each center are used as indicators of design impact. This thesis never makes the assumption that design is the only influence upon these dependent variables. The researcher's field observation measures the amount and liveliness of use of outdoor space; shopper interactions; diversity of distribution of age, race, gender; and an impression of shoppers' income levels, approximated from their level of dress.

3. Summary

Cross-tabulating independent and dependent variables for all three shopping centers and providing interpretive comments for these tables allows the next step of research development.

RESEARCH MEANING

Analysis

Interpretation and evaluation of the similarities and differences among the independent and dependent variables found in Chapter 4 is carried out in the Analysis section of that chapter.

Conclusions

The data gathered, ordered, summarized, and analyzed finally permits answering the research question to the extent possible in this thesis. This requires a return to the background issues introduced in the Preface, Introduction, and Literature Review to discover the meaning of these findings in the large scheme of things. This section concludes Chapter 4.

Implications

This only topic reserved for Chapter 5 draws on all the previous work in this thesis to identify urban planning and design issues related to infill development that deserve greater attention. The nature and focus of such attention may also be informed by this chapter.

Chapter 4

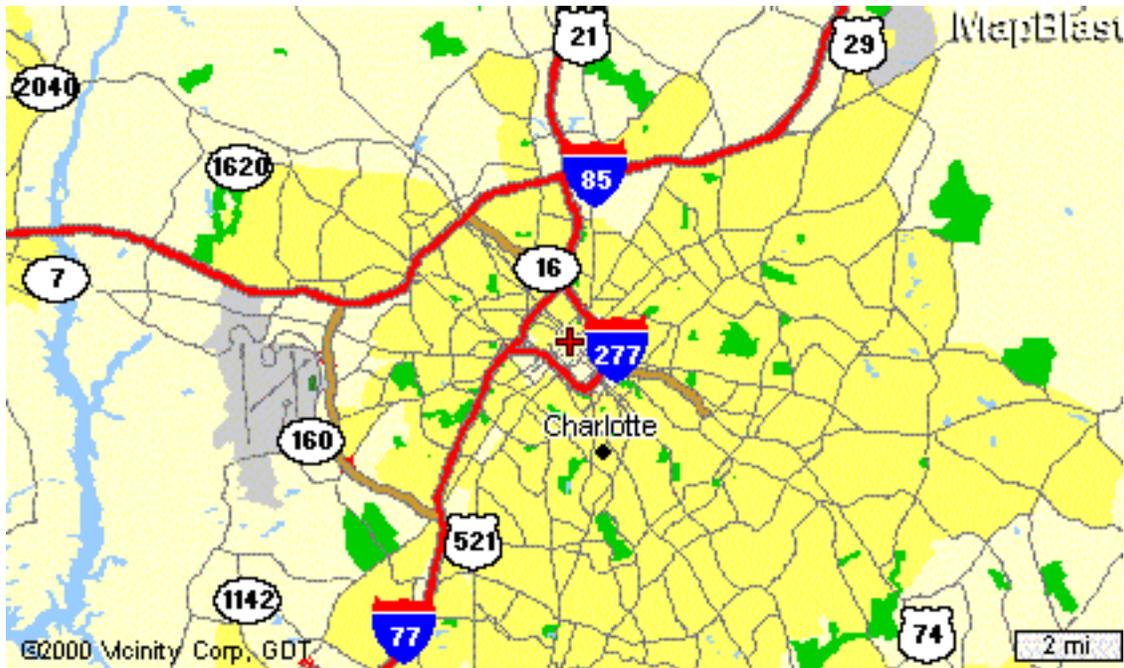
FINDINGS

INTRODUCTION

This chapter provides information on the city of Charlotte, NC, its region and, primarily, each of the three research sites. Each site is a “strip mall” shopping center with a parking area of its own. A recent history of each site; its morphology; its relation and linkage to surroundings; relevant maps and photographs; and an account of its contents (number and type of stores and amenities) and condition are presented as the independent variables. In this thesis, the major determinants of the dependent variables are: outdoor security, the manner and intensity in which public space around each Center is being used, and the store occupancy or vacancy rate for each Center. All findings were then summarized and analyzed, and are the basis for conclusions drawn at the end of the chapter.



Map 4.1. The Southeast Region, Charlotte at center.



Map 4.2. Location of the City of Charlotte in the region's highway system.

THE CITY OF CHARLOTTE

Climate

With mountain ranges approximately 90 miles to the northwest, forming a break from prevailing winter winds, and the ocean shore 160 mi. to the southeast, Charlotte's climate is considered moderate, having only 71 annual frost days. The long growing season permits much agriculture, including its historic production of cotton. Snows are rare and not lasting. Summers are quite long and warm, unmitigated by the too-distant ocean.

History

By the mid-18th century, the original Native American population in the Southern Piedmont region was being displaced and replaced by Scots-Irish Presbyterians and German Lutherans moving from the more crowded areas around Philadelphia. The cultivation of cotton altered the forested landscape and fostered a thriving textile industry. Incorporated in 1768, Charlotte was named after Queen Charlotte whose husband was King George III of England. It currently occupies approximately half of Mecklenburg County, named after the queen's German home state. By the 19th century, gold was discovered in Mecklenburg and the surrounding areas and active mining ensued. Charlotte was the site of the first branch of

the U.S. Mint. The railway development of the mid-19th century, together with Charlotte's existing textile and banking industries, helped develop the City into a major business center. This trend has continued to present time: "Charlotte is the nation's second largest financial center, after New York City" (Avin, 2000). The original town center, once defined by a square formed by classical buildings at the intersection of Trade and Tryon streets, is now the site of modern high rises.



Photo 4.1. City of Charlotte (photo by City).

Current Status

Charlotte has four colleges and four universities, and several major medical treatment and teaching facilities. In 1996, the City's unemployment rate was 3.7%. Its population growth from 1980 to 1999 was from 404,000 to 622,000. During that time, the planning commission "directed a lot of energy to maintaining the health of the center city and its surrounding neighborhoods" (Avin). In 1999, a "Smart Growth Audit" was performed at Charlotte-Mecklenburg by its Planning Commission together with a private planning firm. Under the audit's sub-heading "Urban form," the Commission was shown to support "Compact development," "Infill development" and "Walkable neighborhoods." Under the sub-heading of "Infrastructure" it supports "Balanced multimodal transportation" and "Maximizing existing infrastructure" (Avin). The City's Planning and Property Management department reflects its infill policy in its business plan: "As Charlotte's economic prosperity becomes more dependent on infill and re-development, ordinances will have to change to accommodate a more urban community." Concurrently, however, outward

growth is occurring as well, aided by existing and planned major highways (I-485) and belt roads. The Charlotte Observer's Home Editor reports an expected peripheral growth of 15% by 2003. A public transit system of local, express, and special bus lines operates 20-1/2 hours a day, with schedules responsive to peak business hours. The express system is coordinated with park'n'ride lots in the outlying areas it serves. Privately run neighborhood and center city shuttle circuits complement the public bus system and the small mid-town public system of restored historic trolleys, currently in its beginning stages. All three study sites are located at local bus routes. A feature called the "after dark service" reflects the city security climate. It allows passengers to get off directly at their destination along the route, instead of at regular bus stops, by request to the driver.

Security

The Charlotte Observer, Oct. 16, 1999, reports an increase of youth gang activity from 3 identifiable gangs in 1988 to approximately 50 in 1999, based on Charlotte-Mecklenburg police records. This figure exceeds the population growth rate and therefore indicates a decline in the area's security climate. The nature of the crimes is expected to become more violent. This pattern resembles a nationwide trend, but gang activity is below that of the national average for cities of this size range. Some gangs are ethnic by membership and some have ties to nationally known gangs. Police in the area are actively counteracting this development with crime intervention and gang prevention programs. Gangs are now more sophisticated, especially at making themselves less recognizable, thus compounding the task police are facing. Schools receive instructions on gang recognition from police. A most recent addition to the prevention and monitoring efforts is cooperation with youth counselors, social workers, and educators. Mapquest's report on Charlotte issues (Nov. 28, 1999) shows Charlotte experiencing an increase in homicides, partly attributable to this growth in gang activity. This contrasts the downward trend in the state and the nation, although a U.S. Bureau of Justice report of the same date states: "The southern regions historically have had higher homicide rates than other regions."

Architecture

As Charlotte grew in size and wealth, architectural styles, including "Queen Anne," were imported from other parts of the region to Charlotte residential neighborhoods. Other local residential styles reported by Boyte are "carpenter gothic," Victorian (at the turn of the previous century), Georgian, and bungalow. In the early twentieth century, this last style evolved from a favored combination of newly and plentifully available factory-built wood

components, the Craftsman style of detailing, open floor planning, and wide overhangs (Boyte). Its name comes from “bungla” – a travel shelter widely used in colonial India by British government officials. At this time, much residential development using various versions of this style and others began to spread and cluster around the new electric streetcar lines.



Photo 4.2. Martin/Beardsley House, Dilworth District, Charlotte, NC. (Photo by Pat Shanlin.)

THE DILWORTH DISTRICT



Map 4.3. The Dilworth District and adjacent areas, with Shopping Center locations. (K.P.- KingsPointe, K.C.-Kenilworth Commons, D.G.- Dilworth Gardens)

One such streetcar development was the now historic Dilworth District in which, Boyte states, “preservation is now a way of life.” It is therefore a suitable morphological and historical reference among the locations of the three study sites. Under E. Dilworth Latta, the Dilworth-Latta development company actually owned both this public transit line and the subdivision land. To this day, Latta Park in this neighborhood serves the originally intended recreational purpose for its residential neighborhood. Approximately two miles to the southwest of center city, the Dilworth street pattern is a grid less finely grained – because more recent – than the original four city wards; it is also less geometrically regular because of topographic features. At the time of the district’s development, Charlotte was so small that Dilworth was one of the new suburbs that radically changed the City’s shape. But by the 1950s it had become a “center city enclave” (Boyte). But rising car ownership, greater suburbanization, and lack of interest in such enclaves drew residents to the more remote city peripheries. The enclaves became gradually neglected and vacated, and the trolley line was discontinued. But gradually some of the architectural styles now considered quaint gained the interest of preservationists. In the 1980’s, renovation and even gentrification began. “Now the center city is surrounded by historic houses where zealous neighbors protect their new-found ‘old’ life style and ‘old’ houses” (Boyte).

THE RESEARCH SITES

History

The three shopping centers were built between 1987 and 1990. In each case a private developer applied to the City, submitting a project fully designed by a professional firm to be built at once, not in phases. No laws required public planning or design participation. Two of the sites had previously been experiencing gradual use changes, decline, and under-utilization over a period of years. But the current Dilworth Gardens was converted directly from another active commercial use, by demolition and new construction, into a shopping center. The content of each shopping center was strongly determined by its surroundings, as explained in the subsection on zoning, below.

Topography

The hilly landforms of much of Charlotte are a notable feature of its natural morphology. In the case of all three shopping centers, these landforms present a challenge of physical design that must be practical in order to be affordable. The elevation differences from one end of the property to the other range from a ten-foot to a twenty-foot incline, shown for each in Figures 4-1 and 4-2.

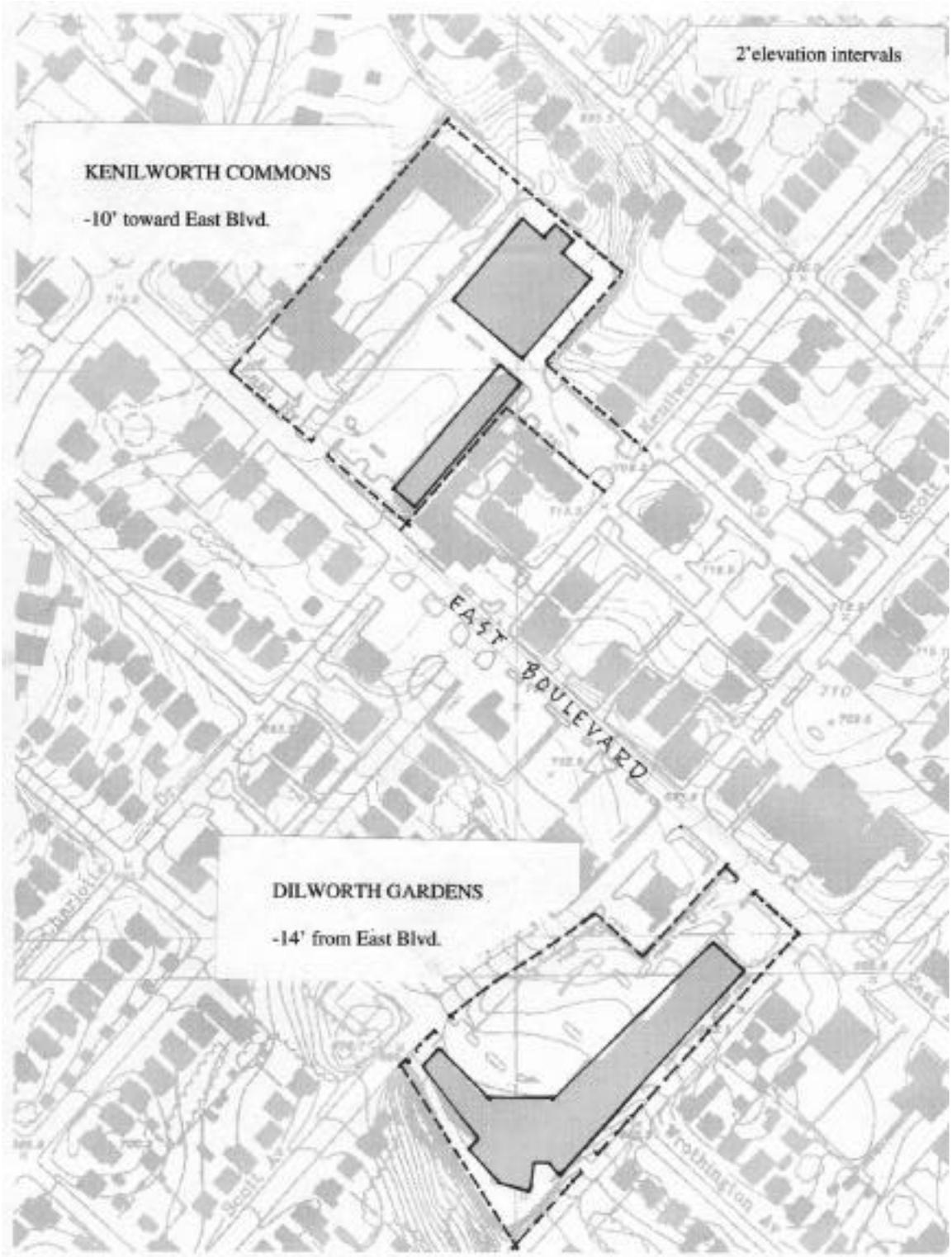


Figure 4.6. Shopping Center overlays on City topographic map. Base Map: City of Charlotte.

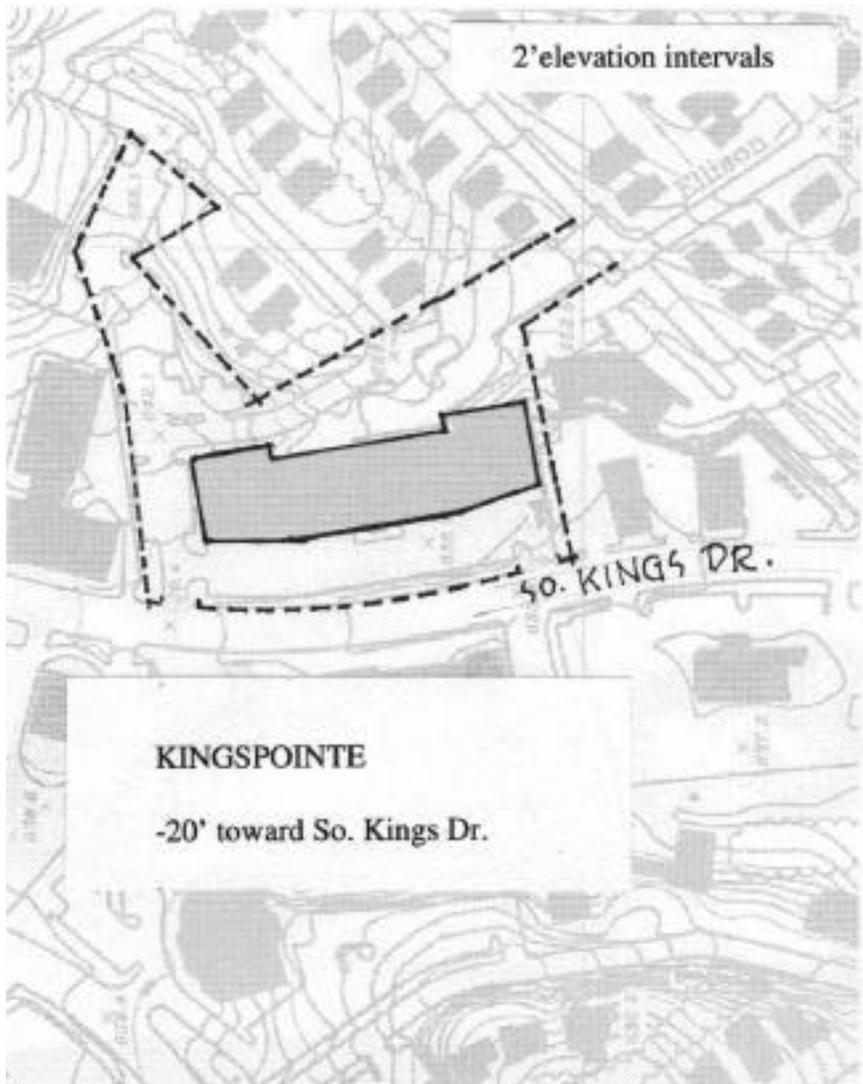


Figure 4.7. Shopping Center overlay on City topographic map. Base Map: City of Charlotte.

Design responses to that challenge are not expressing but rather hiding the natural land form of the location, unless the ubiquitous retaining walls are interpreted as such an expression. These walls, supporting the concomitant massive regrading, serve to create plateaus sloping gently enough to accommodate the level – not stepped – store buildings, barrier-free requirements, and parking. In the case of KingsPointe, the steepest property, the land slope is utilized to enter its second story at the level of the uphill lot portion behind South Kings Drive. Its southeast corner actually lies in the flood plain, at one time legally culverted and built over, that is associated with Sugar Creek.

Street Grid Location

Another obstacle is that the potentially ideal corner (or near corner) position of each Center is partially or completely obstructed by street patterns or adjacent existing real estate, thus reducing potential effectiveness for circulation, orienting legibility, and visibility. The site plan for each Center graphically illustrates this obstacle, along with the discussion of pathways and linkages. The public transit (bus) system, which passes along a four-lane 25 miles-per-hour urban roadway, stops directly at one of the entrances to each shopping center. The only recognition of this fact by the City is provision of standard, explicit bus stop identification signs mounted onto utility poles. Neither the city, nor any of the three shopping centers, has provided a bench or bus shelter at these locations.

Spatial Morphology, Building Typology, Landscape Architecture

The relationship of each shopping center to its surroundings, and the morphology of the open space in each, are remarkably similar as shown by Maps 4.4, 4.5, and 4.6. So is an architectural feature, shared by all three shopping centers as well as by many ancient structures in public spaces – namely, a modern version of the colonnade. This takes the form of a true overhang at KingsPointe, and the form of structured canopies at Kenilworth Commons and Dilworth Gardens. One major distinction between the ancient versus the current criteria for evaluating the merits of colonnades is the speed and distance for glimpsing the buildings' shop window contents. The quality and effect of the colonnades differ materially among the Centers. Building typology as a whole, in each case, not having evolved from incremental renovation of buildings used earlier on these sites, nor attempts to mirror historic architectural styles, reads “late 1980s - early 1990s strip mall” at a glance. Rather than detecting an architectural stylistic label, one reads a *Gestalt*¹¹ for the whole Center in each case, which is composed of the structures, location in the street grid, signage, and amount and spatial arrangement of parking. All three shopping centers have a distinct “front” and “back”; almost all of the parking occurs at the front side, from which the stores are entered. The exception is KingsPointe with its more confined site that uses landlocked space to its left and rear for about two thirds of its parking requirements. Landscape Architecture applications were not a major, essential component of design for any of the Centers, and almost absent altogether in some cases.

¹¹ In this case, a formed pattern of elements that has come to be associated with shopping centers.

Zoning

The nature and pattern of zoning surrounding each Center is key when examining the Center's role in its neighborhood. This, in turn, must be interpreted as critical to the Center content chosen by the developers, and most likely a strong determinant of the commercial success of each Center. Selections from the City's zoning maps are the basis for Figures 4-3 and 4-4. The specific relationship of the surrounding zones to their Centers is discussed individually for each, below. Only KingsPointe contains a small amount of office space (O-2) along with the commercial use that is zoned, in all three Centers, "B-1."

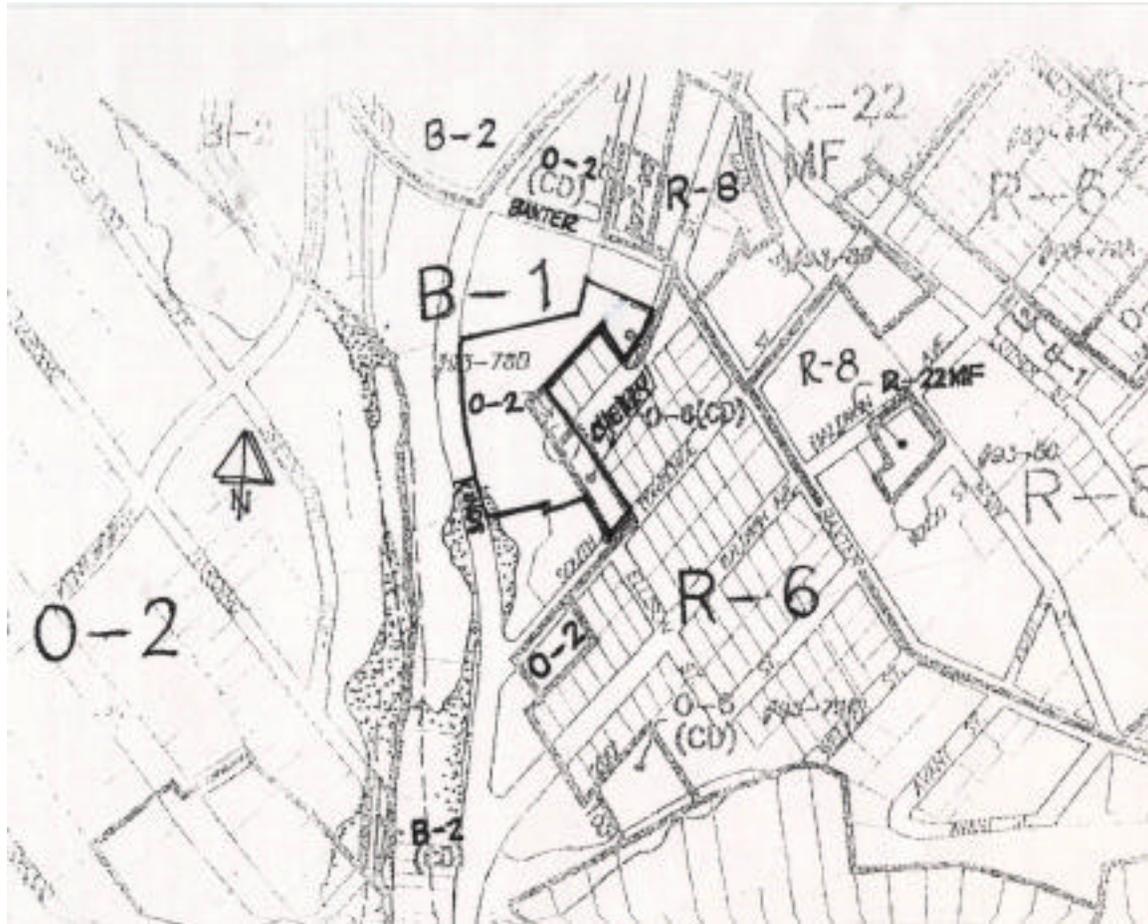


Figure 4.8. KingsPointe showing shaded flood plain underlying South Kings Drive and Center corner. Base Map: City of Charlotte.



Figure 4.9. Kenilworth Commons (northeast) and Dilworth Gardens (southwest).
Base map, City of Charlotte.

Table 4.1. Zoning District Descriptions

District	Description
MUDD-CD*	Mixed-use Development District – Condition District
O-2	Office District (max. FAR: 1.0 %)
O-2 (CD)	Office District (max. FAR: 1.0 %)
O-6 (CD)	Office District, min. Lot Size 6000 SF
R-2 MF	2 Units of Single Family Units/ac, Multi-family Overlay
R-4	4 Single Family Units/ac.
R-5	5 Single Family Units/ac.
R-6	6 Single Family Units/ac.
R-8	8 Single Family Units/ac.
R-12 MF	Multi-family 12 Units/ac
R-22 MF	Multi-family 22 Units /ac.

*CD: “Condition Districts” from the Zoning Ordinance prior to 1992

Security

The Charlotte Police Department lists various types of crime committed during the period of January 1998 through April 2000 in the “radial district” of each shopping center. Among these, crimes of property predominate overwhelmingly: larceny/theft, burglary and forgery. In the three districts, violent crime amounts to approximately 7% of crimes committed. In no case was any crime concentration located within any of the shopping centers, but rather peripherally. Each Center is affected somewhat differently as reported separately below. Also, see Appendix A for Charlotte Police Department reports and diagrams on types, frequency, times, and locations of crime in each radial district.

KINGSPONTE



Photo 4.3. Shopping Center front at South Kings Drive.

Independent Variables

The independent variables consist of physical and historic information about KingsPointe, design factors (site morphology), and maintenance observations. The data is summarized at the end of the section. This format and method will be identical for all three shopping centers.

1.Introduction

KingsPointe Shopping Center is closer to center city than the other two. After a farm use in the distant past, this site was later occupied only by a movie theatre and a filling station. This apparent under-utilization in such an urban environment can be explained by the fact that part of the site is situated in the floodway of Sugar Creek.



Photo 4.4. View toward uptown from Center's second-story balcony.

The **pre-design** sequence of events follows: When a developer successfully applied for a waiver of the floodway building restriction, before the current more severe requirements, the creek was culverted and the project completed in 1988. Because of the already existing commercial zoning, public hearings and the opportunity for public input did not occur.

The project was **designed** and built all at once, by a single developer. Instead of relating to the relatively low-income, somewhat faltering, mostly black-occupied old residential Cherry Street neighborhood behind the shopping center, the Center is entirely geared – both by physical design decisions and content – to serve a totally different market at its south and east property lines. It addresses itself to the surrounding commercial, office, and apartment occupants; the upscale Myers Park single family district nearby; and Kings Drive itself, a high-volume commuter route for midtown office workers. The decision to bar two potential direct interchanges with the Cherry Street neighborhood was the developer's.



Photo 4.5. Rear overflow parking lot adjacent to Cherry Street Neighborhood.



Photo 4.6. Permanently locked gate at rear parking lot adjacent to Cherry Street Neighborhood.

The Center **acreage** is 3.380, and its Floor Area Ratio (**FAR**) maximum is .6, which it nearly meets with an actual FAR of .54. The **taxable total value** of the Center is \$3,404,760. Most of the structure is two stories high and **contains a total of 20 businesses** consisting of stores, offices, and restaurants. There is no grocery retail store for use by the adjacent Cherry Street residential area. The offices are upstairs; all restaurants, a martial arts center, and stores are at ground level. The offices consist of various professional, non-professional and cosmetic care businesses, and three radio stations. Among the stores, some sell computers, others sell sewing equipment, gifts, or sign-making services. A mid-size Chinese restaurant with near-capacity crowds at noon and early supper service complements the much larger lunch and nighttime Mexican restaurant “Pancho & Lefty’s,” which has been the Center’s anchor business from the start.

2. Design Factors: Site Morphology

The building **architecture** attempts no relation to any surrounding local or period style, although a similar finish is used on a slightly older office building to its right. The décor is faintly reminiscent of adobe buildings in Santa Fe, New Mexico, and thus the restaurant seems intended to set the tone for the whole shopping center. Within the site confines, both front and rear (upper) building faces are intended for public access. The colonnade, mentioned earlier, here takes the form of an overhanging balcony with periodic support columns. Fenestration clearly expresses office, store, or major restaurant functions, respectively. Many of the upper story offices can also be reached from the balcony served by a forbiddingly dark and steep staircase that contains a landing and is accentuated by the Center's highest, and almost theatrically decorated, pair of gables.



Photo 4.7. KingsPointe stair entrance at ground level.



Photo 4.8. Stair view from upper to lower level at KingsPointe.

The architecture itself does not lend definition to the **shape of the open space**, whose parking arrangement is almost suburban in style. Only some plantings shape portions of this shopping center exterior.

Landscape architectural efforts, although secondary in design impact, are very consciously and successfully pursued to achieve guiding, screening, shading, and space-

defining functions. They are limited to those functions and make no attempt to respond to the site topography. The landscape functions are accomplished by treating the plants as masses through their placement and in some cases through shearing to shape.



Photo 4.9. Sheared minor trees frame the entrance of the KingsPointe anchor: the Mexican Restaurant.



Photo 4.10. Natural trees shade parking area and sheared minor tree alternates with office entrance canopies at the Center's second story rear entrances.



Photo 4.11. Second story rear entrances: Massing of landscape materials forms an instantly legible pattern, together with canopies and double gables at stairway, identifying entrances and pathways.

Space Surveillability: All exterior areas at the Center are surveillable both from parking areas and business windows, and the front is in plain view from Kings Drive as well. The upstairs rear entries and windows allow parking lot surveillance in most cases. But the whole rear building façade has no opposite surveillance source because of the continuous landscape screening.

Orientation of KingsPointe places the anchor restaurant at the north. Thus the front, main entry side receives primarily western sun in the afternoon, the offices in the rear are turned to morning sun.

Visual linkage within the Center works rather well. The combination of fenestration type, signage, and landscape elements provide guidance. A slight drop between store windows and the front parking area and only occasional interruption of view by landscape features allows identification of store types both from the sidewalk and parking lot. In the more shaded morning hours, with window content not visible, store recognition depends almost entirely on canopy signage.

The Center, located in mid-block, has no corner location because the intersections with Baxter Street and South Torrence Street at South Kings Drive are occupied by separate office uses. The visual relationship between the Center and its surroundings must depend

heavily on the rather large and gaudy signposts at the street, and signs affixed to the building, all announcing its name in the faux old English font used throughout. The signposts' size, elevation, and scale are primarily arranged to signal drivers, not pedestrians. The reason the features that support internal legibility serve less well at the periphery is the major setback of stores from the street for front parking, and the rise of several feet from the sidewalk. Visual linking relationships both among open-space forms and among structures, between the Center and its surroundings are practically non-existent but rather a relationship of contrast – almost competition for attention - is present –and definitely by design. Across Kings Drive is a stark, white, modern, four-story continuing-care facility, flanked by a gas station and a typical McDonald's. The facility's architecture relates morphologically to the shopping center just as little as the Cherry Street neighborhood in the back; the building to its right, which is recessed even further from the sidewalk; or the government office building to its left. (See Photos 4.12 and 4.13.)



Photo 4.12. Office building at right of KingsPointe Shopping Center.



Photo 4.13. Government office building left of KingsPointe, separated by small parking area.

South Kings Drive itself, at this location, looks quite fragmented and offers little to relate to. Just to the left of the office building shown in Photo 4.13 is the corner of Baxter Street, from which KingsPointe Shopping Center is not visible because the curve of South Kings Drive blocks that legibility.

The linkage of pathways within and to the edges of the Center is shown on the following map and discussed in following paragraphs.



Figure 4.10. Key to all Pathway Maps.

Among all pathways, those for cars are given by far the highest priority. They are convenient, generously sized and legible. The Center has three driveways. Parking is plentiful and includes only one distant uphill portion seldom needed for overflow parking. The building density and the visual advantage of being able to hide much of the parking at the side and rear of the building permits following the advice of Robertson (1995) that we should not “suburbanize downtown” by building spatially sprawling shopping centers there. KingsPointe can be relatively compact because the two-story architecture uses the odd-shaped sloping lot and through-drive to good advantage.

A pedestrian walkway system is stopped at the city sidewalk and resumes only at the foot of Center front and side (restaurant entrance), serving the businesses. This store and restaurant sidewalk is not connected with the rear sidewalk along the offices.



Photo 4.14. Flight of stairs from South Kings Drive sidewalk. Not even paint striping protects pedestrians when crossing the parking lot to the main entrance and sidewalk.

The steep and bleak stairway connection between floors (see Photos 4.7, 4.8 and 4.14) has a lower entrance with poor distance legibility due to insufficient artificial lighting. Although all sidewalks within the Center are accessible with barrier-free ramps, absolutely no other recognition, safeguards, or facilities (e.g., bike racks) are provided for wheelchair riders,

pedestrians, and bicyclists, who must share the driveways with cars. On my visits during business hours I saw very few pedestrians enter from neighboring office buildings, and no cyclists or wheelchair bound people entered the Center. Traffic was fast and dense and when I entered on foot it was plain that drivers do not expect walkers in the entry drives.

A City bus line serves South Kings Drive. Buses stop at the shopping center. But the Center makes no acknowledgement of that fact.

Lighting at night, according to managers of the anchor restaurant, is plentiful and concentrates on the places open during dinner hours and on Pancho & Lefty’s where the bar is open very late. I observed that external electronic **security devices** are absent throughout. Regarding security effects of the total spatial design, surveillability both within the Center and of store and restaurant fronts from the street is good.

Waste storage and disposal has excellent placement directly behind the restaurant. The containers are screened with fencing and shrubbery. Opportunity to use both South Kings Drive and South Torrence Street allows a safe and efficient driving loop with no dangerous backing-up.

Table 4.2. KingsPointe Site Amenities and Accessories

Amenity	Quantity
Automatic teller machines	None
Mail boxes	None
Benches, tables, chairs	One, at anchor restaurant entry
Bus shelters	None
Customers’ waste receptacles	One, at anchor restaurant entry
Public telephones	None
Clocks	None
Newspaper stands	None
Bike racks	None
Bulletin boards	None

3. Maintenance of Buildings, Grounds, and Landscaping

The state of building repair, landscape maintenance, and shopping center outdoor cleanliness was good for each of my visits.

4. Summary: Independent Variables

Table 4.3. KingsPointe Pre-design and Design Phase Data

Criteria	Data
Abandonment or vacancy period	Unknown; lengthy under-use
Age	12 years
Public participation	None
Infilled incrementally?	No
Lot size	3.380 acres
FAR	.54 of permissible .6
Taxable value	\$3,404,760
Anchor business	Restaurant
Total number of businesses	20
Use group zoned	Business and office

Design Factors: Site Morphology

Architecture: Two stories, stucco, no distinct known style

Landscape architecture: Supports Center functions

Orientation: Front: west. Rear: east

Visual linkage and legibility:

Internal: Consistent typology of businesses establishes legibility

External: Marginal morphological relationship, legibility through contrast

Pathway linkage:

Internal: Automobile dominated. Pedestrian, handicapped, bicycle pathways undefined, unprotected.

External: 3 driveways, one pedestrian stair, transit bus stop

Night lighting: Sufficient. Security surveillance devices: none

Waste storage and disposal: Completely appropriate

Site amenities and accessories: Minimal, one location only

Maintenance

Good

Dependent Variables

These consist of site observations of public life in open space, security data, and store occupancy rates. They are summarized at the end of the section and reported in the identical format for the remaining two shopping centers.

1. Public Life in Open Space as Observed

During weekday business hours, on a sunny spring day at approximately 70 degrees Fahrenheit, a moderate number of adults, arriving almost entirely by car and dressed primarily for business, moved briskly through the short distance between vehicles and businesses. Everyone seemed at ease and no uniformed police or security guards were on duty. Customers consisted of a balance of men and women, with retirement-age people and children almost entirely absent. Ethnic diversity matched that of the surrounding business community.

I noticed no spontaneous conversations among customers, which would have had to occur on the run, for lack of any seating surfaces. The only bench, not large and rather worn, is on the deeply shaded north side of the building away from all stores. It probably is to

accommodate customers waiting to go into Pancho & Lefty's. Neither during the weekday nor the Saturday daytime site visit was it being used. The Center had much fewer customers on Saturday morning than during the week.

2. Security Data

According to the Charlotte Police records shown in Appendix A, from January 1998 through April 2000 a total of 33 reported crime incidents occurred in the "radial district" of KingsPointe. Most of these were various forms of theft, but two assaults and six hit and run incidents are included. No strong relationship to business hours can be detected. Most of these crimes are concentrated in another business district one and one-half blocks south of KingsPointe where South Kings Drive converges at sharp angles with Harding Street and Baldwin Avenue. Nothing indicates that the Center either harbors or furthers crime.

3. Occupancy Rate

With only one small store currently vacant, the occupancy rate at KingsPointe is approximately 95%. Rates between this and 100% have been typical since the Center opened in 1988.

4. Summary, Dependent Variables

Outdoor Life

Attendance: Good

Population distribution:

Age: Working

Ethnic: Representative of business environment only

Economic: Representative of business environment only

Gender: Balanced

Personal security: No evidence of concerns, no guards

Spontaneous socializing: None

Resting, strolling, lingering: None

Security Statistics

Charlotte Police Department shows no crime at KingsPointe

Occupancy Rate

95%

DILWORTH GARDENS



Photo 4.15. Mall to left of Talley's at Dilworth Gardens.



Photo 4.16. Talley's Green Grocer (photo by owner).



Photo 4.17. Mall to right of Talley's at Dilworth Gardens.



Photo 4.18. View from adjacent Brixx Restaurant above.

Independent Variables

1. Introduction

This mall is located at the edge of the Dilworth District, a beautiful former suburb of Charlotte, and two blocks from Kenilworth Commons Shopping Center. A business use preceded this mall, namely, a long row of brick wholesale greenhouses descending toward a creek to the south, and a florist supply store. **Pre-design events:** When the second-generation owner had different business interests, the greenhouses and shop became very inactive and the real estate value of the property itself was much greater than these declining business profits. After the property changed hands, demolition and the **design** and building of the mall followed promptly. An initial building plan shows a small, pedestrian, alley-sized break in the building mass at the approximate center point, opening out toward Floral Avenue at the mall's back, near the tee with Worthington Street. These streets have entirely single-family residential occupancy. When neighbors became aware of the planned new shopping center, they informally but successfully exerted pressure on the developer to prevent the opening of the Center. Public participation during planning and design was not legally required because of the pre-existing business zoning. The project was completed in 1990.

Center **acreage** is 3.920; **FAR** maximum .6 is utilized only to actual FAR of .148, in keeping with the suburban lack of density. The **taxable total value** is \$5,271,480. The total number of stores and restaurants is 10, with Expressions Furniture, Outback Steakhouse, and Talley's Green Grocer, serving as co-anchors. Talley's is visually dominant after the Center has been entered and it has been there from the beginning. The steakhouse dominates the entrance on the rectangular Center's narrow, higher north side, the busy East Boulevard, and almost totally hides the L-shaped mall building standing along the east and south edges. The topography requires retaining walls to the north and west that contribute to this lack of visibility. Among the stores are a small Chinese restaurant, gift stores, a nail salon, and a package mailing and supply facility. The very large space next to Talley's specialty health food supermarket was vacated in late 1999 by Eckerd's Drugs, following a trend toward stand-alone, big-box drug stores with standard company styling and drive-through windows, strategically placed on busy drive-and-parkable corner locations. Realtors are expecting the Eckerd space to be subdivided as tenants are found.

2. Design Factors: Site Morphology

Architecture: The one-story building is faced with brick. Its façade steps forward and back, within the basic ell-formation, intermittently and according to no artistic or functional central principle. Nevertheless, the typology, again aided by the fenestration, reads “stores.” The building scale, compared to human scale, is uncomfortably tall. The colonnade with its 15’ to 20’ dark ceiling feels cavernous instead of sheltering and protective. Curtain wall panels spanning between column tops serve in some cases to hold store signage and, in all cases, to further darken the colonnade. The Center has a distinct front and back face, with the back completely inaccessible to the public.

A definitive **shape of the outdoor open space** is almost absent because of the suburban scale of buildings and, especially, parking. The only somewhat sheltering effects are provided by the L-or-crescent-shaped structure that curves at the lower end of the site, and the pleasant tree canopy in the parking area. (See Photo 4.19.)

Landscape architecture is used methodically only parking area (Photo 4.19) and to screen waste storage and part of the Center’s back from the residences across the street (Photo 4.20).



Photo 4.19. Shade tree canopy in parking lot at Dilworth Gardens.



Photo 4.20. Landscaping screens portion of waste storage at Center back.

Landscape elements in the Center shopping sidewalk have no discernible system or spatial meaning. Thus they actually confuse legibility of the path one should walk (Photos 4.21, 4.22, and 4.41). Shrub massing defines nothing and occupies a great deal of space.



Photo 4.21. Confusing pedestrian pathways at storefronts of Dilworth Gardens.



Photo 4.22. Awkward stair and landscaping configuration.

Spatial surveillability is poor here for the following reasons: Retaining walls and a great distance from the street make it impossible to detect any unusual activity in the Center open space. From the parking lot, the combination of curbside parking and shrubbery hide many storefronts. On the other hand, from inside the stores a relatively near and limited portion of the parking area can be scanned rather easily.

The **orientation** of the Center storefronts is to the northwest for the long side of the L, and northeast for the short side. The meeting point of the wings at the rear, where the waste storage is placed, points directly south (see pathways map 4.5). This orientation is a distinct disadvantage because for many daytime hours the store windows, already shaded by the colonnades, are in the dark. The store contents can not be glimpsed from cars driving by and one must stand directly in front of them on the sidewalk to see them. Limited low morning and afternoon sun lights south wing and east wing windows, respectively. The waste storage and rear blind passage between Floral and Scott Avenues is favored with plentiful sunlight. Building placement was no doubt influenced by the fact that the major customer supply artery, East Boulevard, is at the site's narrow north edge and that the site's north corner is already occupied by a pre-existing restaurant.

Internal **visual linkage** is disturbed primarily by the arbitrary advancing and receding of the building façade and the fact that the types of stores have no relationship to the shape of

the building portion in which they are located. The positive exception is Talley’s, which is both prominent and has a distinct and inviting façade containing its entrance. There is a great lack of uniformity in signage styles and sign placement – and even sign presence or absence. Some stores have name signs that don’t reveal the store type, such as “Rainbow Path.” This makes legibility weak and orienting difficult when arriving in the parking lot (see Photos 4.15, 4.23, and 4.24).



Photo 4.23. Unarticulated building facades impede wayfinding.



Photo 4.24. The former Eckerd Drug Store, currently vacant.

The two corners of the Center in the street grid are on East Boulevard, intersecting with Scott and Floral Avenues, respectively. Scott Avenue is restricted to one-way traffic north. The independent Brixx restaurant occupies the corner of Scott Avenue and East Boulevard. It is raised to Boulevard level by high retaining walls that screen the Center from visibility. It shows its back to the shopping center. (See Photo 4.25.)



Photo 4.25. Brixx Restaurant stair access and parking entrance to Dilworth Gardens.

The Floral Avenue corner is occupied by the Center's franchise of Outback Steakhouse, or rather its parking lot (Photo 4.30). The building is recessed from the Boulevard considerably and thus interrupts the structural continuity of a "street wall" found along much of the Boulevard. As at KingsPointe, visual linkage with Dilworth Garden's surroundings barely exists and for similar reasons. The lacking density here, as compared to KingsPointe, contributes to an even greater feeling of fracture and lack of urban wholeness. There is some resemblance of building shapes and brick veneer with the two-story office building across Scott Avenue (see Photos 4.26 and 4.27). This is the only shopping center edge with at least a minimal visual relationship to surroundings, although the great distance, a partial retaining wall, and the trees in the Center's parking lot barely allow seeing this connection.



Photo 4.26. Office building across from Dilworth Gardens on Scott Avenue.



Photo 4.27. Signage for Dilworth Gardens on Scott Avenue.

The opposite edge, Floral Avenue, contains a homogenous and pleasant single-family residential neighborhood that faces the blank and totally undecorated rear façade of the shopping center, partially screened with landscaping. East Boulevard at the Center's north edge is zoned for business and multi-use, but much of the former residential construction remains in evidence. It is in a state of transition (Photos 4.28 through 4.32).



Photo 4.28. Transitioning former residential area at corner of East Boulevard and Scott Avenue.



Photo 4.29. East Boulevard mid-block, opposite Outback Steakhouse.



Photo 4.30. Steakhouse entrance (looking out at East Boulevard).



Photo 4.31. East Boulevard near Floral Avenue. View of Deli Restaurant in small upscale shopping plaza next to white office building.

The surrounding buildings and the formlessness of open spaces among them are almost as loose and suburban as the inner structure of the Center itself. The feature that they have in

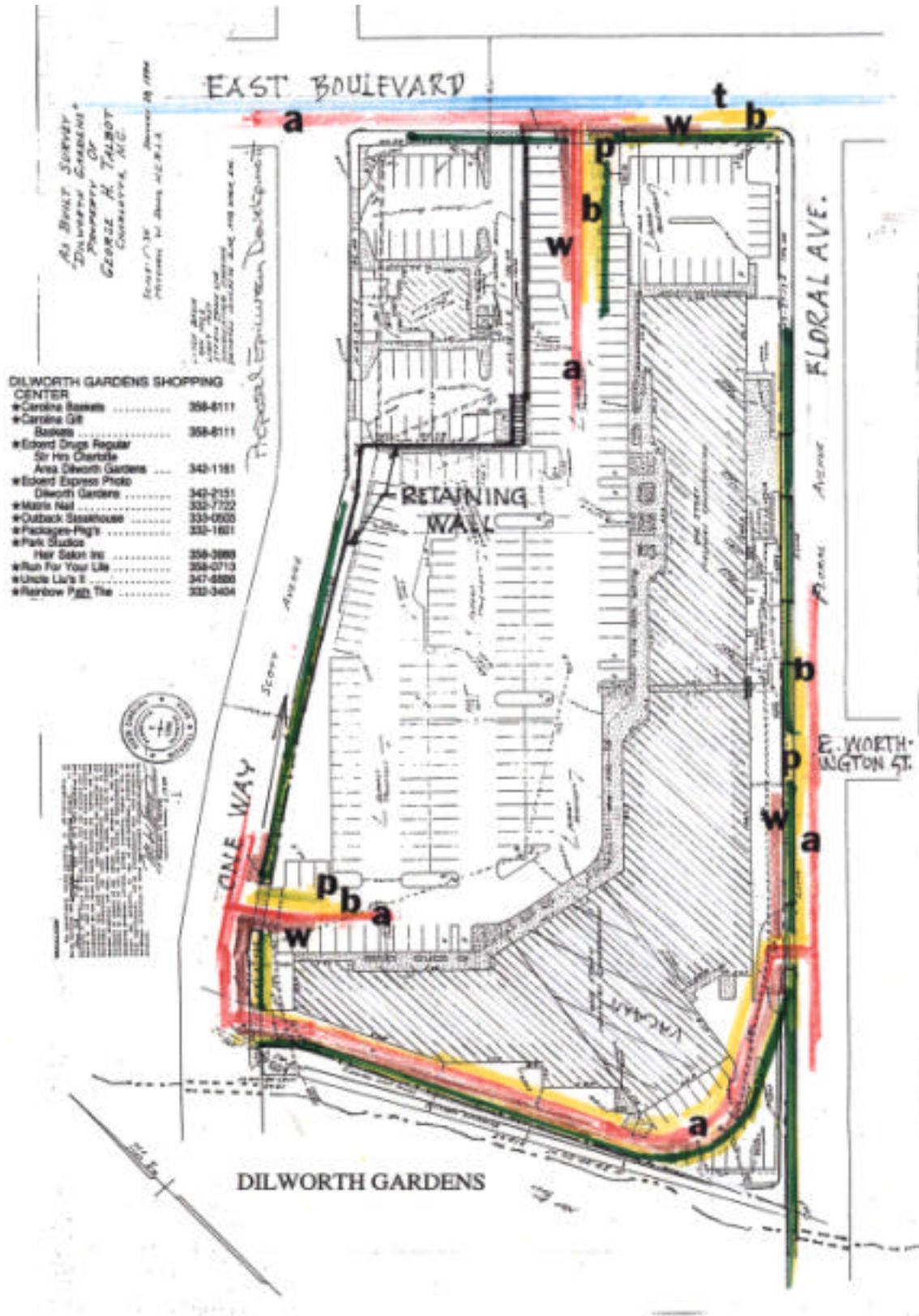
common – one more of style and lacking density than of spatial shapes – is perhaps a subtle form of linkage.

The Center’s south edge is not a street but a blind pass-through lane between the avenues, whose potential pedestrian and natural landscape opportunities are left totally unused. No windows in the Center’s rear wall or in adjacent houses provide surveillance for pedestrians, wheelchair, or bicycle riders’ safety. A deep, active creek bed ravine with mature trees, bordering an older, rather large-lot residential area is adjacent. No sidewalk, nor open-structure safety-balustrade or fence allowing view of the creek was installed. This edge of the Center has the greatest lack of morphological linkage to its surroundings, both visually and functionally. The fracture here is total. (See Photo 4.32.)



Photo 4.32. Creek bed and old trees between Dilworth Gardens’ south edge and residential neighborhood.

The linkage of pathways within and to the edges of Dilworth Gardens is shown on the following map and discussed in the paragraphs that follow.



Map 4.5. Pathways at Dilworth Gardens Shopping Center. Base Map supplied by Owner.

As at KingsPointe, pedestrian considerations made by the City end at the edge of this shopping center. Except for a continuous sidewalk along the store building, only cars receive consideration, beginning with drives at entrances and throughout the Center. Parking is plentiful and at close proximity to the stores. There are two driveways: at East Boulevard and at Scott Avenue at the Center's south. The pass-through lane allows no access to stores directly. Again, the handicapped, bicyclists, and pedestrians must share the driveways with cars unprotected by any separation. (See Photos 4.33 and 4.34, and Map 4.5.)



Photo 4.33. Scott Avenue entrance to Dilworth Gardens. Sidewalk ends here.



Photo 4.34. Handicapped who drive get reserved parking.

An unclear orientation message, not clarified by any signs, is given at this same location at the Scott Avenue Center entry, leaving the drive to the right a mystery. (Photo 4.35.)



Photo 4.35. A functional Center entrance and a blind driveway off Scott Avenue.

From the other side of the Center, off Floral Avenue, Photos 4.36 through 4.38 show a sequence not identifiable or predictable from the street.



Photo 4.36. Blind passage entrance from Floral Avenue. No curbed path for non-drivers is provided.



Photo 4.37. Well-hidden waste storage in blind passage.



Photo 4.38. Curving passage, barricaded ravine and creek bed to the left.

At the northern end of the Center, pedestrians (I observed some school children) cut paths through the plantings to enter, instead of depending on the driveway far removed. (Photo 4.39.)



Photo 4.39. Footpaths worn through plantings from Floral Avenue sidewalk.

A stairway is provided at Brixx restaurant that makes a connection from the East Boulevard sidewalk through the Brixx parking lot into the Dilworth Gardens parking lot (Photo 4.40).



Photo 4.40. Stairway at Brixx allows entering far side of Dilworth Gardens parking lot on foot. The Charlotte Transit bus line serves East Boulevard and stops here.

Because of the single building mass and row of storefronts, internal pathways are relatively simple to detect, but some landscape efforts interfere. Is this a sidewalk at car fronts or is it too narrow for that (Photo 4.41)?



Photo 4.41. Internal pathways unclear due to confusing pavement and landscape elements.

Lighting at night is sufficiently provided at the parking area and of the few stores open during evening hours, particularly Talley's. None of the stores are equipped with external security devices.

Waste storage and disposal function poorly at Floral Avenue (individual stores, Photo 4.20) and very well in the blind passageway at the south end (Photo 4.37) where landscape elements hide the containers and a continuous driving loop exists.

Table 4.4. Dilworth Gardens Site Amenities and Accessories

Amenities	Quantity
Automatic Teller Machines	None
Mail Boxes	None
Benches, Tables, Chairs	One group at Talley's, one other
Bus Shelters	None
Customers' Waste Receptacles	At Talley's but few others
Public Telephones	One, at Talley's
Clocks	One, at Talley's
Newspaper Stands	Yes , at Talley's
Bicycle Racks	None
Bulletin Board	One large, at Talley's

The amenities at Talley's are shown in Photos 4.42 through 4.44.



Photo 4.42. Amenities outside Talley's Green Grocer, Dilworth Gardens.



Photo 4.43. Seating arrangement blocks view and access to bulletin board at Talley's.



Photo 4.44. Phone shell and newsstand outside Talley's.

3. Maintenance of Buildings, Grounds, and Landscaping

Maintenance of buildings was rather weak, showing somewhat insufficient effort. The vacant former Eckerd store exterior had a sooty or moldy appearance. Grounds were slightly unclean. The worst maintenance by far was provided for the landscape plants, some of which were failing to thrive but yet pruned to geometric shape.

4. Summary, Independent Variables

Table 4.5. Dilworth Gardens Pre-design and Design Phase Data

Criteria	Data
Abandonment or vacancy period	Prior decline but no vacancy
Age	10 years
Public participation	None, but informal influence
Infilled incrementally?	No
Lot size	3,920 acres
FAR	.148 of permissible .6
Taxable value	\$5,271,480
Anchor businesses	Outback, Talley's, Furniture
Total number of businesses	10
Use group zoned	Business

Design Factors: Site Morphology

Architecture: One story, brick, no distinct known style

Landscape architecture: Supports only some Center functions

Space surveillability: None from street, good from stores, poor from parking lot

Orientation: Northeast and northwest facing

Visual linkage and legibility:

Internal: Advancing & receding facades irrelevant to contents; landscape elements, shading, parking and disorderly signage impair legibility.

External: No morphological relationship with buildings or spaces; legibility primarily through clear entrance signs.

Pathway linkage:

Internal: Automobile dominated. Pedestrian, handicapped, bicycle pathways undefined, unprotected except at storefronts.

External: 2 drive-ways, transit bus stop. Sidewalks end at center edge.

Night lighting: Sufficient. Security surveillance devices: none.

Waste storage and disposal: Slightly disorderly

Site amenities and accessories: Minimal, primarily at food market

Maintenance

Insufficient

Dependent Variables

1. Public Life in Open Space as Observed

During weekday business hours, on a sunny spring day at approximately 70 degrees Fahrenheit, a moderate number of adults populated the Center open space. There were almost no children and very few seniors; ethnic, income, and gender distribution was representative of the population in the mostly residential and minor business surrounding. All arrivals were by car except for the following: A few middle-school-age children cutting through plantings near the steak house from Floral Avenue residential section, a bicyclist, and a young man in a wheelchair. He took advantage of the parking lot slope by free-coasting from the sidewalk at East Boulevard down to the cleaner's at the south end. He used his wheelchair motor to return uphill.

Everyone appeared quite at ease and there were no uniformed police or security guards.

Most customers went directly to and from their destination and there was almost no window shopping and no impromptu socializing. A single bench near a smaller store was unused, and the only use of the moveable seating furniture grouped at the food market was by a few market workers for a brief break time. The steak house has a roofed outdoor terrace, clearly for its customers, some steps raised and partially covered with outdoor carpet. It is a softer and less tall and cavernous space and was well used, although its only views are of the parking lot and the back of the raised, adjacent Brixx restaurant.

The amount and type of customers on Saturday late morning was similar except there were more young school age children, always with adults. Use of the market seating area with its cavernous shape and entirely hard surfaces, and mostly metal furniture, did not increase on Saturday.

2. Security Data

The Charlotte Police records report a total of 88 incidents within the radius of Dilworth Gardens for January 1998 through April 2000. The highest numbers of these are 17 larceny-theft under \$50; 16 larceny-theft over \$200; and 11 burglary-forcible entry. There were also four non-aggravated assaults and five hit-and-run incidents. The focus of the crime activity was the corner of Scott and East Boulevard in the block of the Center, but on a corner outside its property line – namely, Brixx restaurant. The former drug store registered the largest number of offenses: 18; “other” parking lots had 15, but the Center’s had only two. There were 11 outdoor crime locations for the entire radius. A slight relationship to business hours can be detected: The greatest known number of incidents occurred between 6:00 a.m. and 12:00 noon. In spite of the involvement of some Center locations, nothing indicates it is causative to crime. Of the reported incidents, 52 are attributed to “commercial” places – many of which surround the Center to the north and west and are therefore part of the shared statistics. The fact that outdoor space is very poorly surveillable at the Center shows little correlation with the outdoor crime total of 11 for the whole radial district of approximately 8 block-lengths of street, over this 28-month period.

3. Occupancy Rate

With the former Eckerd Pharmacy, a major store, waiting to be re-rented whole or in parcels, the current occupancy rate at Dilworth Gardens is 80%. Although vacant now, this large store had been there from the beginning for about 10 years; some of the smaller stores turn hands now and then, but with very brief vacancy periods.

4. Summary, Dependent Variables

Outdoor Life

Attendance: Good

Population distribution:

Age: Primarily, working

Ethnic: Representative of surroundings

Economic: Middle class, representative of surroundings

Gender: Balanced

Personal security: No evidence of concerns, no guards

Spontaneous socializing: None

Resting, strolling, lingering: None

Security Statistics

Charlotte Police Department shows some property crime at the former drug store

Occupancy Rate

80%

KENILWORTH COMMONS

Independent Variables

1. Introduction

Kenilworth Commons Shopping Center is located in the Dilworth District, perceived as Charlotte's oldest and most affluent residential neighborhood. The Center stands on the site of former single-family and duplex owner-occupied dwellings in the district, along East Boulevard and Kenilworth Avenue.



Photo 4.45. Kenilworth Commons Shopping Center, as seen from the pedestrian entrance on East Avenue.

During a period of serious decline in the 1960s and 1970s, these homes were converted or gave way to residential or office rentals units, boarding houses and, later, large apartment buildings. Real estate values fell and the rest of the Dilworth neighborhood experienced decline as well. When a renovation movement began in the 70s and early 80s, a growing customer base of “young upwardly mobile people” renovating and moving into the district became potential customers for the shopping center. After demolition of the existing buildings, the construction was completed in 1987.

At the **pre-design** phase, according to City staff, no public hearings were required regarding a re-zoning. This would normally indicate the land was already zoned

“business” before the development application. There was no formal public participation in the planning and design phases.

A single developer **designed** and built the Center all at once, in two separate structures at right angles, between which is one of the entrances. Although surrounded on three sides by medium-to up-scale single-family residential real estate, it has a distinct feeling of a shell whose inside opens to the parking lot and whose blind back faces Kenilworth Avenue, which is restricted to one way south. The lot is tee-shaped, with the leg of the tee as the entrance from Kenilworth. Around the southern corner the only other bordering street, East Boulevard, is topologically separated, lying considerably below the Center and requiring a pedestrian stair and steep driveway. Currently, the parking lot and storefronts face a construction site opposite the storefronts, where an older hotel was recently demolished and Center expansion is under way.

The following facts apply prior to acquisition of the current expansion site. The Center **acreage** is 3.290 and its **FAR** is .27 out of a permissible .6. The **taxable total value** is \$3,547,250. The **total number of businesses** is 12. Harris Teeter supermarket has been the anchor store from the beginning and occupies the stand-alone building of the L-shaped arrangement. There are two small restaurants, an ice cream store and, except for a Mail Boxes, etc., the rest sell enjoyable non-essentials and services, at a definitely upscale level.

2. Design Factors: Site Morphology

The building **architecture** uses consistent but not repetitive patterns of the gable motif throughout. The supermarket uses awnings only at the two entry corners where they have a function of sheltering amenities and shopping carts. The long wing of the Center has colonnades combined with awnings throughout, which support window-shopping and lingering, and relate comfortably to the human scale. The market’s gable lends emphasis but the other gable bears no relationship to any special store under it. The gables and their placement support a relationship between the two wings of the Center. Beautifully crafted but unobtrusive brickwork and window details (see Photo 4.46) provide some of the complexity desirable in a pedestrian environment (Rapoport, 1990).



Photo 4.46. An example of complex details well carried out (note windows and brickwork).

As in the other two shopping centers, no reference to any true local style of any historic period is detectable here, nor is there an attempt to relate to buildings in the immediate surroundings. The reason for this is made quite clear in the section below on edge linkage.

A specific definitive **shape of the open space** itself, such as found in densely built-up urban locations, is quite absent. The lack of spatial definition is almost suburban, except where the two building wings converge and lend a feeling of enclosure to a limited area.

Landscape architectural elements are used sparingly but to great advantage, placed rhythmically in direct relation to vertical architectural elements and entrances. The fact that no shade trees shelter the parking lot is a drawback.

The open space surveillability is complete from the parking lot and good from inside the stores, but non-existent from Kenilworth Avenue at Center back and East Boulevard, where parked cars and a 4' drop are the reason (see photo 4x). The **orientation** of this Center is favorable in that the market faces southwest and the row of other stores northwest, admitting considerable daytime sun. The lower sun angles are successfully counteracted by the added awnings and the colonnades.

Visual linkage within the Center works very well, aided by consistent and orderly coordination of the landscape and architectural elements, a fenestration scale expressive of store size, and a consistent placement of store signs. One knows where to look for what one needs. Store type and window content is legible from sufficient distance to avoid undesired stops and hunting. Once near the sidewalk, the many signs hung comfortably low at right angle to the storefronts are a great asset. Variation in unique sign lettering size and fonts, but not competitive colors, helps legibility and orientation (Photo 4.47).



Photo 4.47. View of Harris Teeter supermarket and remaining stores on right.

Because a spatial and graphic pattern is established and the open space is simple and small enough, and the signage successful, the desired store destination can be spotted immediately once the inner parking lot is entered.

Visual linkage between the Center **edges** and its surroundings, however, is minimal. The intersection of Kenilworth Avenue and East Boulevard is occupied by a row of stores at the Boulevard level (Photos 4.48 through 4.50) and a small group of apartment buildings

(Photos 4.51 through 4.53) at the Center level. Therefore Kenilworth Commons occupies no corner in the City street grid.



Photo 4.48. Row of Corner Stores on East Boulevard, south end of Center at left.



Photo 4.49. Continuing corner stores, East Boulevard.



Photo 4.50. Corner of East Boulevard and Kenilworth Avenue.



Photo 4.51. Apartments adjacent to Center back, Kenilworth Avenue.



Photo 4.52. Apartment parking at Center back wall.



Photo 4.53. Apartments along left side of Center entrance from Kenilworth Avenue.

As stated, the Center turns an impenetrable back to Kenilworth Avenue (Photos 4.54 through 4.56), and is considerably above the only other access road, East Boulevard (Photo 4.57).



Photo 4.54. Shopping Center rear wall on Kenilworth Avenue, facing a row of residences (see Photos 4.55 and 5.56).



Photo 4.55. Kenilworth Avenue residential section opposite the Center.



Photo 4.56. Kenilworth Avenue opposite Center, near residence shown in Photo 4.55.



Photo 4.57. On East Boulevard (access road), looking up to Center.

The western edge is currently defined by the construction site for new Center expansion (see Photos 4.58 and 4.59).



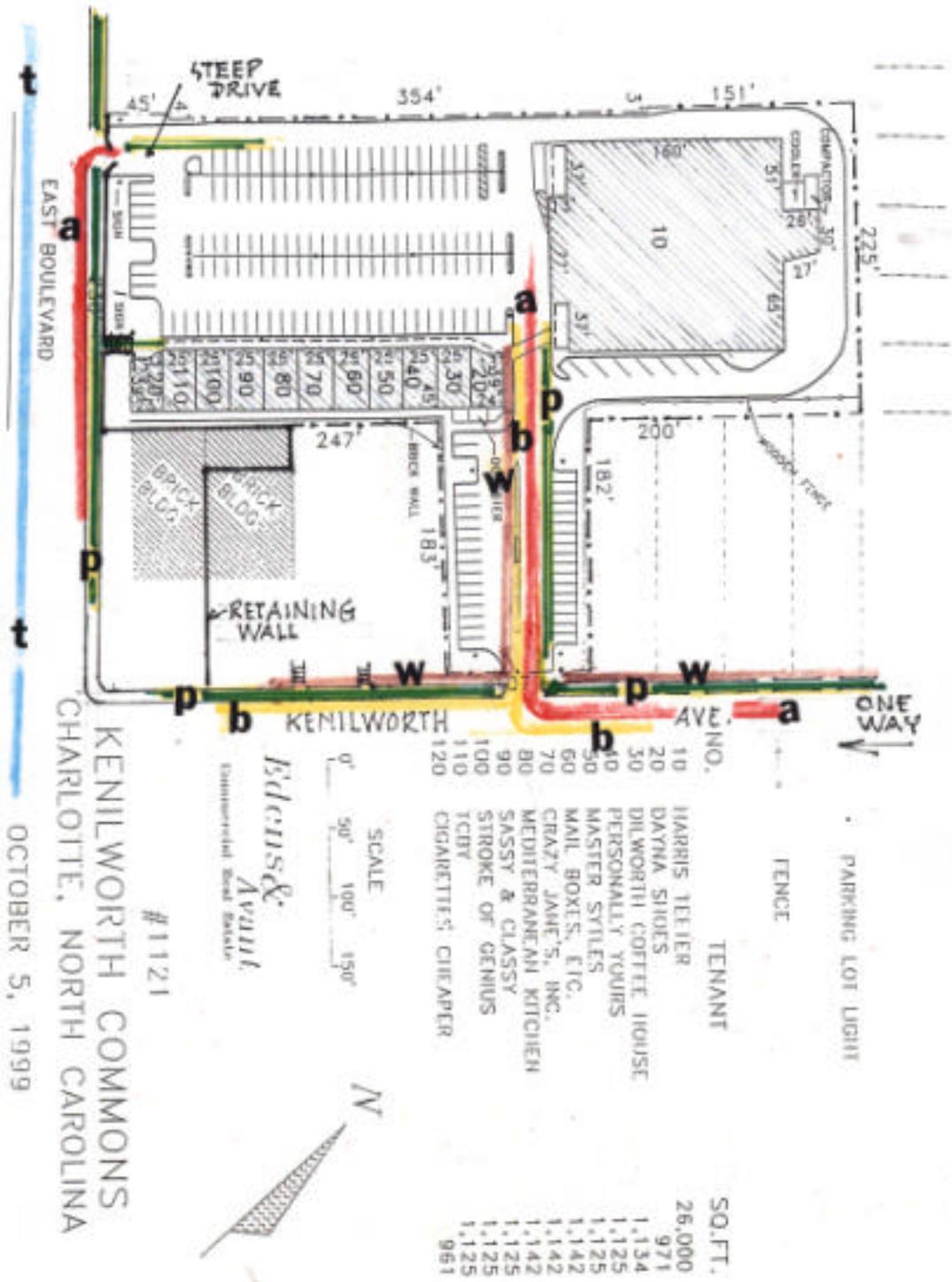
Photo 4.58. Construction to the Center's left, on new land acquisition.



Photo 4.59. Adjacent residential area west of Kenilworth Commons.

Signage at East Boulevard is clear and unmistakable, but at Kenilworth Avenue it is partially hidden by the adjacent residential, well-established landscaping. The fact that the external legibility is a little lacking on Kenilworth Avenue, however, is not a great setback because Kenilworth Commons serves primarily the repeat customers from the surrounding neighborhood. However, all photographs of the shopping center edges show both that buildings and the publicly accessible open spaces between them present no legible spatial pattern to which Kenilworth Commons could relate.

The **linkage of pathways within and to the edges** of the Center is shown on Map 4.6., which follows.



Map 4.6. Pathways at Kenilworth Commons. Base Map supplied by Owner.

(See Figure 4.5 for key.)

Parking facilities are generous and within a comfortable range of stores. The overflow parking area located before the Center is really entered, is somewhat removed. There are two driveways: Kenilworth Avenue and East Boulevard.



Photo 4.60. Entry through overflow parking lot off Kenilworth Avenue.

The drive behind Harris Teeter allows a good truck loop for deliveries and waste removal. As at KingsPointe and Dilworth Gardens, the pedestrian system ends at the street and resumes only at the storefronts. There is a store sidewalk extension around two corners to the storeowners' mailboxes at the edge of the overflow parking lot (Photo 4.61). See also Photo 4.47 for internal pathway linkage.



Photo 4.61. Sidewalk extension from parking lot edge to storefronts.

An important stair connection exists at East Boulevard (Photo 4.62).



Photo 4.62. Sidewalk connection stairs at East Boulevard, accented by permanent and seasonal plantings. The curb cut beyond is for the driveway entrance.

People have worn a pedestrian shortcut entry from the corner apartments to the overflow parking lot instead of walking all the way to the drive entry (Photo 4.63).



Photo 4.63. Unplanned pedestrian shortcut entry from Kenilworth Avenue sidewalk.

Kenilworth Avenue is the only wheelchair and bicycle accessible entry to the shopping center because the steepness at the Boulevard drive would be excessive. As at the other two Centers, pedestrian, wheelchair, and bicycle paths are neither differentiated nor protected from auto traffic. To connect sidewalks between two Center wings, however, a highly noticeable paint-striping pattern gives pedestrians the right-of-way at this point. City buses serve East Boulevard and neither the City nor the Center provides a bench or shelter at the stop.

Night lighting concentrates on the parking lot and the restaurants that are open after dark. No stores have external electronic **security surveillance devices**.

Waste Storage and Disposal occurs at two locations, discreetly hidden from the Center and the neighborhood behind Harris Teeter Supermarket.

Table 4.6. Kenilworth Commons Site Amenities and Accessories

Amenities	Quantity
Automatic Teller Machines	None
Mail Boxes	None
Benches, Tables, Chairs	Plentiful, mobile, well placed
Bus Shelters	None
Customers' Waste Receptacles	Plentiful, well placed
Public Telephones	One, at Harris Teeter
Clocks	One, at central point
Newspaper Stands	Yes , at Harris Teeter's
Bicycle Racks	None
Bulletin Board	Yes, at Harris Teeter's

Site Amenities are pleasant, reasonably placed, unobtrusive, and in comparatively good supply here. Movable, non-matching seating and occasional tables, supplied by almost all stores, under the well-scaled, sheltering but not obscuring colonnades and awnings,

furnishes a casual opportunity to pause, think, rest or chat in the transition zone between indoors and outdoors. Most of the authors discussed in Chapter 2, Literature Review, have given great importance to the meaning of this spatial segment in the human environment, this episode along our daily paths. At Harris Teeter, despite the crowding of a bulletin board next to the telephone almost touching the heavy outdoor bench totally surrounded by merchandise displayed outdoors in pleasant weather, the resulting minor chaos was also reminiscent of the “complexity” concept of Rapoport’s pedestrian environment studies. A little more space between items would have been desirable. But the feeling of “so much to see” vastly surpassed the bleak emptiness in most of the other two Center exteriors.



Photo 4.64. Speed bumps, paint striping for pedestrian passage, and a parking logo for the handicapped.

Also see Photo 4.46. These indicate “slow down and stay a while.” Behind the clock under the awning, at one of the two Harris Teeter entrances, gardening supplies, a phone shell with

book, a bench, bulletin board, newspaper dispenser and well-maintained waste bin successfully coexist.



Photo 4.65. A combination similar to that seen in Photo 4.64, but without the seating, occurs at the left entrance.



Photo 4.66. Rows of well-maintained discrete waste bins, beautiful doors invitingly ajar, a school-type chair behind the door to snack gyros outside, some merchandise just arrived further down the line. Landscaping relates properly to people's paths.

3.Maintenance of Buildings, Grounds and Landscaping

Levels of cleanliness and repair of the whole development were noticeably high and even. No dead or dying landscape plants were visible. This may be the result of the current owner's application of a "tenant-focused management style" that includes weekly visits by the firm's management team.

4. Summary, Independent Variables

Table 4.7. Kenilworth Commons Pre-design and Design Phase Data

Criteria	Data
Abandonment or vacancy period	Prior decline but little vacancy
Age	13 years
Public participation	None
Infilled incrementally?	No
Lot size	3,290 acres
FAR	.27 of permissible .6
Taxable value	\$3,547,250
Anchor business	Harris Teeter Supermarket
Total number of businesses	12
Use group zoned	Business

Design Factors: Site Morphology

Architecture: One story, brick, no distinct known style

Landscape architecture: Supports major Center function

Orientation: Southwest, northwest

Visual linkage and legibility:

Internal: Function succeeds

External: Minimal

Pathway linkage:

Internal: Legible. Automobile dominated. Pedestrian, handicapped, bicycle accessible but unprotected

External: Legible. 3 driveways, one pedestrian stair, transit stop

Night lighting: Sufficient

Security surveillance devices: None

Waste storage and disposal: Completely appropriate

Site amenities and accessories: Nearly sufficient

Maintenance

Completely appropriate

Dependent Variables

1. Public Life in Open Space as Observed

During weekday business hours on a sunny spring day at approximately 70 degrees Fahrenheit, a moderate number of adults used the open space. The ethnic distribution, taken as a whole, reflected the residential surroundings, but a slightly higher concentration of people of color was noticeable among the Harris Teeter supermarket customers. Seniors predominated more than at KingsPointe and Dilworth Gardens, and children were very few. People's dress and cars suggested upper middle class. In the long drive/overflow parking area at Kenilworth Avenue, I noted only one adult shopper enter on foot and only one on a bicycle. All others arrived by car from either driveway. They moved at a relaxed, comfortable pace that expressed no security concerns. There were no uniformed police or guards. A very limited amount of window-shopping occurred, but somewhat more on Saturday morning when open space use was slightly livelier. On the prior afternoon, it was almost impossible to make a call at the only exterior wall phone without disturbing a market worker in her quick break time nap at the bench outside the food market (photo 4.64), because those two amenities had no space between them. The Dilworth Coffee House directly around the interior corner is the greatest focus for both strangers and acquaintances to socialize freely. Its casual, intimate, and lighthearted atmosphere are supported by old or old-looking furnishings, the movability of the outdoor furniture, "task" rather than general ceiling indoor lighting, and a wooden coffee waiter figure (at left in Photo 4.67).



Photo 4.67. Outside the Dilworth Coffeehouse.

Conversation is facilitated in this setting. Inside, the same spirit, setting, and results prevail. This is also a Friday and Saturday nightspot with emphasis on folk music open-stage events.



Photo 4.68. Guitar at rest during a little reading and refreshment. Occasionally, the amateur musicians jam or just casually play singly during the day.

Of the three Centers, Kenilworth Commons is the only one whose design and amenity features have produced a setting where the outdoor space is conducive to more than just the function of shopping; it also supports recreation and free socializing.

2. Security Data

The Charlotte Police records report a total of 115 crime incidents within the Kenilworth Commons radius of about 4 blocks between January 1998 and April 2000. Here, forgery constitutes the highest number with 39 incidents, and larceny-theft under \$50 with 21. There were 13 larceny-theft incidents between \$50 and \$99, and nine each of fraud and hit and run incidents. Two strong-arm robberies and one aggravated assault with a knife were the only reports of violence. The focal locations of the majority of incidents exclude the current shopping center site altogether. They are clustered at the parking area of the low-priced adjacent apartments off Kenilworth Avenue (Photos 4.51 through 4.53), the corner businesses at Kenilworth Avenue and East Boulevard (Photos 4.48 through 4.50) and, primarily, the site of the recently demolished hotel, now being prepared for the Center expansion. Again, between 6 a.m. and 12 noon is the period of highest occurrence, but no notable distinction between Sunday and business days exists. Despite some lacking surveillability, nothing indicates the Center is the actual source of any crime. Commercial locations and parking areas are singled out by the Charlotte P. D. as the primary “offense

locations,” and, despite the exterior focal locations shown (Appendix A), the supermarket and “consumable goods” receive the highest statistical numbers for theft.

3. Occupancy Rate

Kenilworth Commons currently has an approximately 92% occupancy rate with only one small business space, a former women’s boutique, vacant. The Center’s rental pattern has remained near 100% ever since a prompt occupancy early on.

4. Summary, Dependent Variables

Outdoor Life

Attendance: Good

Population distribution:

Age: Working and retired

Ethnic: Representative of surroundings

Economic: Upper middle class

Gender: Balanced

Personal security: No evidence of concerns, no guards

Spontaneous socializing: Some, localized

Resting, strolling, lingering: Some; resting and lingering localized to seating areas

Security Statistics

Charlotte Police Department shows property crime at market

Occupancy Rate

92%

SUMMARY

This chapter section assembles the summaries of independent and dependent variables for all three shopping centers, and comments on these summaries. This discussion will lead to analysis in the next section.

Table 4.8. Summaries: Independent Variables

	KINGSPORTE	DILWORTH GARDENS	KENILWORTH COMMONS
Criteria	PRE-DESIGN AND DESIGN PHASE DATA		
Abandonment or vacancy period	Unknown; lengthy under-use	Prior decline but no vacancy	Prior decline but little vacancy
Age	12 years	10 years	13 years
Public participation	None	None, but informal influence	None
Infilled incrementally?	No	No	No
Lot size	3.380 acres	3.920 acres	3.290 acres
FAR	.54 of permissible .6	.148 of permissible .6	.27 of permissible.6
Taxable value	\$3,404,760	\$5,271,480	\$3,547,250
Anchor businesses	Restaurant	Outback, Talley's, Furniture	Harris Teeter Supermarket
Total number of businesses	20	10	12
Use group zoned	Business and office	Business	Business

Table 4.8 continued. Summaries: Independent Variables

Design Factors	KINGSCOINTE	DILWORTH GARDENS	KENILWORTH COMMONS
	SITE MORPHOLOGY DATA		
Architecture	No known style; garish	No known style	No known style; fine detail
Landscape Architecture	Enhances architecture	Shades parking	Enhances architecture
Orientation	Daylighting advantage	Daylighting insufficient	Daylighting advantage
Linkage, Visual	Internal: good; ext.: fair	Internal & external: poor	Internal: good, ext. poor
Linkage, Pathway	Auto: good; other: weak	Auto: good; other: none	Auto: good; other: weak
Night Lighting	Sufficient	Sufficient	Sufficient
Security Devices	None	None	None
Waste Provisions	Excellent	Deficient	Excellent
Site Amenities	Minimal	Minimal	Above average
	MAINTENANCE		
Condition	Average	Poor	Excellent

Table 4.9. Summaries: Dependent Variables

Criteria	KINGSPONTE	DILWORTH GARDENS	KENILWORTH COMMONS
	DEPENDENT VARIABLE DATA		
Outdoor Life	Busy, no socializing, no staying	Busy, no socializing, no staying	Busy, some socializing, staying
Security Statistics	No crime reported or expected	Little crime, none expected	Market theft, no crime expected
Occupancy Rate	95%	80%	92%

Tables 4.8 and 4.9

As indicated in Table 4.8, Summaries of Independent Variables, all three of the 10-13 year old shopping centers were erected all at once, and without user participation during planning and design. KingsPointe has twice as many businesses as the other Centers and nearly fills its permissible FAR because it has two stories and office zoning combined with business zoning. With their physical, financial, and zoning parameters sufficiently comparable, design factors, visible in the site morphology of each, and maintenance factors can thus be meaningfully evaluated. No Center displays any known architectural period style or even reference to one. A somewhat garish appearance distinguishes KingsPointe, and successful attention to pleasing architectural detailing exists at Kenilworth Commons. Landscape architecture enhances the buildings and spatial structure at these two Centers, whereas at Dilworth Gardens it serves only the parking lot (shading). Internal visual linkage leading to a legible space succeeds at KingsPointe and Kenilworth Commons and is poor at Dilworth Gardens. External visual linkage ranges from fair to poor – for highly significant reasons explained in the following analysis section. With the provision of sufficient night lighting and the choice to forego external security devices shared by all, notable differences appear in the provisions for handling shopping center waste, site amenities, and maintenance.

Table 4.9, Summaries of Dependent Variables, shows the results of these design and maintenance factors applied at the shopping centers. Here, we see that only the Center with some architectural refinements, a distinct day-lighting advantage for most shopping hours, above average site amenities, and excellent building and site maintenance shows significant social interaction and enjoyment (liveliness) in the outdoor space. It is notable that this occurs despite the City's report of considerable theft at the market (see analysis). This Center, Kenilworth Commons, has a high occupancy rate similar to KingsPointe, and similarly brief vacancies. The occupancy rate at Dilworth Gardens – only 80% – caused by the departure of Eckerd Drugs, is expected to remain this low for several months for reasons already discussed in the section about that Center, and to be discussed further in the analysis section.

General Observations Summary

The urban fabric surrounding all three shopping centers is so loosely structured and density so lacking, that visual morphological links with anything are impossible to establish. There is an almost total lack of structural and spatial cohesion and almost no linkage to the shopping centers, except for car pathways. In addition, in all three cases, a predominating

building typology in the Center surroundings does not exist and therefore also cannot be responded to. Particularly in the case of Kenilworth Commons and Dilworth Gardens, an almost suburban scale of space is felt. The complete lack of form of the open space itself within Dilworth Gardens and Kenilworth Commons is typical for suburban, not urban, shopping centers. KingsPointe, closer to Charlotte’s downtown (because of the city center being located on a notable elevation, called “uptown”), has a somewhat more compact spatial structure. Here, the urban fabric is more fine grained and a visual sense of a continuous street wall or enclosure on the South Kings Drive side becomes somewhat possible despite the Center’s recessed position. KingsPointe uses the combination of the building, parking placement, and landscape elements to structure its outdoor space to some extent.

ANALYSIS

Return to the Research Question

This section discusses whether, to what extent, and how, the summarized findings answer the research question, “Which design factors support a high real estate occupancy and a lively, non-threatening public space?”

1. Pre-design Phase Data

The results for three criteria listed as dependent variables in Table 4.9 – occupancy rate, outdoor life, and security statistics – show them to be unaffected by any of the pre-design phase data listed in Table 4.8. Results for the Centers vary little in pre-design table entries. Regarding the sites’ infilling with new uses, the promise of favorable market conditions concurrent with the rapid growth pattern of Charlotte is shown to be the driving force of all three developments. The growth rate of over 50% in the last twenty years is sufficient to support both inner and peripheral development simultaneously. I found no evidence that any group’s or agency’s specific desire for restoring urban wholeness motivated these projects, although a neighborhood development organization had some involvement once the Centers in the Dilworth District were under way. Although a difference in spatial density and a much higher FAR rate exist at KingsPointe compared to the other two Centers, these two factors are not reflected in occupancy rate, liveliness, or security results. The higher density and occupancy in this case are strictly the result of maximal advantage taken of the site configuration, and of the Center’s location in this urban area. Therefore, causes for the variations in the three Centers’ levels of thriving (Table 4.9) must be sought among the nine design factors and design’s ongoing support system: maintenance.

2. Effects on Dependent Variables

The results listed under the nine design factors and maintenance criteria of Table 4.8 show considerable variation among the Centers. This indicates that some of the design factors may influence some of the differences among the dependent variables for each shopping center. Searching for patterns of correspondence we find, however, that the Table 4.9 criterion of **security statistics** actually yields the most similar set of results for all three shopping centers and does not reflect variations. The fact that my own field observation has shown shoppers to be totally at ease when shopping at Kenilworth Commons, and that they even choose to stay and enjoy its outdoor setting despite the incidence of “market theft,” shown in Table 4.9, can be explained. Violence is not documented as the method for market theft, which is no doubt done with stealth (Appendix 4); and the relaxed visitors are not the targets, but rather it is the market owner who is targeted. Regarding security matters, Newman and J. Jacobs notwithstanding, even the potentially damaging design factors of insufficient day-lighting at Dilworth Gardens and the greatly varying – and often lacking – internal and external visual linkage and surveillability at all Centers do not trigger any corresponding outdoor security variations.

A pattern of causality is visible for the dependent variable of **outdoor life**. The independent variables contributing to the result of social mixing and tarrying in the case of Kenilworth Commons are: fine architectural detail (described as desirable complexity in Rapoport’s research on pedestrian environments); landscape architecture that supports the architecture and spatial patterns – even despite the absence of parking shading; day-lighting advantage and good visual legibility within the Center; the absence of garbage in plain sight; simple, inexpensive but plentiful movable seating (as Whyte had identified in New York); and an above average amount of site amenities. All three Centers are found equally “busy” as far as the use of the stores is concerned, with some variation among the individual stores and offices. A strong reason for this condition, which is also the foundation for the generally good occupancy rates, is the choice of shopping center contents that respond to the needs and maximum potential of each location. None are intended to serve regionally.

KingsPointe, in a business district on a major thoroughfare, offers professional health services and primarily restaurants, gift, and business related stores. The other two Centers, within less than a mile of each other, serve an area large enough for both that is primarily residential, with their supermarkets and a type and level of merchandise that reflects careful market study. According to census figures extrapolated to 1997, residents had then a \$45,585 per capita income, and within one mile of Kenilworth Commons, approximately

83% were white¹². The dependable amount of shopping activity in all three Centers developed in this manner reflects Lynch (1971) and Brown (1999). The existence of pedestrian access stairs at KingsPointe and Kenilworth Commons accounts only for a minute portion of Center users to whom it has great value. These access stairs form an exception to the pattern of incompatible pathways being forced into the automobile pathways by default, a condition that prevails at all three Centers. Dilworth Gardens, for instance, which does not furnish such access through its retaining walls, is no less busy. Because automobile access pathways are identically convenient and predominant in all three Centers, and the presence or absence of pedestrian amenities is such a tiny percentage of total pathways, the latter cause no notable variation in the outdoor life among the Centers.

Regarding the **occupancy rates**, one of the observations of Brown applies to the empty drug store space at Dilworth Gardens.

“The real intelligence, the central nervous system of a building, is its spatial configuration. The spatial central nervous system choreographs interface patterns: person to person, goods to person. If not adequately interconnected, parts of the building served by its spatial interconnection...will atrophy” (Brown, p. 221).

The reason for this Center’s low rate of occupancy is that the drug store space is very large. Its vacancy is caused not by a single factor, but by several unique to this Center: poor legibility by arbitrary projection and regression of the facades, the space’s location in the corner receiving the least daylighting, poor landscape design and waste provisions, and the new trend toward stand-alone drug stores. The occupancy rates of KingsPointe and Kenilworth Commons are so high and similar that KingsPointe’s garish architecture and lack of site amenities and Kenilworth Commons’ various advantages appear to have no direct effect upon these rates. With auto access and parking being primary and very satisfactory in each case, these can be understood as essential, positive factors contributing equally to the thriving of each Center. The other factor is the application of real estate principles: the planned juxtaposition of what the Centers offer and where they have been placed in the City. These account for the busy and steady shopping pace repeatedly observed outdoors at these two Centers.

¹² Full Data Report Census '90, Updates and Projections, by National Decision Systems.

General Analytical Observations

None of the pre-design circumstances affected the dependent variables, despite slight variations of these among the Centers. Design implementations show many more variations and do affect the three dependent variables in a discernable pattern. Even the small portion of design theories – advanced by Cullen, Brown, Lynch, Barnett, Sucher, J. Jacobs, Rapoport, and others discussed in the literature review – that were implemented at Kenilworth Commons have produced the secondary, sociologically valuable liveliness and enjoyment of the outdoor space. But even at the Centers where such advantages were not provided, or only to a limited degree, the central objectives of high store occupancy rates and perception of personal security prevail, with a special and minor exception at Dilworth Gardens.

CONCLUSIONS

The research results establish that the commercial success of the three shopping centers is not negatively affected by the lack of application of pre-design theories discussed in the literature review. The results also show that the major design theories regarding the piecemeal process and urban wholeness; and the morphological theories about architectural structures, their placement, the shapes of open spaces, and about linkage have been applied only minimally, and that this fact has not damaged the Centers' commercial success and outdoor security. Almost the only linkage element, substantially and uniformly supplied, is for the automobile. This is evidence that from among many potentially user-friendly, comforting, and orienting morphological elements (see Literature Review), only this narrowly selected, commerce-supporting linkage was supplied, leaving non-auto circulation routes virtually undeveloped. Countless opportunities to respect, support, and safeguard people traveling without cars were missed at the research sites.

The Center where additional morphological assets, hospitable amenities, and good maintenance are provided shows desirable outdoor life. (See site amenities for Kenilworth Commons.) This is only one of the three measuring criteria which includes, however, social interactions with many secondary advantages: Alexander (1966) produced a working paper "The City as a Mechanism for Sustaining Human Contact," and Sucher (1995) states that "cities can connect people who did not know each other before" (p. 166). The conclusions emerge that carefully applied market and real estate principles together with the design element of proper automobile provisions form the primary support system for the soundness of all three shopping centers. Morphological assets and good maintenance

practices have proven to cause only minor fluctuations in the occupancy rate and to support desirable outdoor life.

Infill versus Urban Wholeness

The morphological wholeness identified best by Alexander, and by Moudon, Barnett, and others, is not being brought about by the three infill sites researched. The claim that the wholeness of this part of Charlotte is “the continuing creator of its ongoing growth” that “emerges from the specific, peculiar structural nature of its past” and “whose internal laws ... govern its continuance” (Alexander, 1987, p. 10) can be applied only to two aspects of the three infill sites: location at long established roads (morphological pathway linkage) and market responses. The filling out of an urban area that was declining, underused, or vacant, with active business, must be distinguished from comprehensive urban wholeness. The elements missing from true wholeness, in this case, are public participation as co-determinant for design, morphological linkage, and incrementalism. Participation, in these cases replaced by market study, must really occur only at rezoning applications or variances, or if projects are at least partially publicly owned. The lack of such participation precludes sociological inclusivity and diversity, making these Centers examples of “socio-spatial sorting” (Knox). This condition goes generally unnoticed because such development patterns are now common and generally are not seen directly adjacent to poorer town portions (exception: see KingsPointe findings). Morphological linkage and cohesiveness, and incrementalism are precluded by the current pattern of rapid growth responded to by non-local corporate development wishing to portray a corporate image.

Although it is clear that the emphasis at all three Centers was limited to economic stability with no larger urban design goals, they yet make some important contributions to urban wholeness. These contributions are the avoidance of the former blighted appearance and its negative effects (see Chapter 1, Introduction); a beneficial economic impact on the municipal budget; and excellent re-use of the existing infrastructure. An example of this is location at the public transit lines. The earnings of most workers at the shopping centers are lower than those in the surrounding residential districts. Such workers may have the option to arrive by bus. It is also useful to consider the value of the speed of remediating a creeping pattern of incremental decay with quickly built infill projects such as these. Speed is not without value, although the organic quality of more local, participatory, and incremental development – considered to be “more full of life” by Alexander (1979), and by me – is sacrificed.

Significance of Findings Related to the Systems Forming the Built Environment

Stepping back from the specific findings discussed in this chapter to the larger and more general background contained in the preface and first three chapters, the following conclusions emerge:

A great distinction must be made between assessing the commercial wellbeing of an infill development and the wellbeing of a city and its inhabitants as a whole. To almost quote an American folk saying, “What is good for the goose is not always good for the gander”: What benefits a shopping center does not always benefit its users, or potential users; those excluded from using it; or necessarily the City. Observations on possible resolution of inequities in this regard appear in Chapter 5, Implications.

Chapter 5

IMPLICATIONS

This thesis indicates a need for certain additional research efforts. These should focus on the treatment of the pathway systems for shopping centers, some community design issues, and the replication and extrapolation of my own thesis findings.

PATHWAY SYSTEMS

The fact that all three shopping centers can be considered to have legally barrier-free access for handicapped people must have satisfied any pathway-related questions the City felt mandated to address during application submittals for each Center. The goal in this case appears to have been no more than the minimum fulfillment of a federal requirement.

Social Filtering

Despite this fact, pathways here can be read as a reflection of the actual “social filtering” occurring in this “context-independent”...”market landscape” (Loukaitou-Sideris in “Cracks in the City,” 1999, p. 99). This filtering separates automobile drivers from others. The scarcity of children, handicapped persons and elders shown in my field research appears as a clue to such filtering. The developers acted quite legally. But is it not the City’s charge to serve all by seeking to balance their various rights and needs? In these shopping centers, the bus riders, bikers, car-less pedestrians, and wheelchair occupants are placed into a vastly inferior position of comfort, esthetics, respect, and, most of all, safety. Such social discrimination can estrange the excluded groups of people. An example is school children, who are now increasingly violent. I observed some cutting paths through the shopping center landscape borders; these paths provide the children with direct access from sidewalks to stores and a safe separation from auto traffic. (See Photos 4.33, 4.39 and 4.63.)

Environment/behavior scientists such as Rapoport and Alexander have linked antisocial behavior to such feelings of exclusion and sometimes even disenfranchisement. As shown in the thesis, this social segregation has almost no obvious, immediate negative impact on the Centers’ financial wellbeing. But this selective grouping bears a resemblance to, or seems to express, a city-wide issue! In 2000, at the Global Conference on the Urban Future in Berlin, the chair of the forum, Dr. Irene Weise-v. Ofen, stated that “the key challenge for the urban future is reducing social exclusion.” She based this on the belief that “the main capital of cities is the human capital.” The link between her concept and the study sites is

that shopping centers such as these are among the building blocks of urban organisms as discussed in the Introduction and by the authors whose work is referenced in the Literature Review.

Federal Legislation

At the time these three projects were developed, the Intermodal Surface Transportation Efficiency Act (ISTEA) had not been enacted. The Transportation Equity Act for the 21st Century (TEA 21), and the Executive Order 12898 regarding environmental justice, did not yet exist. These federal documents introduced into law the concept of pathway connections quite separate from those for the automobile. Among the targets of this legislation are the doubling of daily essential pedestrian and bicycle trips, and reduction by 10% of the cyclists and pedestrians killed or injured in traffic collisions. A complete and concise account of federal requirements applicable to pathways in privately owned shopping centers, juxtaposed and statutorily reconciled with all applicable local regulations on the subject, needs to be produced. This would establish whether responsibility for a safe, legible, and well-maintained diverse pathway linkage system rests with the developer, the government, both, or neither. And this account of federal requirements would clarify whether such pathways must serve both the primary customer group (drivers) and non-drivers, including children. Establishing that understanding of responsibility is the first and most essential step toward the pathway improvement this thesis has shown to be needed. Aside from the requirement to be law abiding, obvious energy-saving advantages of increasing and facilitating non-auto travel, and the comparatively tiny expenditure for diversifying the pathway system, recommend such research. Driver-biased discrimination in pathway provision affects diverse income groups almost equally because it very negatively affects non-drivers and those who prefer other transportation modes regardless of their income level.

COMMUNITY DESIGN ISSUES

The flaws in the pathway systems researched resemble certain segregative patterns in the City of Charlotte. Community design changes directed at greater inclusivity and urban livability can realistically be considered. Even if further study reveals that neither the City nor the developer bears responsibility for more inclusive and diverse pathways, the City planning office may choose such community design changes because they would enhance urban livability. They would include more inclusive and diverse pathway systems. Some

large specific goals for such changes are functional and visual wholeness, a reduction of social sorting, and an improved environment for supporting social respect and equity.

Equity versus Equality

I make a distinction between equity and equality at this point. In the United States, it is not the task, nor the capacity, of governmental agencies to provide equal incomes or to arrange identical life styles for citizens. But current U.S. laws such as TEA 21 support an opportunity for equity of access (a concept similar to the constitutional “pursuit of happiness”) so that diverse people can more easily access and interact in public spaces. A more realistic and interesting perception of one’s city, rather than a screened enclave exhibiting mostly automobile drivers of a certain spending level at these Centers, could thus be enjoyed. There is a great, though at first subtle, sociological impact of such changes. Functional and visual wholeness, social sorting, and an improved environment for supporting social respect and equity affect the antisocial behavior exhibited by some people who feel disenfranchised and socially excluded. The implementation of these goals may reduce the feelings of frustration that lead some people to violent and non-violent crime and mental illness. The city-wide crime statistics presented in the description of Charlotte, Chapter 4, would most likely reflect a gradual improvement if such community design measures were taken. And no one can argue against efforts to reduce increasing cases of mental illness.

Implementation

For shopping centers such as KingsPointe, Dilworth Gardens, and Kenilworth Commons, changes that could readily be considered should begin with implementation of all applicable **TEA 21** requirements (above). Zoning, taxation, design review, and public participation are additional tools that cities can use to implement community design.

Zoning and taxation powers can allow government to balance developers’ natural profit motive against socially diverse and beneficial residential patterns through strategic cooperation. Specifically, mixed-use zoning, which allows modest-sized or even efficiency dwelling units to be incorporated as a spatial percentage in commercial or business development, can be re-introduced (from the past) as a “by right” zoning provision. This type of zoning could be encouraged and rewarded by tax incentives for the developer. Close physical proximity of sales and service workers to their work sites would reduce costly employee turnover and absenteeism due to transportation problems. Large commercial and

business zones can be interspersed with residential zones or mixed-use zoning. Here, dwelling units affordable to service workers who can least afford automobile work commutes could be mainstreamed among market-level dwelling units. Regarding social sorting, tax incentives for developing affordable housing close to existing public transit may balance residential patterns toward greater diversity, as well as increase transit ridership. Such governmental measures can result in a reduction of social sorting and creation of user groups that are financially less segregated when market studies for development are performed.

Design review should primarily address the goal of functional and visual wholeness. In the Charlotte district studied, an obvious basis for design standards is not perceptible. Beyond the physical limitations of zoning and building codes for building shape limitations and lot coverage, a morphologically cohesive environment and a design vision for redevelopment need to exist as a basic reference. The latter can be created but it is too late for the former. Rapid growth has replaced and blotted out what seems even the memory of a morphologically cohesive environment. This applies both to landform and the built environment. The only conceivable design standard to adopt at this phase of “build before you vision” pace of development would be the stipulation of a minimum level of craftsmanship in building the architecture and the landscape architecture. The implication is that cities need to preclude the disappearance of their sense of place because its disappearance is irremediable. The morphologically cohesive environment should therefore not be sacrificed to growth. Creating a meaningful redevelopment design vision in a near vacuum can be a nearly overwhelming task.

No legal base is currently in place for **public participation** in private development planning that does not need re-zoning. In place of public participation, market studies may be considered a relatively socially equitable project planning reference when based on the preferences and characteristics of a user group made much more diverse by the type of zoning and taxation recommendations described above. Such diversifying efforts can be expected to take decades to realize. But market studies based on these, after implementation, should provide a meaningful reference, though under a different name. Such market studies may provide a more substantial reference than series of public hearings in which the public’s opinions are non-binding upon the City and the participants are only stakeholders secondarily. One could hope that, by more integrated zoning instead of exclusion, the needs of a larger range of people would then get attention simply by their residential presence.

REPLICATION AND EXTRAPOLATION OF THESIS

Validation

As stated earlier, I did not find a truly similar inquiry among related research. Therefore the meaning of this thesis would greatly benefit from any validations or refutations that a repetition – namely replication – could supply.

Extrapolation

The meaning of my research would also become greater and deeper by testing the design impact against the urban environment zoned for office use and, even more diversely – the environment of residential use. Such extrapolation may reveal differences in the role and impact that design factors have upon projects in these other types of zoning districts. In each case, the owner, users, and permanent daily occupants play a role different from their roles in shopping centers. The use and meaning of public and publicly accessible space in such zones also differs significantly from those of shopping centers, thus making different demands on the design factors. Many of the independent variables and the dependent variable of “liveliness” in these spaces would need to be changed accordingly. Attendance at these places is not primarily optional as in shopping centers.

In the case of office zones, a design relationship to the owner’s business image may affect the occupancy rate as much or more than the design factors of function and utility.

In the case of residential zones, it appears the impact of design factors upon occupancy rates and quality of the surrounding publicly accessible spaces may greatly vary among forms of ownership and occupant income levels. This multiplicity of conditions in turn would suggest separate but related studies for these diverse ownership forms and income levels.

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APPENDIX A

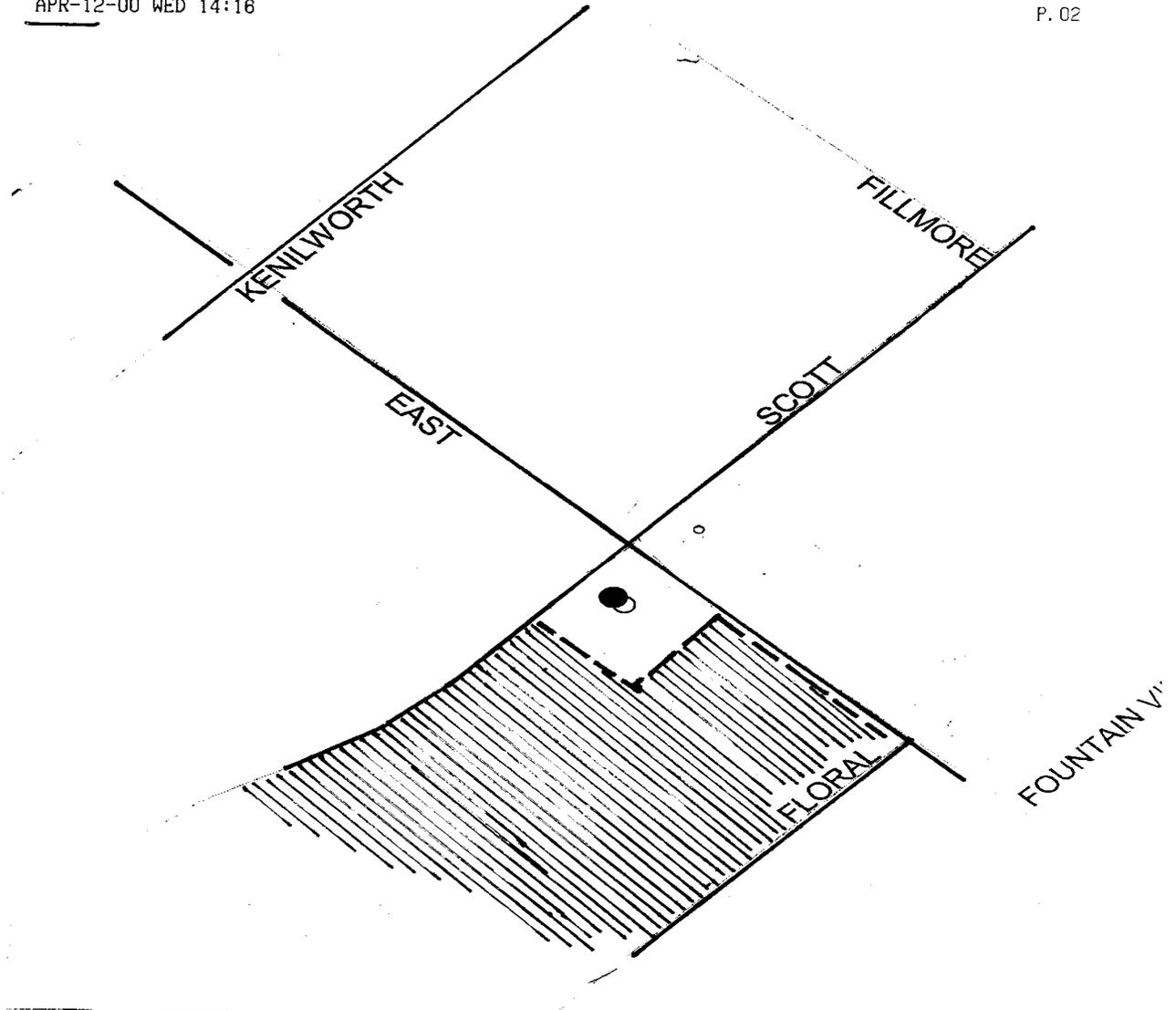
I.

Charlotte Police Department Crime Records for Area of Each Shopping Center

Dilworth Gardens

Kenilworth Commons

KingsPointe



Location Analysis Dilworth Gardens Shopping Center

Research Planning & Analysis Bureau
Charlotte-Mecklenburg Police Department

Number of Offenses
○ 9
○ 10 - 19
● 20 - 39
— Streets

Radial Analysis Results: Dilworth Gardens Shopping Center

Time Frame: 1998 - Year to Date
 Subject of Analysis: Reported Incidents
 Radius: NA

(General) Place Type of Offense Location:

Commercial Place 52
 Vehicle Storage 18
 Outside Location 11

(Detailed) Place Type of Offense Location:

Drugstore 18
 Other Parking Lot 15
 Other Business Location 9
 Restaurant/Diner/Coffee Shop 9
 Other Outside Location 8
 Laundry/Dry Cleaner 4
 Other Retail Location 4
 Supermarket/Grocery 4
 Other Business Office 2
 Shopping Mall Parking Lot 2
 Street, Highway, or Alley 2
 Bar/Tavern/Nightclub 1
 Construction Site 1
 Hotel/Motel 1
 Other Commercial Parking Structure 1

Property Stolen Included:

other miscellaneous 23
 cash 15
 building exterior 10
 automotive items 9
 TV/radio/stereo 9
 consumable goods: other 8
 business/personal records 6
 credit card 5
 tools/construction equipment 5
 truck/bus 4
 office equipment 4
 negotiable check 4
 auto parts 3
 jewelry 3
 clothing/furs 2
 bicycles 2
 musical instrument 1
 camera/optical equipment 1
 negotiable certificate 1
 non-negotiable check 1
 pets 1
 household item 1

Radial Analysis Results: Dilworth Gardens Shopping Center

Time Frame: 1998 - Year to Date
 Subject of Analysis: Reported Incidents
 Radius: NA

of Incidents within Radius = 81

UCR Code Breakdown:

Armed Robbery	2
Non-aggravated Assault	4
Burglary - Forcible Entry	11
Burglary - No Forced Entry	1
Burglary - Attempt	2
Larceny/Theft - Over \$200	16
Larceny/Theft - \$50 - \$99	6
Larceny/Theft - Under \$50	17
Auto Theft	2
Fraud	6
Embezzlement	2
Vandalism/Damage to Property	5
Hit and Run	5
Other Non-Offenses	1
Lost/Missing Property	1

Day of Week:

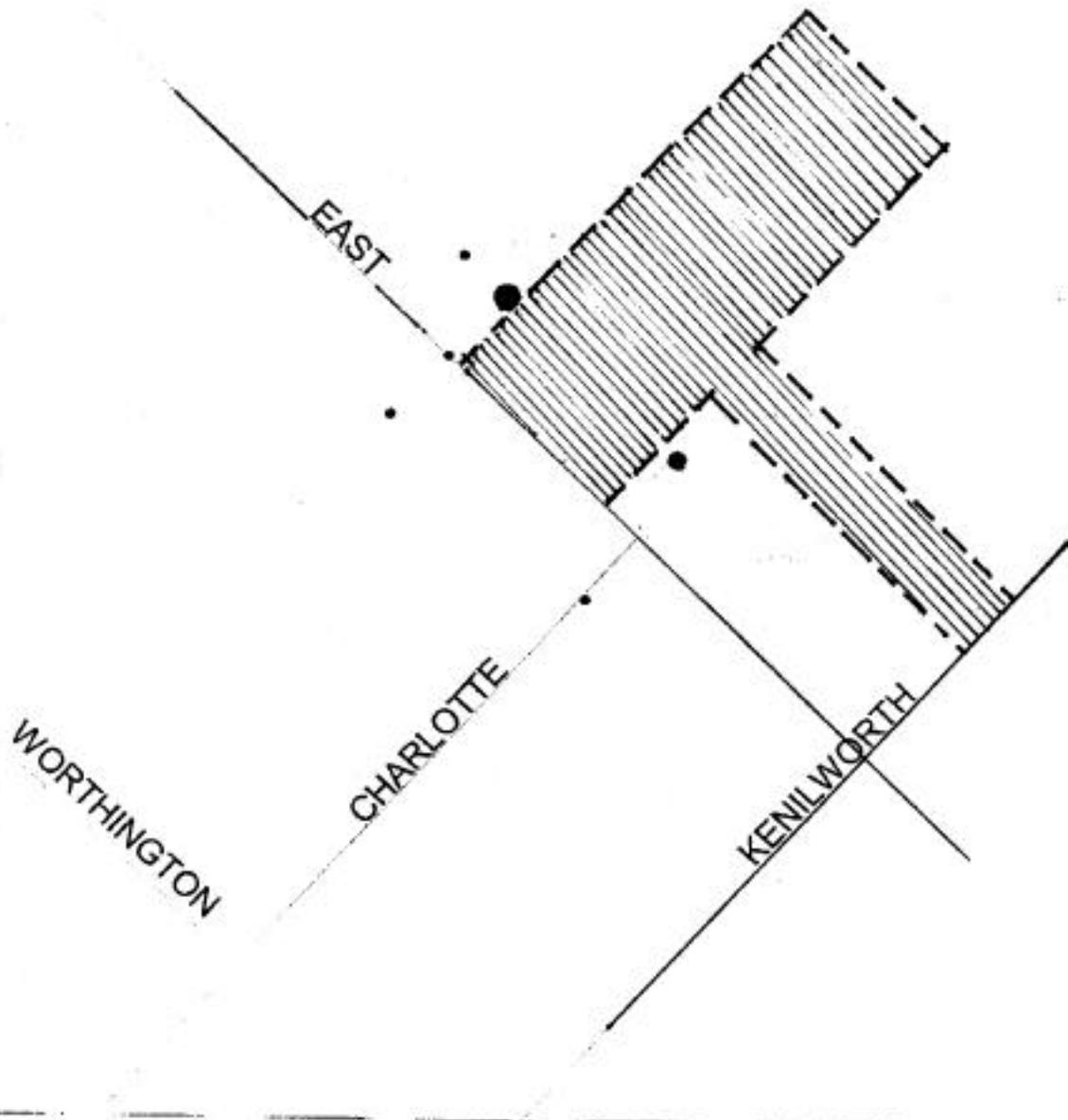
Monday	10
Tuesday	9
Wednesday	10
Thursday	6
Friday	8
Saturday	10
Sunday	9
Unknown	19

Time of Day:

0000-0600	12
0600-1200	18
1200-1800	12
1800-0000	10
Unknown time	29

Clearance Status:

Arrest	7
Exceptional	9
Open	63



Location Analysis Kenilworth Commons Shopping Center

Research Planning & Analysis Bureau
Charlotte-Mecklenburg Police Department

Legend
Number of Offenses

- 1 - 2
- 3 - 15
- 16 - 96

Radial Analysis Results: Kenilworth Commons

Time Frame: 1998 - Year to Date
 Subject of Analysis: Reported Incidents
 Radius: NA

of Incidents within Radius = 115

UCR Code Breakdown:

Strongarm Robbery	2
Aggravated Assault w/Knife	1
Burglary - Forcible Entry	7
Larceny/Theft - Over \$200	3
Larceny/Theft - \$50 - \$99	13
Larceny/Theft - Under \$50	21
Auto Theft	1
Forgery	39
Counterfeiting	1
Fraud	9
Embezzlement	1
Vandalism/Damage to Property	2
Violation of State/Local Law	4
Hit and Run	9
Other Non-Offenses	1
Lost/Missing Property	1

Day of Week:

Monday	21
Tuesday	11
Wednesday	12
Thursday	16
Friday	11
Saturday	13
Sunday	20
Unknown	11

Time of Day:

0000-0600	7
0600-1200	40
1200-1800	17
1800-0000	34
Unknown time	17

Clearance Status:

Arrest	18
Exceptional	5
Open	89

Radial Analysis Results: Kenilworth Commons

Time Frame: 1998 - Year to Date
 Subject of Analysis: Reported Incidents
 Radius: NA

(General) Place Type of Offense Location:

Commercial Place	96
Vehicle Storage	12
Outside Location	6
Residential	1

(Detailed) Place Type of Offense Location:

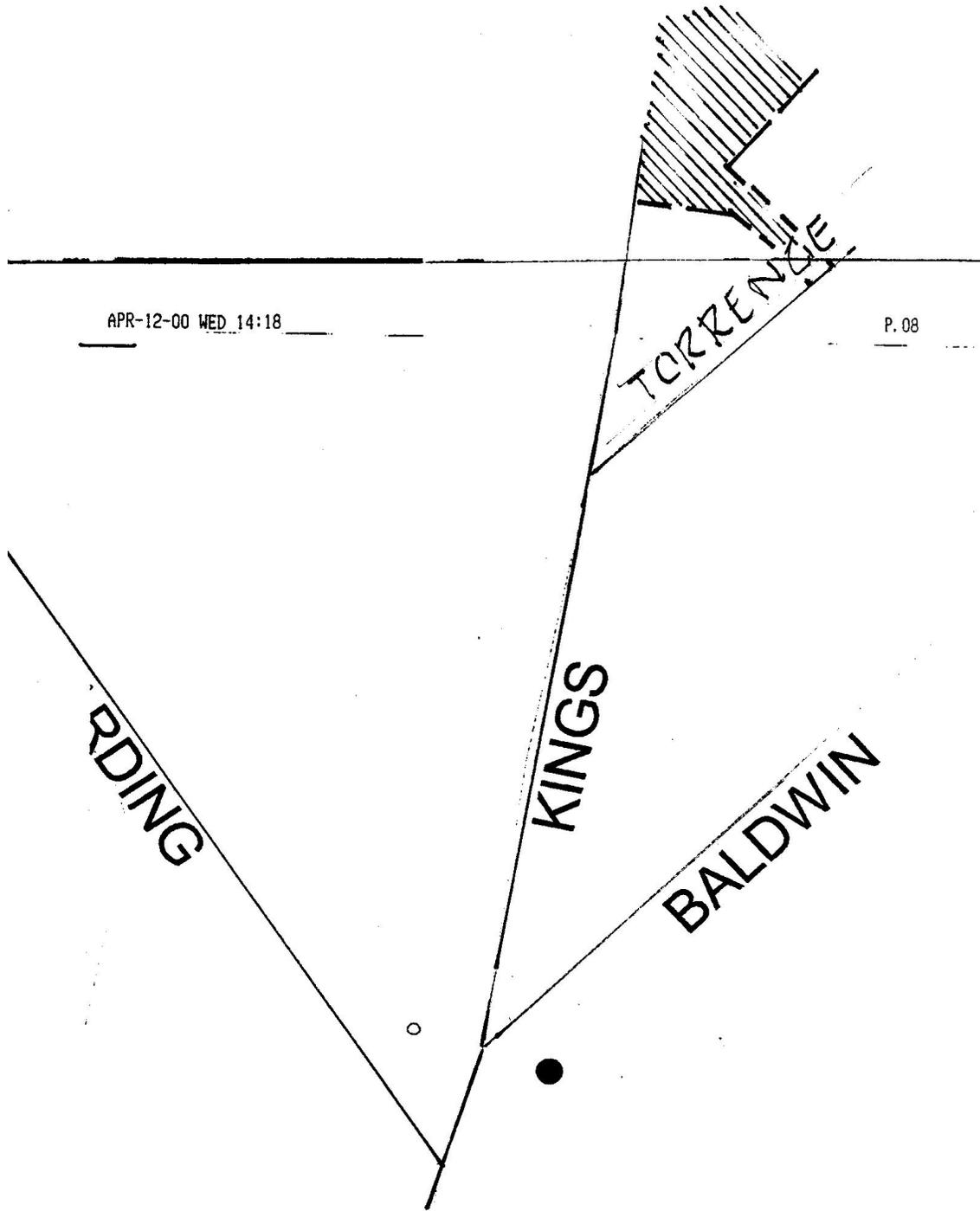
Supermarket/Grocery	84
Other Parking Lot	10
Other Outside Location	5
Other Business Location	4
Other Retail Location	3
Restaurant/Diner/Coffee Shop	3
Convenience Store	2
Shopping Mall Parking Lot	2
Private Property Surrounding Residence	1
Single Family Dwelling	1

Property Stolen Included:

consumable goods: other	35
cash	27
negotiable check	22
other miscellaneous	16
automotive items	11
business/personal records	10
credit card	10
building exterior	9
non-negotiable check	3
office equipment	2
TV/radio/stereo	1
jewelry	1
auto parts	1
clothing/furs	1
negotiable certificate	1
bicycles	1
consumable goods: fuel	1

APR-12-00 WED 14:18

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Location Analysis Kings Pointe Shopping Center

Research Planning & Analysis Bureau
Charlotte-Mecklenburg Police Department

- Legend
- Number of Offenses
 - 11
 - 12 - 22
 - Streets

Radial Analysis Results: Kings Pointe Shopping Center

Time Frame: 1998 - Year to Date
 Subject of Analysis: Reported Incidents
 Radius: NA

(General) Place Type of Offense Location:

Commercial Place	18
Outside Location	8
Vehicle Storage	6
Residential	1

(Detailed) Place Type of Offense Location:

Other Retail Location	10
Street, Highway, or Alley	6
Other Parking Lot	5
Other Business Location	4
Restaurant/Diner/Coffee Shop	3
Other Outside Location	2
Other Business Office	1
Shopping Mall Parking Lot	1
Single Family Dwelling	1

Property Stolen Included:

cash	9
building exterior	7
other miscellaneous	7
automotive items	6
negotiable check	3
credit card	2
office equipment	2
household item	2
TV/radio/stereo	2
clothing/furs	2
building interior	1
business/personal records	1
collectible: art/antique	1
consumable goods: other	1
jewelry	1
landscaping	1
truck/bus	1
computer equipment	1

Radial Analysis Results: Kings Pointe Shopping Center

Time Frame: 1998 - Year to Date
Subject of Analysis: Reported Incidents
Radius: NA

of Incidents within Radius = 33

UCR Code Breakdown:

Strongarm Robbery	1
Non-aggravated Assault	1
Burglary - Forceful Entry	6
Burglary - Attempt	2
Larceny/Theft - Over \$200	10
Larceny/Theft - \$50 - \$99	3
Larceny/Theft - Under \$50	1
Embezzlement	1
Vandalism/Damage to Property	2
Hit and Run	6

Day of Week:

Monday	4
Tuesday	2
Wednesday	7
Thursday	5
Friday	1
Saturday	3
Sunday	1
Unknown	10

Time of Day:

0000-0600	7
0600-1200	4
1200-1800	7
1800-0000	4
Unknown time	11

Clearance Status:

Arrest	2
Exceptional	2
Open	29

GLOSSARY

For the convenience of the reader I have provided the meanings of the following terms from the fields of urban design and planning.

Environment-behavior Studies (EBS): “the relationship of human behavior . . . to the built environment” (Rapoport, p.2)

Floor Area Ratio (FAR): “total number of usable square feet of built space with respect to the total block area” (Moudon, 1986, p. 251)

Inductive Research: A method in which neutrally gathered data on a specified subject are searched for underlying relational patterns.

Infill Development: Construction in a previously empty or abandoned area that is surrounded by existing occupied development.

Morphogenesis: The birth, source, cause, and sequence of evolvement of form.

Morphology: The features, collectively, comprised in the form and structure of an organism or any of its parts (Webster). The “organism” in this thesis is the city.

Semeiology / Semiology: Science or art of signs (Webster). In urban design context, the cultural and typo-morphological significance of features of the built environment.

Surveillance: Oversight; close supervision.

Typology: Analysis of type, generation, or form of building. Rule. (Moudon).

Wholeness: The state of being whole (Webster). Predominant use in this thesis is based on the meaning of “whole”: being uninjured or without signs of injury (Webster).

E. Maria Roth

VITA

After experiencing World War II in Germany, I immigrated to the United States at fifteen years of age. I earned a Certificate of Completion from the School of Architecture in the Cooper Union for the Advancement of Science and Art in New York. A Bachelor of Science degree in Landscape Architecture from Cook College at Rutgers University was added in the '70s.

I am the mother of three sons and two daughters.

Now retired from many years of private and public sector work based on my education, I am pursuing some of the issues discussed in this thesis.