

PROTOTYPE AND INNOVATION: CASE STUDIES IN THE EVOLUTION OF MIXED-USE DEVELOPMENT

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SUBMITTED TO THE DEPARTMENT OF ARCHITECTURE AND THE DEPARTMENT OF URBAN STUDIES AND PLANNING IN PARTIAL FULFILLMENT OF THE REQUIREMENTS OF THE DEGREE MASTER OF SCIENCE IN REAL ESTATE DEVELOPMENT AT THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

SEPTEMBER 1988

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ABSTRACT

The focus of our thesis revolves around the tensions and relationships between established prototypes and the influences upon innovation. This research is based upon the specific circumstances of four individual mixed-use developments, which are: Reston Town Center, Reston VA, Tysons II, Tysons Corners VA, Princeton Forrestal Village, Plainsboro, NJ, and Mashpee Commons, Mashpee MA. Within this context we explore what the precedents to mixed-use development are, what sort of innovations are occurring, and to what extent they break from established examples.

The paper also considers what leads developers to either choose a prototype or allow for innovations. In real estate, innovation can be explained as the process of adapting and refining previous ideas and solutions, rather than as the result of inventing an entirely new concept or form. This is the case with MXDs: even the most pioneering projects were actually the result of incremental and relatively minor improvements to earlier prototype designs and solutions.

The main conclusion supported by our thesis is: where a prototype is useful, achievable, and, in the developer's mind represents the best alternative, the prototype will be followed. But, when such a prototype is not workable for a variety of reasons, or when a given prototype fails to truly differentiate the product, create a focal point for surrounding development, or be the location of choice, then a developer will innovate.

In chapters one through three we summarize the history of mixed-use development and present the case studies. In the fourth chapter, we analyze the specific reasons for, and forms of innovation as they apply in four broad categories: market, finance, control and management issues, and design. The concluding chapter offers a broader analysis of a range of alternative explanations of the motivations for real estate innovation.

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CHAPTER ONE: GENERAL INTRODUCTION

Developers have been accused of being conservative practitioners of formula at the expense of adding significantly to the fabric of urban life. Nowhere is the impact of a development as a shaper or contributor to modern life more apparent than in the construction of large mixed-use developments. Given the complexities involved with developing a mixed-use project, it is understandable that developers many not want to stray far from a proven formula.

However, there are a number of projects currently under way which, on the surface, appear to break significantly with accepted formulas or prototypes. The intent of our study is to examine the tensions and kinships between established prototypes and innovations. Within this context we explore what the important mixed-use prototypes are, what innovations are being attempted, and to what extent they break from established patterns. We also consider what leads developers to either choose a prototype or allow for an innovation. We explore these choices in light of the unique and substantial risks mixed-use developments involve, the changing face of local markets and social fabrics, and the physical form such projects take.

What is a prototype? On one hand, all mixed-use developments (referred to as MXDs) emulate known patterns or formulas. There are antecedents, accepted patterns, and well known rules of thumb for achieving economic success in

mixed-use development. On the other hand, considering the complexities to which such large developments are subject and the wide diversity of circumstances affecting planning, there are never exact duplications. By adapting to their individual circumstances, all MXDs are unique. Thus, we cannot talk of prototypes in a purely literal way, as if developers actually attempt to reproduce a project down to the finest level of detail. This cannot be done. However, the developers and consultants with whom we have spoken, as well as many writers of articles on mixed-use development, consistently refer to a small group of projects which are, in concept, partially or substantially recreated in a broad range of mixed-use development projects. Typically, these "prototype" projects represent a major breakthrough from, or transformation of, previous concepts.

What we refer to as a prototype, however, and what these "experts" really have in mind, is not the actual manifestation of a project, but the underlying concept, form, or essence which guides the ideology or purpose of a project. In this sense, we find that to understand a prototype is to strip the prototype project of its nuance and uncover its essential structure.

This, however, is not that simple because the acknowledged prototypes combine a number of significant innovations which come together all at once to change the common perceptions held by developers and open up new opportunities which have not been previously explored. As

an example, it is not enough to say that the Houston Galleria is a prototype simply because it was built as a single megastructure. Rather, it is also that it opened up great opportunities for capitalizing on a mix of uses all geared to the high end rather than the middle consumer market, and was built in a more suburban as opposed to downtown settings. It is the "vitality" created through this combination of elements that established the project as a prototype. In fact, many projects have used the Houston Galleria as a prototype while improvising on the basic megastructure design. The challenge of these later projects was to improve upon the basic "galleria form" while maintaining the essential vitality created by the combination of the original design and marketing mix which made the first project work economically. In this sense, it is important to note that a prototype like the Houston Galleria may not reflect the best solution or refinement to an idea, but does represent the first solution or establishment of a concept.

The litmus test for a project to be regarded as a prototype, then, is that it spawned developments which attempt to recreate the essential vitality of the previous project's underlying concept.

To underscore the importance of viewing these prototypes as concepts rather than as buildings in-and-of themselves, our overview of mixed-use development prototypes, found in chapter two, traces the evolution of

basic concepts. It does not attempt to hold "first-of-its-kind" buildings that started a trend in absolute reverence.

The word innovation brings to mind breakthrough ideas and creative invention. In real estate, however, innovation can be explained as the process of adapting and refining previous ideas and solutions rather than the result of inventing entirely new concepts and forms. So it is with MXDs: so called pioneering MXDs were actually the result of incremental improvements to earlier prototype designs and solutions. As an example, the Houston Galleria's design and concept "can be traced to the Galleria Victor Emanuele in Milan, Italy, a world-famous collection of shops, restaurants, and residences built in 1867."¹ In more recent terms, the Houston Galleria adjusts the market focus of the office, retail, and hotel combination to the high-end market, although a number of these elements had been employed in other configurations and with different market orientations in earlier projects. As an example, Prudential Center in Boston, MA employs the office, hotel, retail combination in a dense configuration, although it gives much less emphasis to the retail component than does the Houston Galleria. It was the sum total of each of the refinements to earlier examples rather than the innovations themselves that made the Houston Galleria so important to future development.

Also, great innovation does not necessitate the creation of a prototype. In fact, one could view many of

the well known mixed-use development prototypes as far less innovative than some of the more startling or atypical projects which have been built. As an example, Rowes Wharf in Boston, Massachusetts is considered by many to be very innovative and unique in its overall look, configuration of uses, scale, and waterfront orientation. Yet, Rowes Wharf may not be reproducible in many other urban areas due to its unique market context, the shoreline configuration, and other unique circumstances. Also, although its design is unique, the mix of uses and high-end market approach are not greatly different than what was put in place at Water Tower Place, Chicago, and a number of other projects around the country. Even the most startling and innovative project will not spawn a prototype if that project cannot be successfully imitated elsewhere or if it cannot establish a following to its new basic approach.

Changes and innovation are perhaps most distinguishable within the design elements of a project. Perhaps for this reason, more has been written on design innovations at the expense of reporting on other important "behind-the-scenes" innovations involving new market perspectives, financing techniques and constraints, and the like. On the one hand, we note many rules which have gained acceptance by developers: rules on how to approach the market, how to finance a project, and also on how to control the development process. These rules affect the way developers adapt major prototypes to specific circumstances. On the

other hand, we note that such rules are changing, particularly in the degree of sophistication to which developers use, adapt, and refine standard approaches. Thus, one important objective of this paper is to analyze such "behind the scenes" rules, innovations, and perspectives, and show their effect on the final design of an MXD.

The other objective is to explore on a broader level the different motivations for innovation within a project. We hypothesize that there are basically five possible explanations why mixed-use development are different and why developers make innovations. These are:

1. That developers adapt to site specific circumstances. Often, developers must respond to certain site restrictions or other circumstances which do not allow them the ability to recreate a formula in whole. Such circumstances can take the form of crises (unforeseen negative factors) occurring during the construction process, or may be taken into account from the very beginning. The unique opportunities of a site also establish a motivation to innovate.

2. That developers learn from experience and try to avoid past mistakes or make refinements which will improve their chances for success. An example of this might be the manner in which Urban Investment and Development Company (UIDC) tapered the tower of their new 900 North Michigan Avenue project in order to accommodate upper level

condominiums. Although condominiums are best adapted to a floorplate smaller than that of a typical office or hotel floor, the floor plates of their earlier Water Tower Place were approximately the same size. This refinement allows for more efficiency. Site circumstances such as lower land costs or greater available acreage upon which to build may also allow for less density, which may translate into an opportunity for lower construction costs if buildings can be pulled apart.

3. That developers will create new or novel "look" for their project in order to attract attention and to give the projects stronger thematic unity and a unique identity. An example of this would be the creation of the nineteenth century seaport motif employed as a unifying theme for the Rouse Company's South Street Seaport project in New York City. In this case, it could be argued, that the "facade" or "vener," in terms of choice of materials, scale, and building design, provides a strong publicity draw and a sense of novelty within the context of a tried-and-true Rouse Company formulas for creating a successful "festival market."

4. That developers search for new and innovative formulas or solutions which go beyond merely improving upon a formula and succeed in creating a more hospitable environment responding to the basic, long term, human needs of patrons and workers. And, as such, will withstand the test of time. This is the claim that many of the proponents

of new "open-oriented" or "neo-traditional" projects have been making in recent articles. The problem here is that it is difficult to separate only novel solutions from truly better solutions. Richard Galehouse, a principle for Sasaki Associates and the designer of a number of innovative MXDs, states that many of the most innovative MXD designs have two objectives. One objective is to respond and adapt in a more sophisticated manner to the needs of the project and its patrons. The other objective is to create a more compelling marketing "look" calculated to better promote the project and attract attention.

5. Finally, that developers innovate as a way of self-expression. Again, such a motivation may be hard to distinguish from other motivations if the "personal statement" contributes to the success of a project. For example, It is claimed by a certain developer, and perhaps validated by the large sales of his autobiography, that the incorporation of his name in many of his projects contributes to their success.

Our main conclusion is that: where a prototype is useful, achievable, and, in the developer's mind represents the best solution to a site's "highest and best use," the developer will emulate that prototype. But, if such a prototype is not workable for a variety of reasons, if a given prototype fails to truly differentiate the product or create a focal point for surrounding development, or if the project site is not the location of choice, a developer will

deliberately and increasingly apply innovations to the project in order to differentiate the product within the competitive real estate market. However, even in the most unique market circumstances where developers find that any one prototype will not apply, developers will still look to a number of prototypes for references in an attempt to justify their innovations and ground their ideas in some reality or proven formula. On a skeptical note, developers can also be accused of using such arguments as a means to attract financing and give their project credibility. It is often hard to separate vague or hollow architectural references from real workable formulas borrowed from elsewhere.

The more a developer has control of the situation the more an innovation will stand out as a deliberate act. Innovations in such a context point to a response to something other than crisis. We contend that, in a number of cases, and particularly in cases where the developer has had the flexibility to innovate or stay with a more typical design prototype, deliberate attempts to innovate are made in order to differentiate a project within the competitive real estate market.

Methodology

Our research methodology involves both a review of the history of MXDs and a first hand analysis of a number of current projects displaying a range of innovative

approaches. We gathered information on a broad number of significant projects but concentrated on four projects, each offering a different approach to mixed-use development. It is clear that the amount of suburban mixed-use development has recently outweighed urban developments. In keeping with this, we concentrated our case study analysis on the suburban market although made a general review of both suburban and urban projects for this paper. We reviewed each case in light of the documented history of MXDs and made comparisons between each in order to highlight the similarities and differences between them.

Overview and Organization of paper

In the next chapter, we offer an overview and history of mixed-use development as background to our inquiry. As part of this, we define mixed-use development, highlight innovations and statistical trends noted by the comprehensive "Mixed-Use Development Handbook," published in 1986 by the Urban Land Institute, and review the current literature on mixed-use development. We are particularly interested in considering the state of development after publication of that manual, a work which, because of its breadth of research and commentary on the subject, has formed the basic perceptions and agendas for a number of recently published articles on MXD development. In chapter three we summarize the elements of the four MXD cases studied most intently. These cases are: Reston Town Center,

Reston VA, Tysons II, Tysons Corners VA, Princeton Forrestal Village, Plainsboro, NJ, and Mashpee Commons, Mashpee MA. Each case represents a development which characterizes innovation and refinement of previous precedents. Then, in Chapter four, we analyze the different forms of innovation and rules of thumb among the important factors influencing final project outcome and design.

Notes to chapter one:

1 Dean Swanke, Mixed-Use Development Handbook (Washington, D.C.: ULI - The Urban Land Institute, 1987 p.33.

CHAPTER TWO: LITERATURE OVERVIEW AND HISTORY OF MXDs

Introduction

Among the most significant trends in real estate development in the last 15 years has been the substantial increase in the number of mixed-use development projects. Although there are a few cases of pioneering MXD projects started prior to the late 1960's, it was not until the early 1970's that this development type began to gain wide acceptance. According to a 1985 study conducted by the Urban Land Institute (ULI), the number of projects started during the first half of the 1980's is greater than the total of those built during the previous three decades combined.¹ But, to highlight the important prototypes and various innovations that have shaped and redefined the MXD, a background must be established. Therefore, an understanding of what mixed-use development has come to mean in the last few decades, why mixed-use developments are desirable, what the disadvantages are thought to be, and the historical context in which mixed-use development has come from will be summarized in this chapter.

We first define the major characteristics that make up this form of development and explain the reasons for their popularity with developers. We then describe the first applications of MXDs, tracing the evolution of the project type since its early developments, and then examine criticisms that were leveled at the development form. Next, we recount statistical information concerning underlying

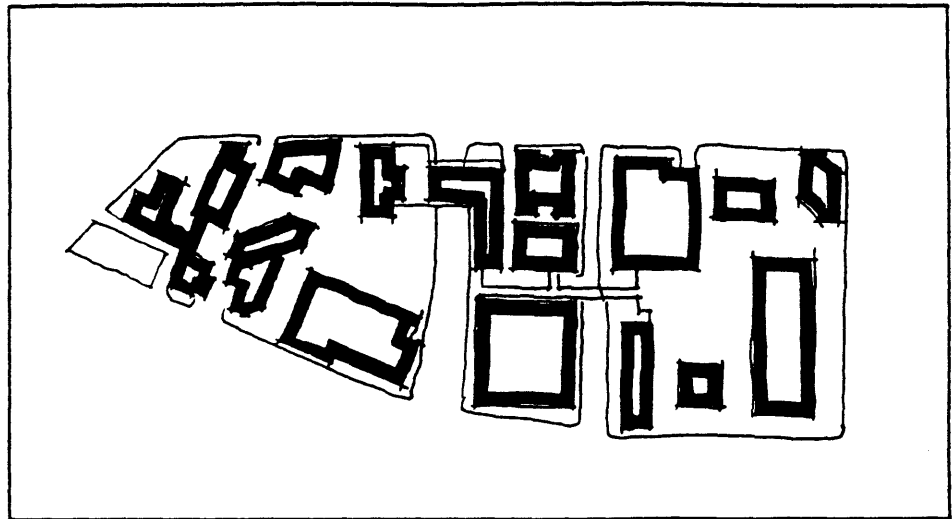
trends and examine speculations on market, finance and design issues as noted by various authors. Finally, we describe a broader definition of mixed-use development which is being supported by the efforts of developers, designers, and planners, and which expands on the limited ULI definition.

Mixed-Use Development Characteristics

The mixed-use development type has been defined by the Urban Land Institute as projects which contain three or more primary revenue-producing uses, have components that are functionally and physically integrated and highly compact, and are developed in accordance with a coherent plan.² The integration can be accomplished through a variety of design solutions such as by a single megastructure, by connecting several freestanding structures with pedestrian connections, or by positioning project components around centrally located spaces such as atriums, plazas or gallerias. (Exhibit 1 shows three mixed-use developments which characterize the range of design solutions used, from a megastructure to freestanding buildings). The term MXD has become more commonly used to describe any development that features several mutually supporting and closely locked uses. Typically, the integration of components in a mixed-use development includes a well designed public space as the central focus of the project.³

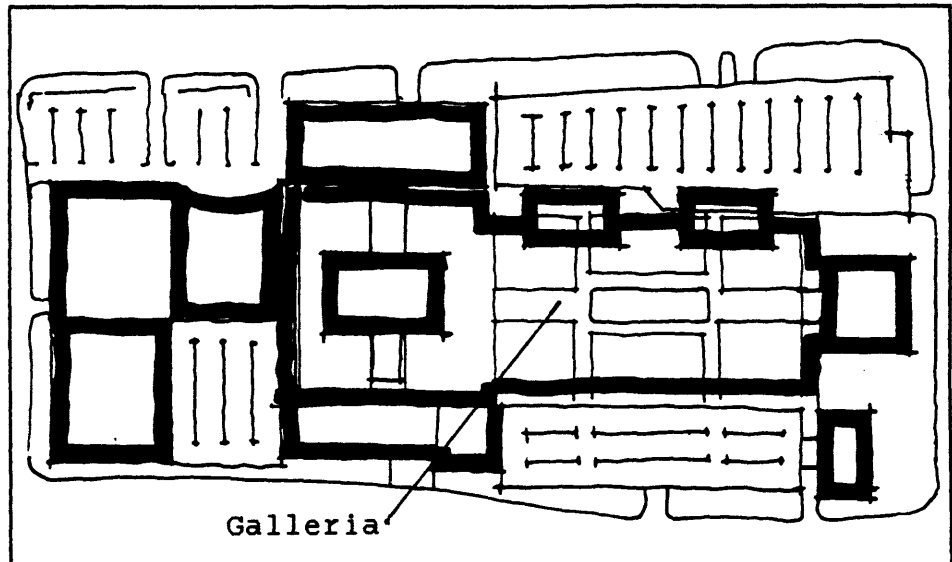
- Seperate but Connected Multiple buildings

Charles Center
 Baltimore, MD
 (1960)
 3.2 million s.f.
 3.0 FAR



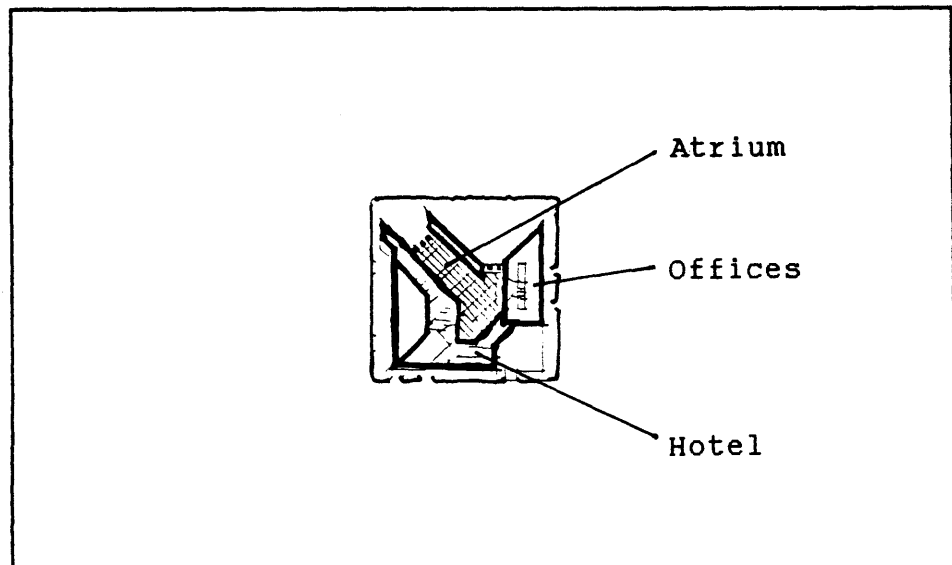
- Galleria Building

Houston Galleria
 Houston, TX
 (1970)
 4.0 million s.f.
 2.5 FAR



- Atrium Building

Merchants Plaza
 Indianapolis, IN
 (1974)
 1.4 million s.f.
 9 FAR



Advantages and disadvantages

There are several advantages to mixed-use development consistently noted by developers and consultants. First, mixed-use developments offer the potential for providing market support for each project component.⁴ "Synergy", the idea that the economics of the whole project is greater than merely the sum of its parts, is a frequently noted feature of MXDs. In specific terms, office and residential tenants benefit from retail and food service while people in hotels and residences patronize the stores and theaters. This has the potential of contributing to the overall economic return of the development through lengthening the time period that the project is open on a daily basis and expanding the potential draw of the project.⁵

Developers consider mixed-use centers attractive financial opportunities, providing a superior return to competing single use projects. The primary reasons given for this higher return are; 1) lease up rates tend to be faster; 2) rental rates achieved are higher than in comparable developments; 3) higher development densities can be achieved; and 4) given an allowed density to which to build, a developer can lease or sell different types of component uses earlier (e.g. housing, office, or retail) without the need to phase development over an extended period of time, as is required in large scale single use projects. This may enable a faster absorption, thus increasing the present value of the investment by bringing

in revenue earlier.⁶ Exhibit 2 indicates the superior performance characteristics of suburban freestanding MXDs, as reported by the ULI.

Differentiation in an increasing competitive and highly overbuilt market is also cited as a reason that MXDs are built.⁷ It is believed that the mixed-use development product is distinguished from the rest of the market by its superior image and amenities. According to the ULI, developers in Atlanta and Houston have proven that office space in MXDs has leased 50 percent faster than other office space.⁸ The positive image of the project created by associated uses such as a prestigious hotel can also contribute to the value of the office component. It is claimed that these benefits and services are so important to some tenants and users that they will be willing to pay a higher price to be in the project.⁹

Mixed-use development is considered by developers as a means of achieving higher density because the mix of land uses on a site typically receives an increase in allowable density as a result of special zoning action from the municipality. In 50% percent of the projects that the ULI reviewed, there was a special action on the part of the municipality to approve the project.¹⁰

Other advantages noted in the literature are that MXDs offer economies of scale and operating efficiencies. ULI's survey revealed a significant amount of sharing between components, the most frequently shared services being common

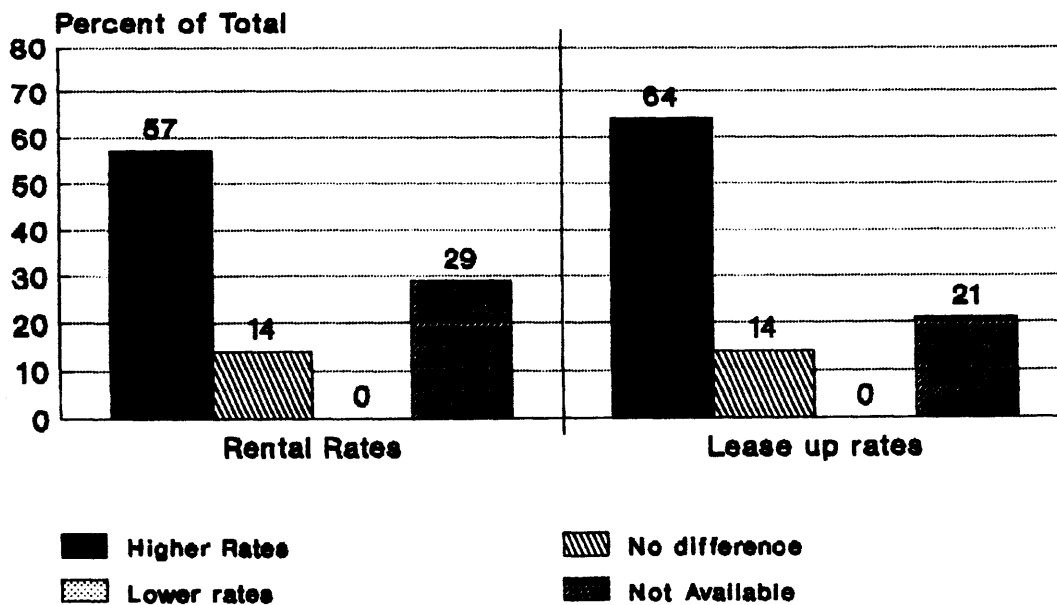
area maintenance (in 80% of the projects), building management (73%), marketing (56%) and HVAC (45%).¹¹ Through shared parking, which takes advantage of the overlapping demands of various uses, MXDs can utilize 20-33 percent less parking than the building code would otherwise require, resulting in sizable cost savings.¹² Sharing infrastructure costs between uses is another cited advantage of MXDs.

Regardless of these stated advantages, many of which are not entirely verified, it is clear that the complicated nature of the development type also generates significant problems and disadvantages for the developer. This is especially true in the prolonged planning period associated with MXDs. As an example, the Copley Place mixed-use development in Boston, MA took nearly 7 years of planning prior to construction. Reston Town Center has taken 8 years in project planning. Overhead and land carrying costs, taxes, design and consulting fees, and similar front end development costs are typically greater than with other single use types of development. Developers need excellent planning management and capital resources to cope with the inordinately long lead times between undertaking the project and ground breaking. The projects are also considered high profile, thus creating a significant risk of political or neighborhood opposition. Another disadvantage associated with the MXD is the higher cost of construction. Norm Elkin, of Urban Investment and Development Company (UIDC) attributes the higher cost of construction to the fact that

mixed-use projects are typically one-of-a-kind developments, causing a premium cost for MXDs due to the lack standard construction methods.¹³

EXHIBIT 2

Performance of MXD's Suburban Freestanding Locations



Source: ULI, 1985 131 Projects Surveyed

Historical overview of the development type

The mixing of land uses in urban development has been restrained in modern times by the advent of "Euclidean" zoning which promoted single-use developments and was intended to create order through the control and separation of land uses. The automobile, as the main form of modern transportation, has reinforced this trend by allowing people to live away from their places of employment and shopping. This has led to a land use pattern of separate and dispersed uses.¹⁴ The mixed-use development has its precedents in the way that cities were built before the advent of the automobile, with apartments and offices located directly above shops.¹⁵ The cores of cities such as New York exhibit a great integration of land uses with a residential population, and these places stand as important precedents for mixed-land use.

The pioneering example of a dense downtown mixed-use project driven largely by office demand, but also including other amenities and uses, is Rockefeller Center in NYC. This development, built in 1931, integrates office uses with retail, recreation, and cultural facilities organized around a pedestrian circulation system. This project serves as one of the most important predecessors of future MXDs. The inclusion of Radio City Music Hall and other cultural uses was an innovation which drew people to the complex on evenings and weekends. The Rockefeller Center was carefully planned to create a strong urban focus. This feature is

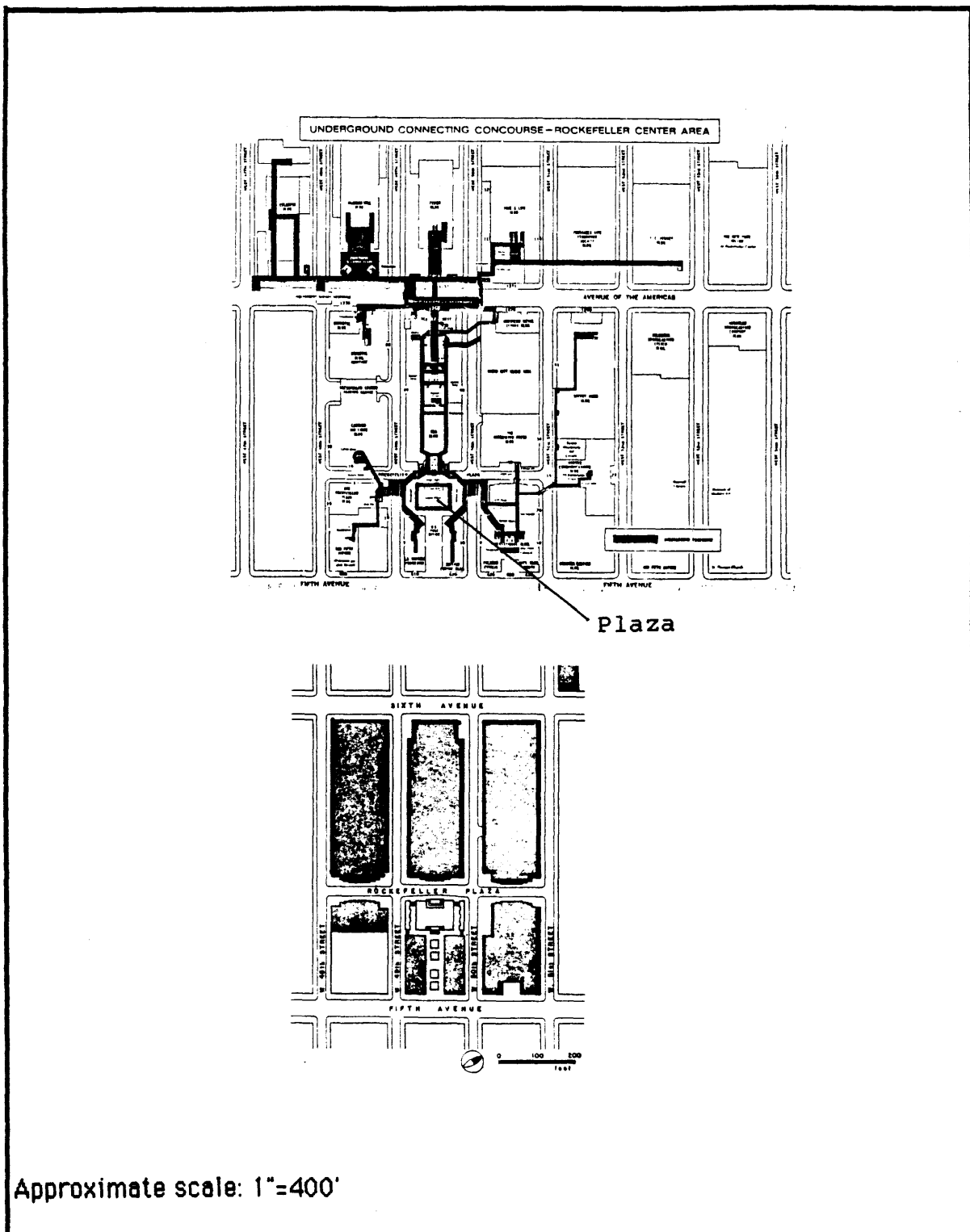
frequently noted as an attribute of successful MXDs.¹⁶ (The pedestrian plaza and concourse network plan of Rockefeller center is shown in Exhibit 3.)

Later, in the 1950's, a group of similar MXDs appeared in downtown settings as a result of attempts to revitalize declining central commercial cores. By the mid-1950's many urban centers had deteriorated as residents moved to the suburbs. Large scale projects were proposed with the intent to reestablish downtown as an activity center. To this end, large redevelopments included multiple uses to extend the activity cycles of the development and the surrounding neighborhood. The underlying idea was to integrate various functions within a single, compact project, essentially creating a new environment, and in turn, attracting large numbers of people. These projects, typically, were several buildings oriented around plazas and public concourses built upon several blocks of the city. While the Urban Land Institute contends that these developments were characterized by their emphasis on fitting into their urban settings in order to foster adjacent redevelopment, in reality, these projects were actually clearly set-off from the rest of the city. The public plazas and concourses were frequently on upper levels, away from the city streets. The buildings themselves were oriented to these internal spaces.

Rockefeller Center

Exhibit 3

Among the major innovations of the Center was the underground pedestrian concourses, and the lower plaza ice skating rink. These landmark concepts, perhaps more than any other single element of the design, influenced the form of later separate but connected MXD building complexes.



Approximate scale: 1"=400'

Completed in 1954, Penn Center in Philadelphia is among the first examples of a development of mutually supporting activities in a single, architecturally integrated real estate project. The project, built by several developers according to a master plan prepared by the city, incorporated 500,000 s.f. of retail space organized around a pedestrian concourse and a sunken ice skating rink.¹⁷ Another example of this prototype (shown in Exhibit 4), characterized by many buildings organized around public plazas, is the Charles Center in Baltimore Maryland. These projects spawned duplication in many cities: A third example is Constitution Plaza in Hartford, Conn, a fourth, Prudential Center in Boston, MA, and a fifth example is the Allegheny Center in Pittsburgh, PA. The distinguishing feature of these projects is the separate but connected towers integrated through a lower level platform or concourse.

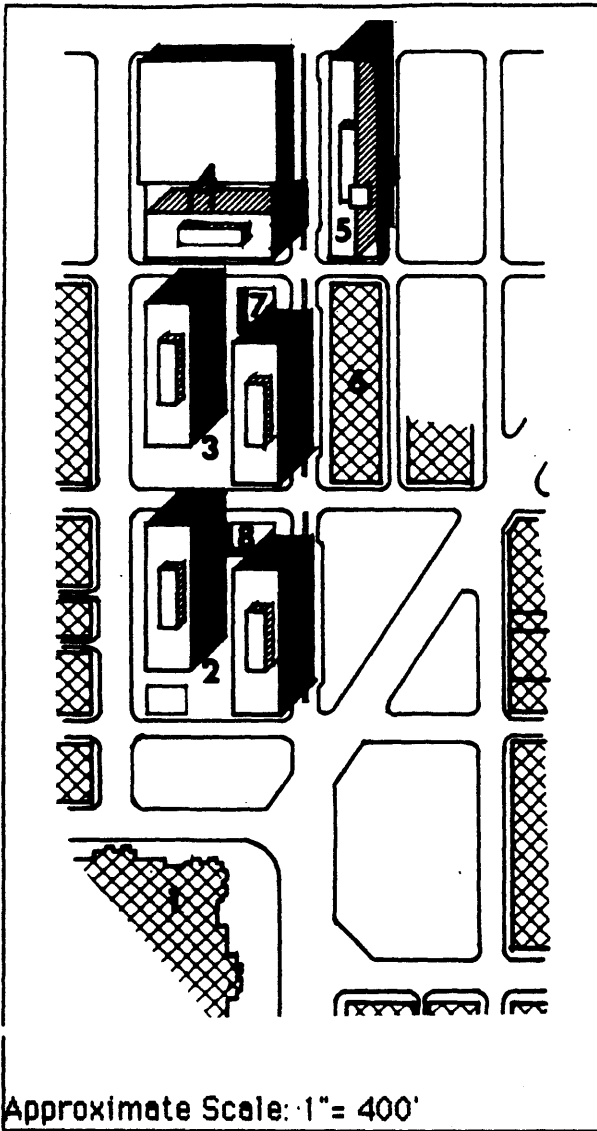
The influence of this basic prototype on downtown mixed-use development has been significant. Even today in Los Angeles, California for example, the Community Redevelopment Agency set out to enliven a part of that city's downtown by finding a developer for an 11.2-acre site in what is known as the Bunker Hill area. The plan selected is a 1.2 billion mixed-use project made up of separate buildings connected by a lower level platform. Similar to the earlier developments mentioned the buildings are organized around upper level public plazas.

The early MXDs also indicated that the public sector, which frequently played an important role in the revitalization projects of the 1950s, was interested in integrating different uses within a development. Previously, public planning efforts had emphasized the separation of uses, the consequences of which were downtown streets being deserted after office hours and widely dispersed suburban districts. This new point of view was an important shift in planning theory and public policy favoring the inclusion of multiple uses. Influential planners and urban critics such as Jane Jacobs endorsed the concepts of dense multiple use districts and the diversity of urban environments.¹⁸

During the sixties, not many MXDs were built. In fact, the first ULI survey, done in 1976, identified only 23 projects started during the decade. Because of urban strife, many of the projects that were built tended to set themselves off from the surrounding city, thus, ultimately not serving the urban revitalization function for which they were intended. However the MXD was a development solution to the problems of the downtown. The public spaces were essentially inside the development and under the control of the developer. They were safe, clean and well maintained, and, therefore, more attractive to the suburban patrons.

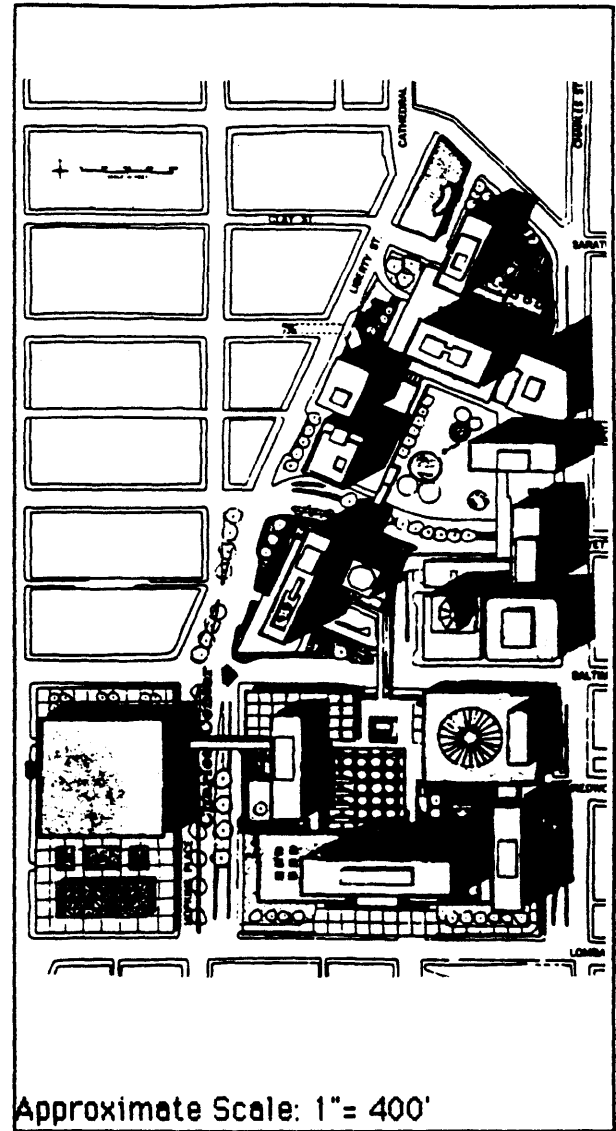
● Separate but connected multiple buildings MXD prototype

Exhibit 4



Penn Center, Phila. PA (1954)
 2.7 million s.f. office, 500 room hotel
 500,000 s.f. retail in an underground
 concourse. 8 acre site FAR : 11

Six structures on a multiblock site that is organized around an underground concourse, and including an ice skating rink and plaza.



Charles Center, PA (1960)
 1.7 million s.f. office, 700 hotel rooms
 400 residential units, 335 square ft
 retail. 23.7 acre site FAR : 5

Large scale redevelopment plan characterized by multiple buildings on several blocks, organized around three major upper level plazas.

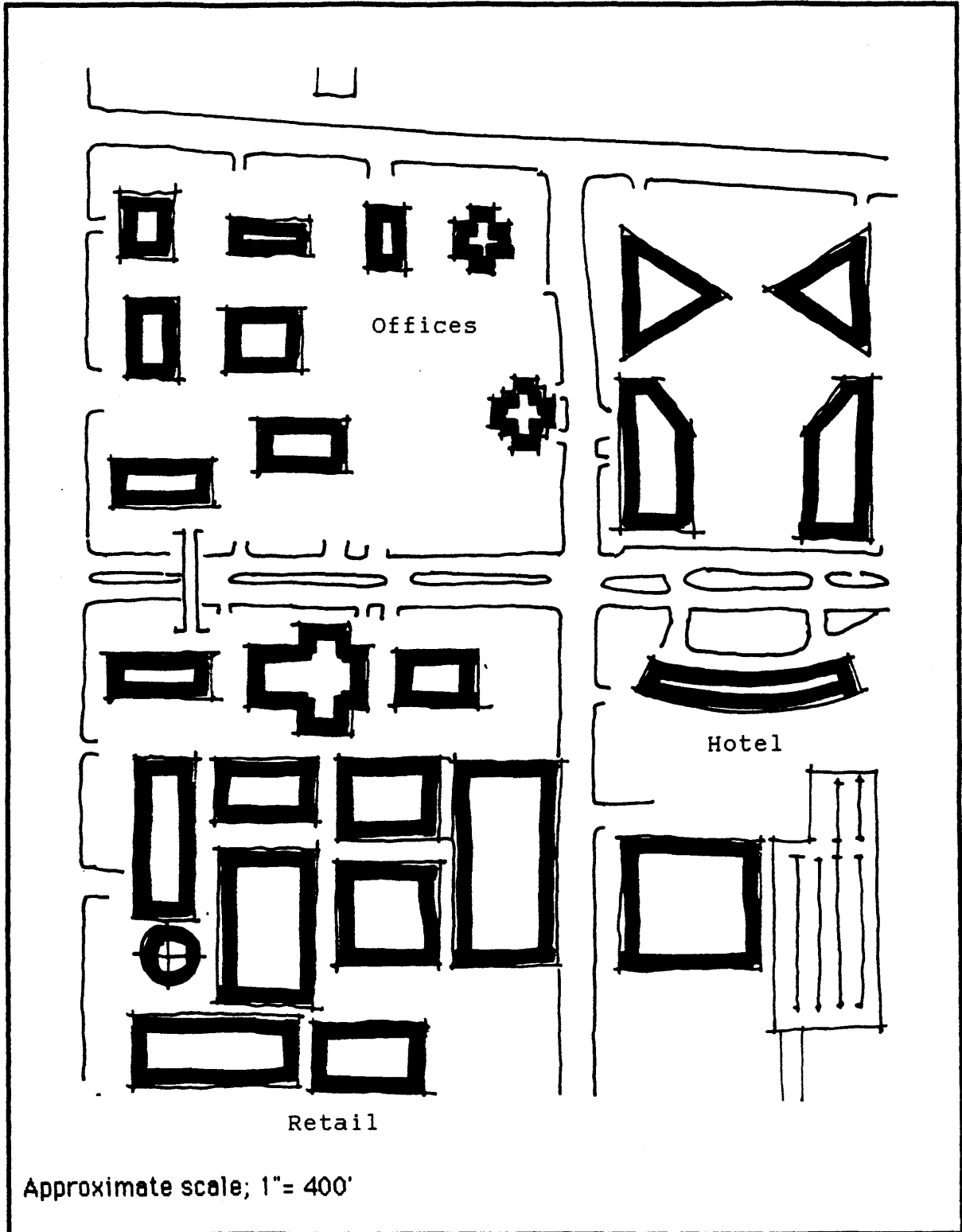
Office growth in the suburbs fostered another MXD prototype: that of the multiple use business park. The larger the office park, the greater the demand would be for amenities to serve the workers, housing for office employees, and hotels to provide accommodations for business travelers. Multiple use centers incorporating these other component uses became an alternative to the office park and shopping center. Notable among these early MXDs is Century City, California, started in 1962. In its open spacing and automobile orientation, Century City (refer to Exhibit 5) became a prototype which reflects the other extreme to such densely integrated projects as Rockefeller Center. Although this development is too loosely configured and not architecturally integrated enough to fit within the strict definition of a MXD as defined by the ULI (they define it as a "multi-use project") it, nevertheless, was a new approach to combining several uses in one development and an economically successful variation on a single use office development.¹⁹ The essential features of the development are its low density (an FAR of 3.7), accommodation of the automobile by wide access streets and surface parking lots, physical separation of the pedestrian from vehicular traffic, and entirely freestanding single-use buildings. The mix of uses is accomplished by horizontal separation (the retail, office and hotels are widely dispersed across the 90 acre site). Nevertheless, the project is an important example to later mixed-use developments in which uses are

more closely related or connected. The Denver Tech Center, the Los Colinas development near Dallas, and the Princeton Forrestal Center (shown in Exhibit 6), are among the numerous multiple use business parks nationwide which essentially followed the example of Century City by combining uses in a low density context.

● Multiple Use Business Park MXD prototype

Exhibit 5

Century City is a large (180 acres) multiple use complex. The project was started in 1961. 22 structures completed by 1976, totaling 15 million s.f. at a density of FAR 3.7. Characterized by provisions for the automobile, such as wide access roads and surface parking and freestanding single-use buildings.



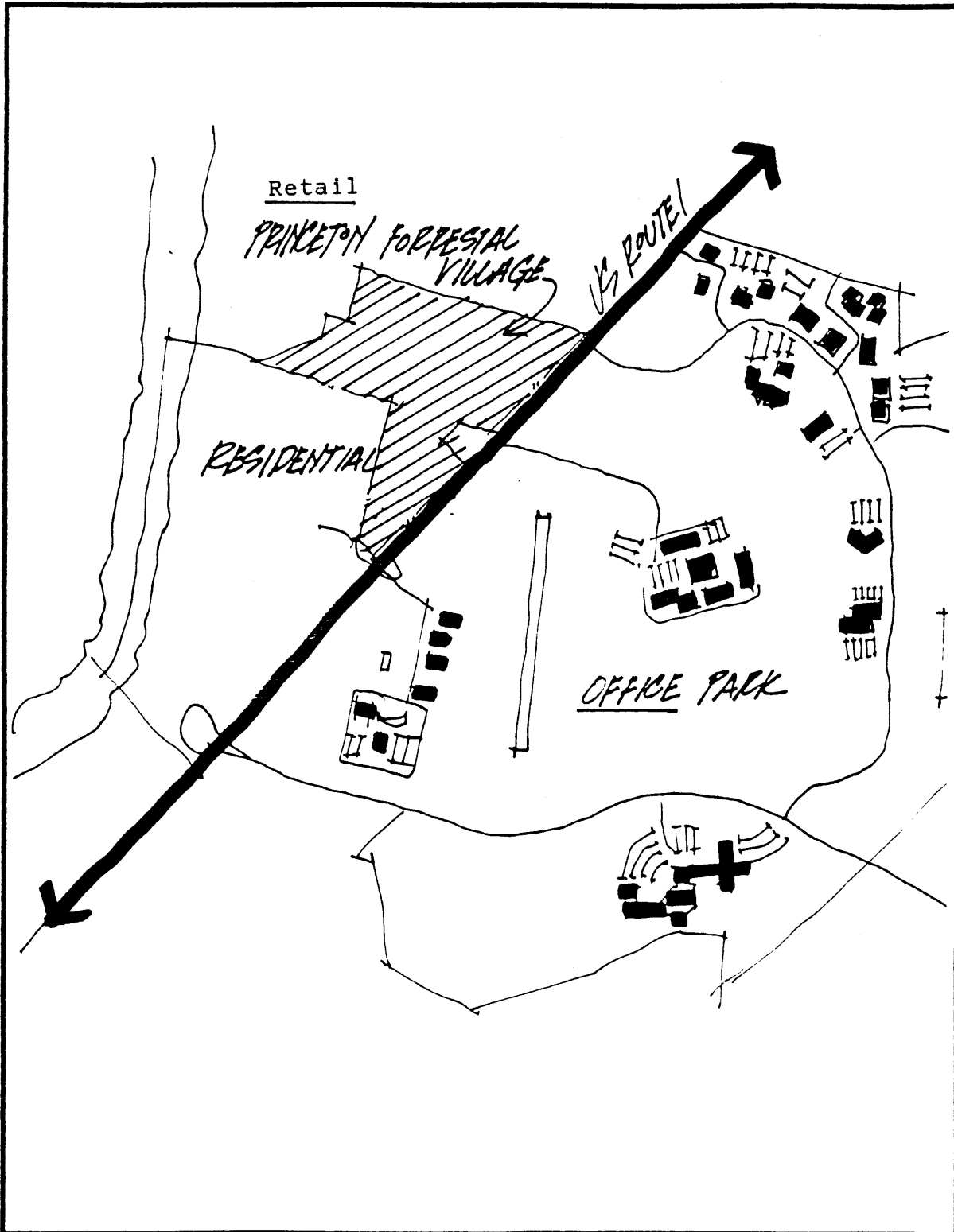
● Regional Context and Location Plan

Exhibit 6

Project : Princeton Forrestal Village

Location: Plainsboro, NJ within Princeton Forrestal Center

Low Density (0.25 FAR) Office and business park of 1600 acres surrounding the mixed use commercial center (highlighted in this drawing)



A seminal MXD prototype which spawned imitation throughout the 1970s and early 1980s is "theGalleria" project in Houston, developed by Gerald Hines Interests. Begun in 1967, this project established a precedent for suburban development and established a configuration and a mix of uses which has been replicated in many other locations. The project was the first to join a hotel with a three level mall, the first to have an interconnected high rise office tower rise above the middle of a mall, and the first to feature a 550 ft. barrel vault that ran the entire length of the three story mall, enclosing the central ice skating rink. (The configuration is shown in Exhibit 7.) The project also was the first to concentrate its tenant mix at the luxury end of the market whereas, previously, the accepted goal was to "aim to the middle of the market".²⁰

It also developed a solution to one of the most difficult problems facing suburban development: how to reconcile the automobile with an urban development. According to Louis Sklar, vice president of Gerald Hines Interests, the high cost of the land mandated that the project have multilevel buildings and structured parking to create densities well in excess of typical suburban Houston development. (The FAR exceeds 1.5)²¹ This basic design prototype, of retail uses on three levels and multiple high rises unified by a central galleria space and tied together in one walkable development, has become a popular destination for the entire region and clearly an economic

success story.²² By creating such a focus, the Houston Galleria may well be considered the first place in the country to succeed commercially at creating, on a large scale, an alternative to the low density sprawling suburban development. The Houston Galleria has also succeeded in becoming the popular center of one of the country's largest emerging suburban cities,²³ and has clearly begun to feel like a genuine community to shoppers and tenants. Although it is claimed by the developer that it is "a whole new urban form that the American public doesn't know exists"²⁴, many of the individual components of the development, such as the three level retail mall, had been used and established before. The Houston Galleria, together with Atlanta's Peachtree Center, a 2.5 million s.f. development in the central business district, paved the way for the repeated use of the internal atrium or galleria as a focal point and organizing feature of MXDs.

The Peachtree Center includes five office towers, 2 hotels of 2,450 rooms and structured parking organized around upper level pedestrian walkways and a large atrium. Many other projects of the late 1970s emphasized a similar mix of office/retail/hotel uses that relied heavily on the upper end of the market and the use of an internal atrium or galleria as the centerpiece of the project.²⁵ This form became the most popular and feasible prototype for MXDs in the 1970s. The atrium at the Hyatt Regency at Peachtree Center, rising entirely through the building and lined with

hotel rooms, has been duplicated in numerous MXDs projects throughout the country, such as the Embarcadero Center in San Francisco.

Another significant mixed-use prototype, the downtown vertical mixed-use tower, an example of which is Water Tower Place in Chicago, pioneered the form of vertically stacked uses with luxury retail organized around an internal core. While retail malls had been built in downtown settings, none containing as much space (614,000 sf) were organized vertically and concentrated on the luxury market. Water Tower Place's seven retail levels are connected by glass elevators and open escalators, drawing patrons up to the highest pedestrian drawing volume tenants on the seventh story. The upper 40 levels of the 74 story structure are luxury condominium residences which take advantage of the best views and are sufficiently segregated from the other uses. Office space is located on the eighth and ninth levels, located directly below the 22 floor Ritz-Carlton Hotel.

An important characteristic of the mixed-use single tower prototype is the separate entrances situated on the street and a clearly defined circulation system for each use. As one of the first projects to tackle the complexities of stacking uses on top of each other within one vertical tower, the building has been an important example to later projects. The Water Tower Place has been closely imitated by the same developer (UIDC) at 900

Michigan Avenue (refer to Exhibit 8 for a comparison between the projects). The prototype has spawned other later imitators, as well, such as One Magnificent Mile in Chicago, and the Fountain Square West project in Cincinnati, Ohio developed by JMB.

In the late 1970s downtown MXDs became popular. inspired by the success of the Houston Galleria and Water Tower place many of these developments were similarly skewed towards the luxury market. Thus, the mixed-use development type began to gain increasing market acceptance, particularly in the more internally oriented form. An explanation for this trend is that people seemed to like them and there were several successful examples to draw upon, therefore developers had more confidence in the development type. The 1970s saw the number of developments started more than double over the previous decade.²⁶ Prominent among these megastructure developments is the Copley Place development, Boston, MA, the Plaza of the Americas, Dallas, Texas, and the Omni International, Miami, Florida.²⁷

The principal design concept of the atria/galleria was meant to enable projects to stand on their own, enclosed and internally focused within an inhospitable urban environment. At the far extreme, this configuration allowed large MXDs to turn their backs on the city. One project which has been criticized heavily for its negative urban design characteristics is Detroit's Renaissance Center. The

complex, similar to other inward focused developments, is all but cut-off from the surrounding urban environment. For the pedestrian, the complex is confusing and disorienting, and access to the adjacent riverfront is blocked off. A recent critical article states:

It scares and infuriates many people. It is a veritable fortress outside, cut off from the rest of the city by a 10-lane roadway and a 30 foot high berm.... Parking lots, rather than a promenade, grace its river side, while inside, people find it nearly impossible to go from place to place in a straight line.²⁸

A critic writes of the failure of downtown MXDs to actually help the urban setting that they were created to revitalize:

For the most part, they are self contained entities intended to create an environment on the inside that many seem to think is no longer possible in a traditional urban setting....They function as destinations much the same way as suburban shopping centers do - once people arrive, they enter and remain inside until ready to return home. ²⁹

While internally oriented megastructures may have been criticized for their urban design qualities, they are, nevertheless, highly successful commercial developments. Detroit's Renaissance Center enjoys an office vacancy rate of only 3 percent, and, in spite of the perceived design flaws, has begun to financially perform as expected. For this reason the internally oriented megastructure is being replicated today in a wide variety of settings such as Buckhead Plaza in Atlanta, GA.

Finally, the groundwork and context for a new suburban prototype for mixed-use has been shaped by large scale

planned suburban residential developments. Begun in the early 1960s, Reston, Virginia, and Columbia, Maryland, are the best known of these suburban "new towns". These projects established master planned mixed-use urban cores as a focus for the planned residential development. The relatively dense commercial multiple use centers of these developments had never been utilized within a suburban context before and has paved the way for today's freestanding suburban MXDs. The "Lake Anne Center", one of the five village centers built in Reston, and which included high rise housing, introduced the idea of a dense mixed-use core approximating the variety and density of urban downtowns in an otherwise low rise community setting. The development incorporated apartments over shops focusing around a plaza and all tightly integrated into the residential neighborhood. (Exhibit 9) Prior to the creation of these new town developments, commercial centers in the suburbs were typically low-rise structures surrounded by surface parking lots, such as a strip retail convenience center.

Today, the originally planned idea of a dense mixed-use urban downtown core in Reston is being completed by the construction of the Reston Town Center project.³⁰ This project will be covered in greater depth in the case studies, but it is important to note that it essentially follows the earlier prototype of the village center. The objective of the development is to create a dense "downtown" that allows the automobile direct access and provides

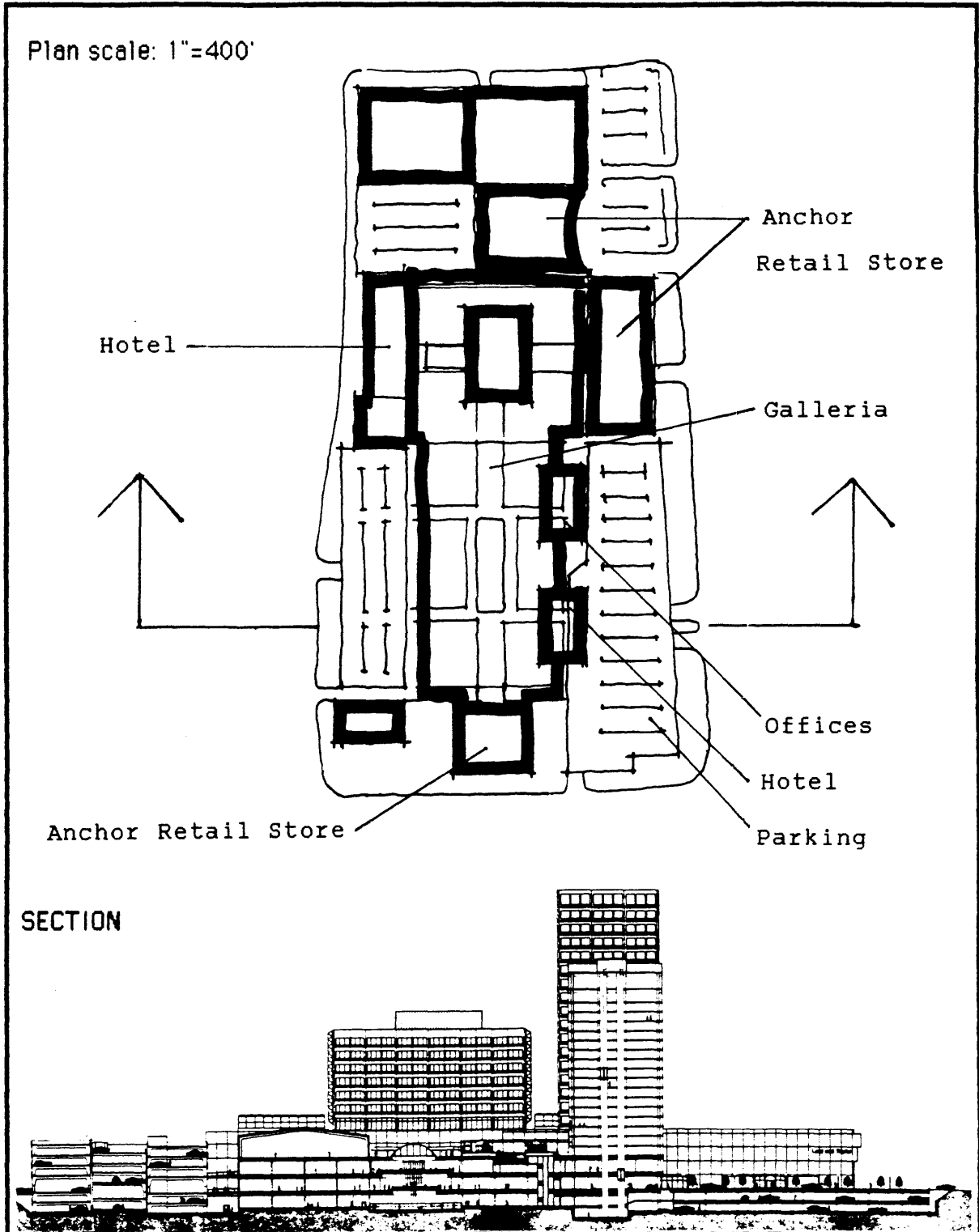
parking within reach of offices and shops, yet is laid out to focus on open plazas and commons. The project is notable because it has a relatively dense combination of uses (FAR of 1.4 to 2.0) in an otherwise low density residential suburb. Like its earlier predecessor Reston Town Center will be breaking new ground, A dense mixed-use development which approximates a downtown, has not been built in a similar suburban context before.

● Galleria building

MXD prototype

Exhibit 7

The Houston, TX Galleria (1970) is focused around a three level interior skylight retail shopping space. 4.0 million total s.f. at a density of approximately 2.5 FAR. Contains a 22 story office tower of 310,000 s.f. totaling 1,088,000 of office space , 4 anchor retail stores and shops totaling 1,634,000 s.f. and 811,000 s.f. of hotel space in 2 buildings.



● Mixed Use Tower Prototype

Exhibit 8

Water Tower Place

(1974)

74 Stories

1.6 million s.f. total

Retail on lower 7 levels- 2 anchors, 134 shops. Internal atrium.

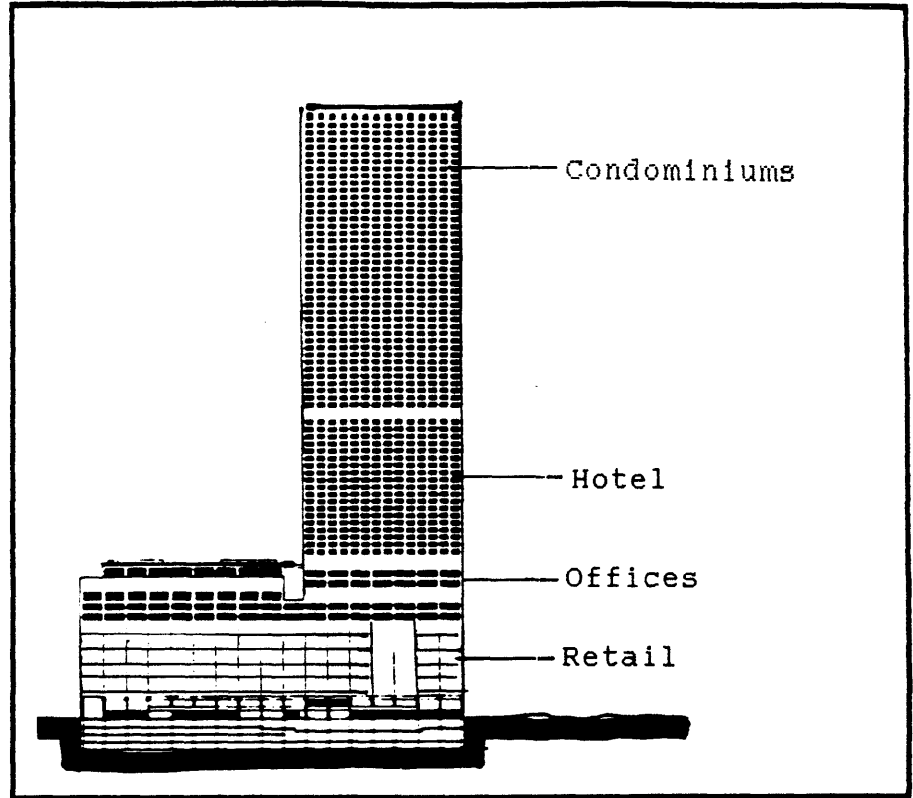
Office on 2 floors (8-9)

Hotel on 20 floors (10-32)

Condominiums on top 40 floors

4 level underground parking.

Developed by UIDC



900 N. Michigan Ave.

(1988)

67 stories

2.7 million s.f. total

Retail on lower 6 levels- 1 anchor, 100 shops. Internal atrium

Hotel on levels 7-8

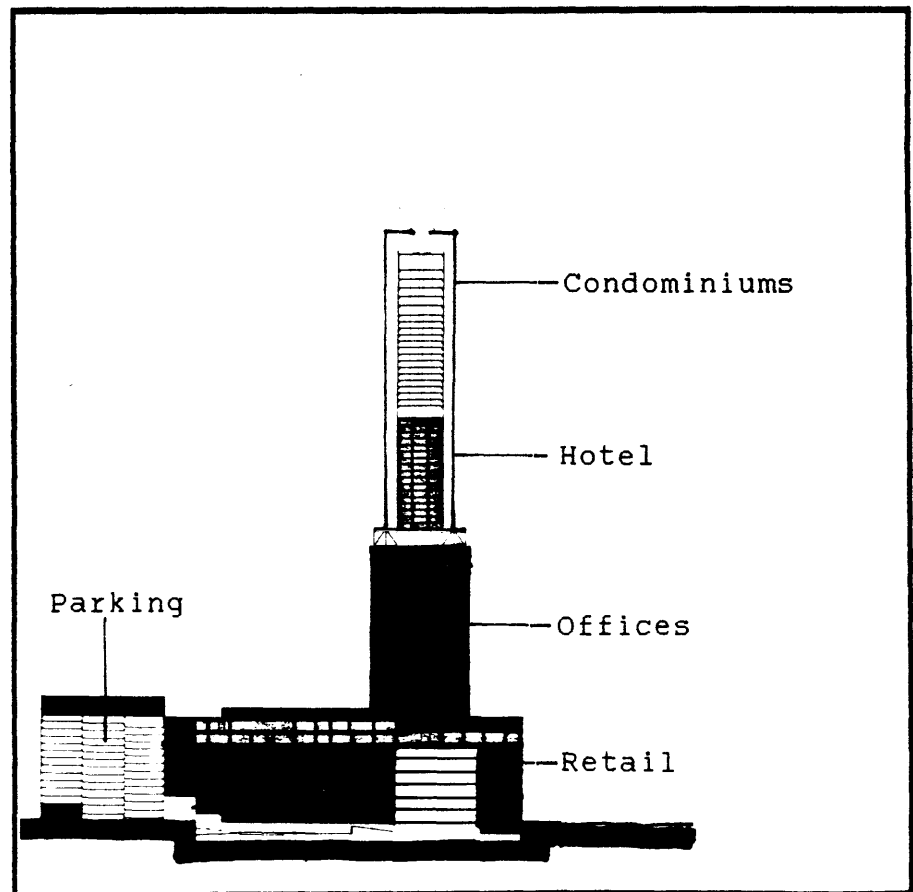
Office on levels 7-28

Hotel rooms on levels 30-46

Condominiums on top 19 floors

3 level underground parking.

Developed by UIDC



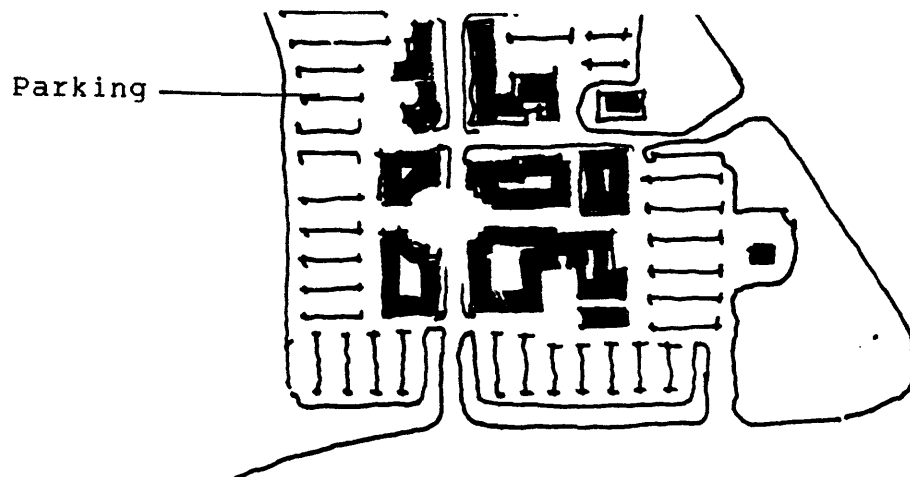
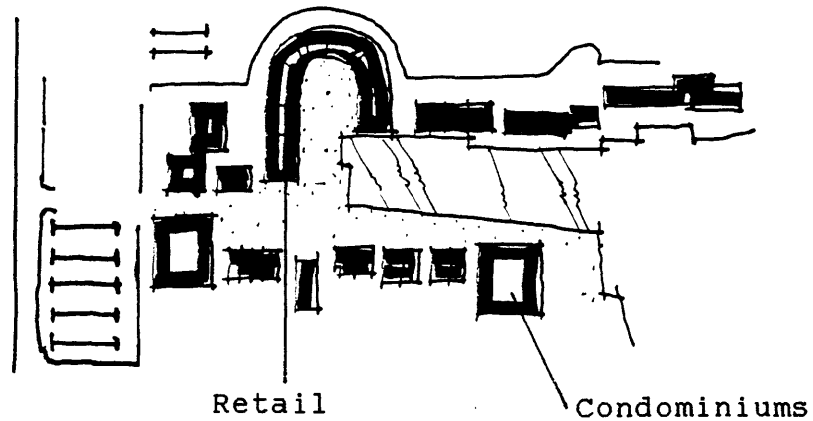
● The Village Core

MXD prototype

Exhibit 9

Low density commercial center in a lower density suburban setting. Characterized by architectural unity, open orientation, pedestrian oriented urban design and accommodations of the automobile. Lake Anne Center, Reston, VA (1964) includes high rise condominium tower and apartments over retail shops. Designed as one of 5 small centers for the 7400 acre residential new town. Mashpee Commons plan is provided for a comparative scale.

LAKE ANNE CENTER (1964)



MASHPEE COMMONS (1986)

Mixed-Use Prototypes

In the relatively short period since their introduction in the late 50's, MXDs have evolved considerably. The historical overview in this section has highlighted the major prototypes and innovations that have shaped and defined the MXD. The chart which follows below summarizes the mixed-use prototypes. A description of the key features and underlying concepts of the prototype are highlighted in boxes. Examples of the prototype, the year the project was begun, and the developer are listed below the boxes. Later developments patterned after the prototype are listed following the earlier examples.

I. SEPARATE-BUT-CONNECTED MULTIPLE BUILDINGS: Characterized by pedestrian connections (such as concourses, tunnels, skywalks, open plazas) between freestanding high rise structures, or structures built on a podium or platform containing parking or retail. Buildings and entrances are oriented around exterior public spaces such as ice rinks or plazas. The location of these projects is typically in the central city CBD and is usually built on multiple blocks of the city. The prototype is notable for the large scale and high density, typically 2.5-5.0 million s.f. at a density or FAR greater than 4.

An example of the prototype: Rockefeller Center NYC, NY (1932), Penn Center, Phila, PA (1954), Charles Center, Baltimore, MD (1960)

Later examples: Embarcadero Center, San Francisco. CA (1968)
California Plaza, Los Angeles, CA (1987)

II. MIXED-USE TOWER: A single megastructure in which the uses are vertically organized and architecturally integrated, located on a small downtown site. The uses stack one over the other and achieve the separation by uses located on different floors. The prototype includes condominium residences and a base of vertical retail mall. The project includes a hotel, which is provided a separate entrance at the ground level and a separate circulation system within the highrise. Parking is provided on site or underground by structured garages. Densities in the FAR 12-15 range. Location: Central City CBD.

An example of the prototype: Water Tower Place, Chicago, Ill. (1974): Urban Investment Development Corporation (UIDC), John Hancock Tower, Chicago, Ill. (1964) John Hancock Mutual Life Insurance Co.

Later examples: 900 Michigan Ave, Chicago, Ill. (1988): UIDC
Olympia Tower, Chicago, Ill. (1988): Olympia and York
Fountain Square West, Cinti., OH. (1990): JMB

III. GALLERIA BUILDING : An internally oriented megastructure, organized around a central galleria space. There are several high rise buildings connected to a three level retail mall. The prototype is characterized by an office/retail/hotel use configuration, skewed toward the luxury market. The retail uses are planned to draw people past shops to get to the anchor stores. The integration of the project components is achieved through a single building but there are separate towers. Predominate parking configuration is in structured parking garages, surrounding the retail core. Characterized by greater densities (FAR of 2.5-5) than the surrounding setting. Location: New Suburban core (Satellite CBD) or downtown core.

An example of the prototype: the Galleria, Houston, TX (1970), Gerald Hines Interests.

Later examples: Dallas Galleria, Dallas, TX (1981), Gerald Hines Interests.
Tysons II Fairfax Co, VA. (1988), Homart Development.

IV. ATRIUM BUILDING: Internally oriented and compact megastructure, utilizing the atrium as the focal point and organizing feature of the project. The prototype has separate office buildings connected to the atrium building by a base structure or upper level connections. The hotel rooms surround the atrium, which rises entirely through the building, and the projects other components such as restaurants, shops, banks closely relate to this central feature by pedestrian connections. Location: Central City CBD and Suburban CBD. Characterized by a high density of FAR 8-14.

An example of the prototype: Peachtree Center, Atlanta, GA (1974)

Merchant Plaza, Indianapolis, IN (1974)

Later examples: Plaza of the Americas, Dallas, TX (1980)
Wynn/Jackson

Omni International, Atlanta, GA (1977) Cousins Properties, Inc.

Renaissance Center, Detroit, MI (1976) Ren. Cen. Ptnrshp.

V. MULTIPLE USE BUSINESS PARK: A suburban multiple use development created to establish a commercial core of retail and amenities to office dominated settings. The prototype is characterized by separate freestanding buildings with a street related or external focus. The project components which include hotels and retail are positioned around centrally located courtyards, plazas or open spaces at grade, and in later examples the uses are integrated both physically and functionally, such as offices over retail shops. The prototype is characterized by provisions for the automobile, such as great access and surface parking. Characterized by low density development with an FAR of 0.25-4.

An example of the prototype: Century City, Calif. Los Angeles, CA. (1962)

Later examples: Denver Tech Center, Denver, CO (1964)
Princeton Forrestal Center, Plainsboro, NJ. (1974)
Los Colinas office development, Dallas, TX (1978)
Princeton Forrestal Village, Plainsboro, NJ (1987)

VI. THE VILLAGE CORE: A urban center characterized by low density commercial uses punctuating the lower-density surrounding residential landscape. Characterized by architectural unity, pedestrian oriented urban design, consideration of circulation and access of the automobile, and the integration of residential and civic uses. The prototype relates to the low density scale and context of the site. This development type is described as having a scale and form which imitates "traditional" cities such as Anapolis, MD or Georgetown, DC. although the context for this prototype is in suburban settings or "new towns". Typically low rise structures at low densities.(FAR 0.25-2)

An example of the prototype: Country Club Plaza, Kansas City, MO (1920s) J.C. Nichols This project combined an overall architectural unity with the concept of a downtown shopping district, oriented to the pedestrian, with special considerations for the automobile. While it is not entirely like a mixed-use village core it nevertheless proved that a freestanding shopping district could succeed in the suburbs.³¹

Lake Anne Center, Reston, VA (1964),

Later examples: Mashpee Commons, MA (1986) Fields Point Partnership.

Reston Town Center, Reston, VA (1989) MKDG/HIMMEL

Statistical Trends

A number of trends have been clearly established in the 1980s, and are reported by the comprehensive 1986 ULI Mixed-Use Handbook. Prominent among the current trends is the significant growth in the number of MXDs created in the suburbs. Current mixed-use projects are being increasingly developed outside of the downtown, keeping pace with the general increase in suburban commercial development. This trend is substantiated by the ULI's 1985 survey results:

Before 1980, only 17 percent of MXD's had been developed in suburban locations, the remainder in CBDs or other central city locations. Since the beginning of 1980, however, 28 percent of MXDs have been started in suburban locations. 32

This number is especially significant when considering the volume of construction undertaken during this same period.

The mix of uses and scale of projects show some consistent patterns. The graph (Exhibit 10) summarizes the use combinations of the projects of the 1980s.³²

MXDs of the 1980s also tend to be smaller than earlier projects, with an average floor area of 1.1 million square feet for those completed during the 1980s, compared with 1.9 million in the previous decade and 2.2 million before 1970.³³

A number of factors, noted in the literature sources, may explain the rise of smaller suburban MXDs. First, many developers are recognizing the competitive advantages of offering office and hotel activities in a changing and

growing suburban setting. Second, because suburban areas are characterized by low density sprawl, MXD integration of different components creates a focus for these areas, thus, adding to a projects increased attention and consequent profitability. Third, a broader familiarity with the characteristics and advantages of successful MXD projects by developers may be evident. Growth in the number of MXDs may also be a result of higher suburban land costs, requiring more density to create an adequate return. Another factor is municipalities' increasing endorsement of MXD concepts as requirements for housing, the overall vitality of development, and the infrastructure demands of households becomes a more widespread concern among public officials. Officials may also see MXD development as a way to reduce auto congestion in suburban areas by keeping households and interrelated services close by. According to a recent Institute of Transportation Engineers report³⁴, MXDs can reduce vehicular traffic trip generation by 25%.

Another trend noted in the literature is the increasing use of a lay out with an open-to-the-air orientation. Developers are increasingly utilizing design schemes which create plazas as an amenity and organizing element. The 1985 ULI study notes that, 64 percent of projects are configured as separate-but-connected buildings while 36 percent are designed as single megastructures.³⁵ A 1976 study showed that the opposite case was true: 60% of the projects completed in the 1970s were in the form of a

megastructure. This trend toward configuring projects with freestanding buildings and open orientation is perhaps explained not merely by urban design or aesthetic objectives but by a drive to create more comprehensible designs. ULI points out that:

Market experience has proven the value to tenants of creating comprehensible designs with strong separate identities for the different uses.³⁶

Developers we spoke with confirmed this statement. Such an objective led the developers of Tysons II, a galleria project in suburban Fairfax county, to claim that the decision to create essentially freestanding buildings in their project was a "market driven refinement" upon the earlier Houston Galleria. Other factors may also explain this trend. The first is the growth in the number of MXDs in the suburbs where, not surprisingly, generally lower land costs will encourage larger land areas and lower densities, allowing land to be more readily used as non revenue producing open plazas. A second factor, which can not be substantiated, is that the high profile of MXDs generally require developers to respond to criticisms that MXDs are monolithic structures. Finally, the higher construction costs associated with buildings containing tightly configured multiple uses would cause developers to build freestanding buildings whenever possible.

There has recently emerged a concern for the vitality and sense of place associated with traditional cities.³⁷ It has only been relatively recently in history that separation

became the accepted way of dealing with land use control; previously the mixed-use of land was a typical and well accepted form of human settlement.³⁸ The concept of recent MXDs, then, can be explained as the logical refinement of many precedents, beginning with the ancient market square, the mix of residential and commercial uses found in traditional cities, and the refinement of shopping centers.³⁹

However, the lessons of the market were not lost on the development community: suburban projects with several uses were obtaining higher rates and leasing up faster than competing single-use projects (as shown in Exhibit 2). In addition, the reliance on the automobile in the suburbs created traffic congestion and structural inadequacies in the road network. Richard Galehouse of Sasaki associates points out that "the miserable state of suburban development and the disfunction of the highway system has led to an actual devaluing of real estate"⁴⁰ As a response to this problem, groups of developers, designers, and public officials are turning to the town-planning traditions of the early twentieth century. This so called "new-traditionalism" is breaking the modern pattern of dispersing services and retail in a way that lacks focus, is advocating on-site shops and services in office developments, and is arguing for residences to be located close to retail. The suburban shopping center surrounded by an asphalt parking lot is claimed to be replaced by a "village center" made up

of retail shops, offices, inns, and civic uses, closely combined with residences and civic open spaces.⁴¹ The design of a project such as Mashpee Commons is intended to be integrated through a walking environment and public plazas. The economic success of this concept, however, is largely unproven. The other side of the argument is held by the developer of Tysons II, Wayne Angle, that neo-traditionalism is a theory of the past. With the advent of air conditioning and high speed transportation, old retail configurations simply don't meet the realities of contemporary living. In contrast he believes that tightly integrated megastructure mixed-use developments are essentially today's downtown.

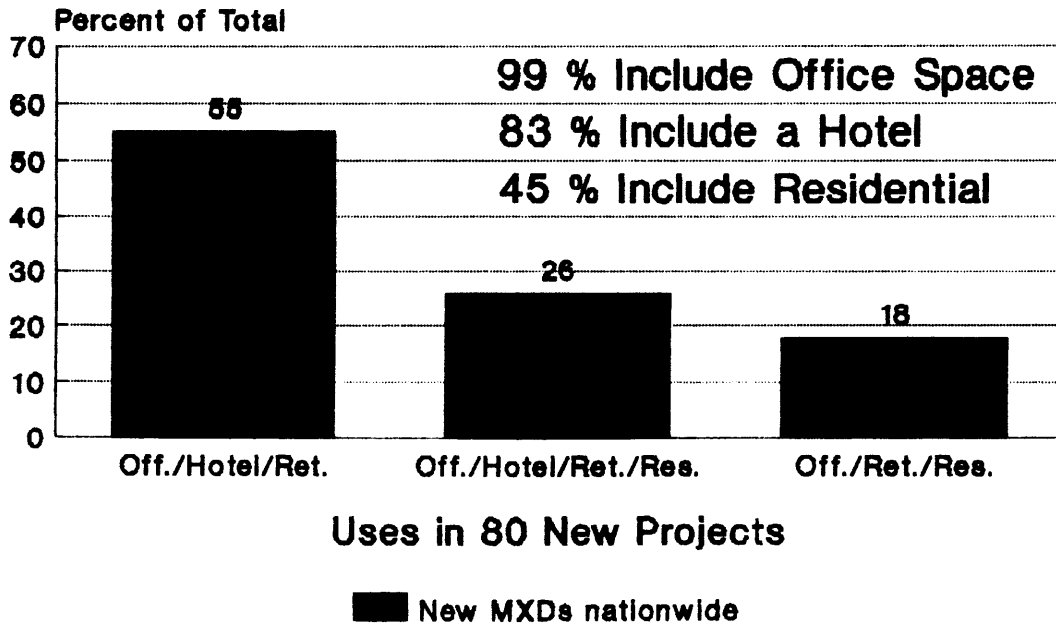
Whatever the approach, newly planned MXDs clearly show testing with different use-mixes, configurations, new market approaches and finance techniques. The MXDs described in the case studies will point out that new projects incorporate knowledge gathered in the experiences of earlier developments, and that while there is a continued reliance on past proven examples, there is also significant variation. Combined with a return to traditional town planning concepts, greater component identity, and a more open orientation, the new generation of MXD projects are indicative of more diversity and a departure from the previously narrowly defined limits of what is a MXD.

The questions that we will focus on in the analysis of the case studies are: What do such projects have in common

with previously developed MXDs? What innovations or refinements to previous MXDs do these projects represent, and are they created for the same reasons as prior developments, or are they an altogether new form of development? Finally, are such ideas simply a form of hype, or are these ideas really heralding a new approach to mixed-use development?

● EXHIBIT 10

Use Combinations Components of 80 new projects



Source: ULI, 1987 construction/planning

NOTES TO CHAPTER 2

1 Dean Swanke, *Mixed-Use Development Handbook* (Washington, D.C.:ULI - The Urban Land Institute, 1987) p.43.

According to this study conducted by the ULI in 1985: Of the 240 projects identified, 60 percent were started in the 1980's, 29 percent were started in the 1970's, with only 11 percent start prior to 1970.

2 Robert Witherspoon et. al., *Mixed-Use Development: New ways of Land Use.* (Washington, D.C.:ULI- The Urban Land Institute, 1976.) p.6.

This was the first definition of MXDs created, which established the key characteristics for analytical purposes. It is the definitive standard referred to by the development community.

3 Michael P. Buckley, *Mixed-use Dynamics*, URBAN DESIGN EXCHANGE, HNTB Newsletter. June, 1987 p.2-5.

4 Michael P. Buckley, *Five principles for Mixed-use Planning*, COUNCIL ON URBAN ECONOMIC DEVELOPMENT NEWSLETTER, Spring 1988.

5 Norman Elkins, Vice president Urban Investment and Development Co., personal interview, June 21, 1988.

6 Swanke, *op. cit.* p.46.

7 Tom Black, Senior researcher, Urban Land Institute, personal interview, June 22, 1988.

8 ULI, *1987 Development Trends* p. 47.

9 Laurence Geller, *Hotels in MXDs*, JOURNAL OF REAL ESTATE DEVELOPMENT, Vol. 2. No. 1, Summer 1986. p. 59.

10 Swanke, *op. cit.* p.347.

11 ULI, *1986 Development Trends* p.48.

12 Richard Galehouse, *Mixed-Use Centers in Suburban Office Parks*, URBAN LAND, August 1984. p 10.

13 Norman Elkins, Vice president Urban Investment and Development Co., personal interview, June 21, 1988.

14 Swanke, *op. cit.* p.1.

15 Richard Galehouse, *Principle*, Sasaki Associates, personal interview, June 17, 1988.

16 Michael P. Buckley, president of Halcyon Ltd. MXD and retail consultants, personal interview, June, 18 1988.

17 Witherspoon, *op. cit.* p. 18.

18 Dimitri Procos, *Mixed Land Use*, pg.7-11. and Swanke, *op. cit.*, pg. 17. The Jane Jacobs book is "The Life and Death of the Great American City."

19 Swanke, *op. cit.*, p. 19-20.

20 Bernard Frieden, personal interviews, July 1988.

21 Joel Garreau, Louis Sklar as quoted in: The Washington Post, The Emerging Cities solving the Equation for Success, Houston's Galleria Is maturing into something of a Community, June 20, 1988, p. A1.

22 ULI Project reference file.

23 Joel Garreau, The Washington Post, June 20, 1988, p. A8.

24 Gurney Breckenfeld, Gerald Hines as quoted in Fortune Magazine, October 1972.

25 Norman Elkins, Vice president Urban Investment and Development Co., personal interview, June 21, 1988.

26 Swanke, *op. cit.* p. 340.

27 J.Thomas Black, *Mixed-Use Development Projects in North America: Project Profiles*, Prepared by the Research Division of the ULI-the Urban Land Institute, 1983.

This reference is the source of summary information on all the known mixed-use projects built prior to 1983.

28 John Bussey, *THE WALL STREET JOURNAL*, A Mazing Place: RenCen's Lost Souls May Get Some Help. June 7, 1988.

29 Ron Blatman, The misuse of Mixed Use Centers, *REAL ESTATE REVIEW*, Summer 1983, p.32-33.

30 Ken Wong, Senior Development Manager, Reston Town Center Associates, personal interview June 23, 1988

31 Alexander Bul and Nicholas Ordway, Shopping Center Innovations, *URBAN LAND*, June 1987 pg. 22.

32 ULI, 1988 Development Trends (Washington D.C.) pg. 47.

33 Dean Swanke, Looking at MXDs, *URBAN LAND*, Dec. 1986, p 20-26.

- 34 Robert T. Dunphy, *Traffic and Parking, A New Generation of Information*, URBAN LAND May, 1988.
- 35 Dean Swanke, et. al. *Looking at MXDs*, URBAN LAND December 1986 p. 21.
- 36 ULI, *1987 Development Trends* p.47-48.
- 37 Phillip Langdon, *A Good Place to Live*, THE ATLANTIC MAGAZINE. March 1988, p. 39-60.
- 38 Procos, *op. cit.*, p.88.
- 39 Buckley, *op. cit.*, URBAN DESIGN EXCHANGE, p. 2.
- 40 Richard Galehouse, *Principle*, Sasaki Associates, personal interview, June 17, 1988.
- 41 Langdon, *op. cit.*, p.39-60

CHAPTER THREE: CASE STUDIES

Introduction-Comparison and Contrast between Cases

The previous chapter has highlighted several projects which have had a significant impact on mixed-use development through precedent-setting designs and development schemes. The projects in the following case studies, similarly, reflect the range of alternatives available to developers of mixed-use developments, and highlight the manner in which developers pattern projects after earlier, successful developments.

Briefly, our four case studies represent a range of notable mixed-use development innovations occurring in the suburbs. At one extreme is Mashpee Commons, a project acclaimed in recent articles as one of a number of "neo-traditional towns" currently being built.¹ The project resembles a Cape Cod town in its look and urban design, but also shares much in common with a contemporary small shopping center. Among the key features is the close integration of pedestrian walkways with village streets allowing automobile access. The project also integrates uses by placing office over ground floor retail shops. In design, the project is characterized by its small scale and more traditional architectural expression. Although anchored by several established stores such as the Gap and Carroll Reed, the developers go to great lengths to provide a mix of tenants not typically a part of such centers, like a hardware store, a post office, elderly housing, and a

church. The initial phase of the project is meant to provide the central mass for later phases emphasizing housing development, and is claimed by the developer to be a the new village center for the region. Its setting and context is essentially rural, but the surrounding area is steadily being developed in the manner of other growing suburban locales.

Princeton Forrestal Village resembles Mashpee Commons in many ways, especially in its evocation of a traditional town and its providing of services, although its services, such as a day care center, are more oriented to the local office workforce than to residents. Unlike Mashpee, its marketing mix is more in line with a specialty festival mall with no anchors. As part of a more bustling "office park" environment, and located on a more heavily traveled thoroughfare, its scale exceeds that of Mashpee (905,000 s.f. compared to the 174,000 s.f. at Mashpee Commons in their initial phases) and offers a stronger office and entertainment component, including a 300 room hotel. In contrast to Mashpee Commons, Princeton Forrestal Village provides a central mass and focus for an already well established commercial center.

Reston Town Center, the next largest project (1.2 million s.f. in its initial phase), also was designed to provide a central focus amid an existing planned community and office park. However, as the existing context was more strongly residential, with 50,000 residents living in the

community, and less emphasis placed on commercial development, it was important to provide a more monumental statement in order to focus attention on the center. As the new downtown for a planned community, it offers a large shopping and entertainment megastructure in proximity to a number of high-rise office buildings, all oriented around a central plaza and walkways. Although more dense than Princeton Forrestal Village (an FAR of 1.4, compared with the Princeton Forrestal Village's density of FAR 0.4) and less characteristic of a "neo-traditional" design, the project still maintains a strong element of openness and pedestrian orientation. Both the land planning for this project and for Princeton Forrestal Village were done by the same designers, Sasaki Associates.

Finally, Tysons II represents the largest effort among these cases (1.9 million s.f. in its initial phase), and most closely resembles previous prototype developments. Similar to the other mixed-use centers the developer intends to provide a focus and "downtown" for Tysons Corner, a giant suburban complex of interconnecting highways and freestanding office buildings. Tysons II is clearly oriented to the automobile, and so, does not integrate as directly with its neighbors as do the previously described, more integrated projects. Tysons II emulates the Houston Galleria prototype by including a three story central enclosed retail mall under a skylight roof, connected to office and hotel buildings, and surrounded by structured

parking. This project offers several refinements from the previous galleria examples, such as taking steps toward spreading the separate components of office, and hotel apart in order to give them stronger identities. This allows for interesting exterior plaza spaces while still maintaining the climate controlled connections between various uses. The initial design plans for Tysons II were prepared by HOK, the architects for both the Houston and Dallas Gallerias. The similarities between projects are quite evident. The architects on the project currently are The Architect's Collaborative (TAC) who, earlier, had provided the architectural design for the Copley Place MXD in Boston. The design of Tysons II is deliberately contemporary and is meant to hold up through subsequent project phasing over the next 15 years.

Tysons II

The project is claimed by the developer to be the new downtown for the Tysons Corner area, and is intended to provide a new focus for the otherwise widely spread out and amorphous suburban setting. This sounds like it may be merely an optimistic claim by the developer, but it is clear that its centrally located site and 4.6 million s.f. development plan is the largest among the last major pieces of vacant land yet to be developed in the area.

Fairfax county, Va., where the development is located, is an area dominated by regional shopping centers and loosely configured and widely dispersed single-use high rise office buildings. The site is adjacent to several major radial arterial highways, and is 15 miles from downtown Washington D.C. Although as recently as 30 years ago Tysons Corner consisted of apple orchards and cow pastures, it is, today, a nationally prominent business center. Construction of the Capital Beltway(I-495) and the Dulles Airport Access Road in the 1960s spurred Tysons Corner to change from what was essentially a rural community to a business suburb. Proximity to the Washington CBD and access to suburban clients and markets are reasons that corporations, consisting largely of government contractors, have moved to the area. Tysons II is 17 miles from Dulles airport, 25 miles from National Airport, and is located at the confluence of the Capital Beltway (I-495), Route 123 and the

Dulles Toll Road. The area is similar to other automobile oriented suburbs around the country in that it is located at the confluence of several major traffic corridors. In this sense, it is similar to the setting of Houston's Galleria.

The first phase of the project, to be completed in the fall of 1988, incorporates a three level retail galleria mall with three anchor stores and 125 other shops, creating a total of 800,000 s.f. of retail development. Also included in the project will be a freestanding hotel and two 17 story office buildings. This 1.9 million square foot mixed-use core will ultimately be surrounded by six other freestanding office buildings and a second hotel, all assembled on 117 acres, and totaling 4.6 million s.f. of space. Parking is configured into a two level structured parking deck providing pedestrians access to both first and second levels. In general, the development is oriented to accommodate the automobile: wide access roads bring visitors and workers directly off of the major highways and provide direct automobile access to parking structures.

This project is described by the developer as merely a refinement to the Houston Galleria prototype, pioneered by Gerald Hines, Co. in the late 1960s. It is similar to that project in its market orientation to the luxury market. The project was designed by the same architects as the Houston Galleria, and has a nearly identical three story mall. Subtle refinements and improvements to this prototype have been incorporated in Tysons II such as providing an upper

level food court as a draw, and orienting the office users away from shoppers. Among other improvements, the trademark barrel vault skylight of the Houston Galleria has been replaced by smaller skylights in order to reduce the heat load on the building.

Another difference, in comparison with previous galleria developments, is the greater emphasis on component identity at Tysons II. To achieve this identity, the offices and hotel have been pulled away from the retail mall and are made to be essentially freestanding buildings, inter-connected by enclosed or covered walkways. According to the developer, market analysis has proven the value of creating strong separate identities for the individual uses in the Washington D.C. area. To accomplish this objective, the project orients the hotel and office developments to an outside public plaza, while access is gained from a high image "project address street" separate from that of the retail mall. The retail "galleria" is oriented to its own "retail address street" and adjacent structured parking decks. This attempt to clarify and simplify the layout is intended to maintain the individual identity of each component.

Tysons II is a phased project, with the mixed-use core at the center of a surrounding office park. The outlying offices are planned to be built later and will not have the advantages of proximity to other uses that the core has,

although they will benefit primarily from the image of the adjacent MXD.

The main, upper level parking deck accesses the three level retail mall at the mid-level to enable shoppers to be no more than one level from any possible retail destination. The parking garage has floor to floor heights that are greater than standard height. These improvements are intended to safeguard patrons from a feeling of being "lost" and "narrowly confined," feelings that the developer contends are inherent in large MXDs such as the "Dallas Galleria".

In conjunction with a regional transportation district (TYTRAN), the project has been involved, for five years, with roadway and improvements planning. Construction of these off-site improvements is costing \$14-\$15 million, and precedes actual project construction. Included in this set of public improvements is the widening of Rt. 123 to six lanes, the building of an off-ramp from the Capital Beltway, the completion of a the six-lane International Drive, and the extension and widening of roadways adjacent to the project.

Regional Context and Location Plan

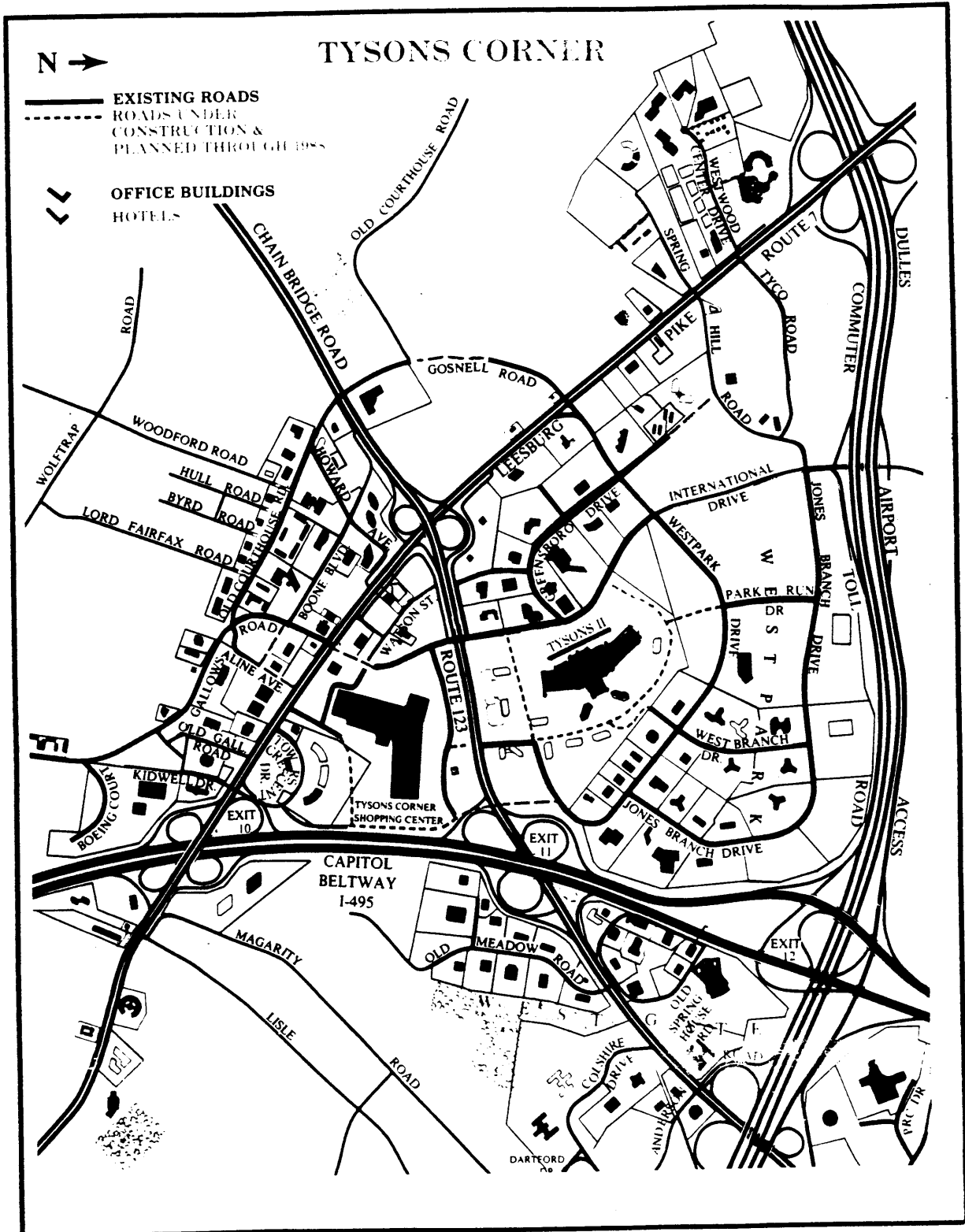
Project: Tysons II

Location: Tysons Corner, Fairfax County, VA. (Suburban Washington D.C.)

Phase 1: 85 acre site

Phase 2: 117 acre site

Approximate scale: 3"=1 mile



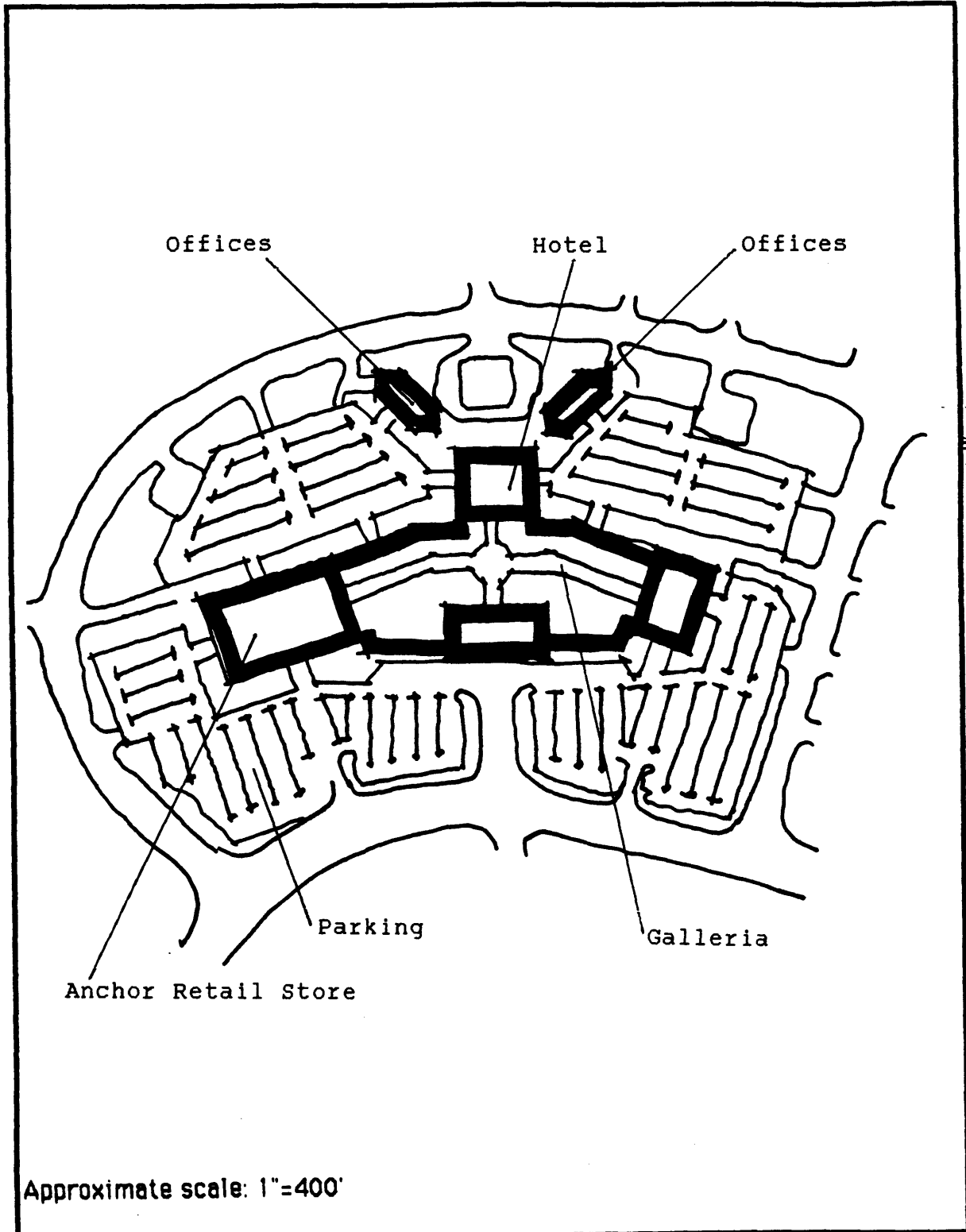
● Comparative Site Plans

Project: Tysons II

Location: Tysons Corner, Fairfax County, VA. (Suburban Washington D.C.)

Density: 0.5 FAR 1,900,000 total s.f.

Phase 1: 85 acre site



Reston Town Center

The pioneering "new town" of Reston has had a significant and pervasive impact on both suburban and mixed-use development through its precedent-setting development scheme. The history of development at Reston has been extensively chronicled in other sources. However, the significance of the Reston "Lake Anne Center" as a MXD prototype should be noted.² Through the construction of village commercial centers, the developer, Robert Simon, is credited with providing an example of a development that paved the way for the increased employment of the mixed-use concept. These developments are characterized by high rise apartments and shops assembled around an open plaza. Reston Town Center, which is currently under construction, will, similarly, be a mixed-use development built around an open retail main street and plaza, and is described here to highlight the implications of such innovation upon the design of future MXDs.

The prevalent pattern of suburban development prior to the 1960s, characterized by separating residential areas from work areas, and service areas from cultural amenities, was deliberately avoided in the planning of Reston. The Lake Anne Center integrated many of the elements of the urban cityscape: it offers high rise condominiums, apartments located above stores, and a lakeside plaza

created to provide a gathering place. As the story goes, the developer was familiar with how residences and the workplace could be closely integrated, having owned Carnegie Hall and nurturing great fondness for the quality of urban life in his native New York. Visually, Lake Anne Center with its closely packed crescent of apartments over shops curling around a waterfront plaza, was modeled after the traditional Italian town of Portofino.

Although Reston's Lake Anne Center represents a vanguard project in its clustering of residential units around a multiple-use center in a suburban setting, it has been only partially successful as a "people magnet" and as an economically viable shopping center. There are many reasons offered: the project was too far in front of the actual market in setting urban patterns such as residences over shops in a suburban setting; it was too isolated from access roads; and it is commonly believed that the project simply did not provide enough of a critical mass.³ Nevertheless, the Lake Anne Village Center is considered a seminal development, well documented in design literature, and nationally acclaimed as an important innovation in suburban planning.

None of the four other village centers subsequently built were large enough to create a viable commercial focus either. The Reston Town Center is, therefore, planned to become the heart of Reston. Today, after twenty five years and three successive developers, the "downtown" originally

conceived in the Reston master plan is finally being built. The original master plan for the 7150 acres of Reston, originally approved in 1962, called for a 150 acre town center that would ultimately serve as Reston's downtown. During the 1970s, Gulf Reston, the developer at the time, felt that market forces strong enough to support a downtown center were not present, and, thus, attempted to sell 50 acres of the high density land to the county as a site for a government offices. Failing that, they tried to build a hospital.⁴ Currently, Mobil Land, the latest developer, is undertaking a plan for the creation of a dense mixed-use "town center." It is a different kind of commercial development than anything previously undertaken in Reston, which has. Instead of offering typical low density, campus-style offices, with surface parking, Reston Town Center is being built to densities that are commonplace in central cities, and features office towers and a retail development combined with structured parking. An open configuration and a design oriented to pedestrian usage is intended to create a destination for people at all times. Hotels, restaurants, open space, and cultural facilities will help create this draw.

The project is composed of tightly interlocking but separate freestanding buildings, many of which integrating uses such as offices over retail shops. An architectural competition held in 1986 produced a design for a high profile, high density core of twin 12 story office

buildings, retail, 12 screen cinema, hotel and restaurant space, to be combined in later phases with residences. The adjacent development of 1400 dwelling units is planned to follow the completion of the town center, although no firm development proposal today exists. All of these activities will be packed closely along a distinctly non-suburban, "Main Street" promenade. In a central plaza will stand a glassed in greenhouse, an arts center and conservatory for concerts. Later phases will complete a much larger downtown: plans are in place for a second large hotel, additional large office buildings, including a much higher tower, and 600-800 apartments to be located in planned residential neighborhoods located within walking distance from the project under construction. In the first stages, Reston's downtown will be surrounded by surface parking lots, in every way resembling those found at other suburban shopping centers. However, future expansions will fill in the surface lots with multi-story garage structures concealed behind office facades.

The Mobil Land Company, Reston's owner since 1975, initially considered plans for either a marketplace/bazaar with low rise offices surrounding it or a typical, "pure vanilla" shopping mall. In 1983, a development plan described by the developer as "just more of the same suburban development, but just a little bit more squeezed together" was presented to the public.⁵ However, the plan was not received well. ULI assailed the plan and

essentially reported that it did not represent the innovative effort it was Reston's duty to provide. Because of its planning influence and unique place in development history as a model community, ULI felt the development should have a "greater focus and should represent urban development innovation."

The impact of this public opinion was crucial, and the owners of the land felt that they could do better. This led them to conduct a competition to solicit development proposals. Himmel/MKDG won this competition in 1983 by creating a more desirable urban concept. The current developers maintain the importance of creating a pedestrian experience with active, memorable public spaces. In October 1986, the architecture competition was conducted and the present plan was developed. Design objectives called for cultural facilities and a series of parks, all to be placed within a tightly configured urban street grid. In keeping with this, the plan, designed by RTKL of Baltimore, incorporated an axial series of plazas and parks with central space defined by the curving facades of the two major office buildings. The hotel is located along the retail spine. While the developers' background literature tends toward promotion, and thus, some overstatement, it, nevertheless, gives some insights into the thinking and underlying objectives behind their plans:

Reston Town Center is a refinement of mixed-use development. Unlike typical suburban developments—free standing office buildings and hotel with some

retail space at ground level- Reston Town Center organizes its major elements around retailers. And puts those elements within walking distance of each other. RTC is an exciting alternative to a mall.⁶

Critics are heralding the design as an innovative downtown comparable to the precedent-setting "new city" design.⁷ While these claims may be overstated, it is true that a mixed-use project of its size and density, characterized by an open orientation and structured parking has not been accomplished in a suburban context before.

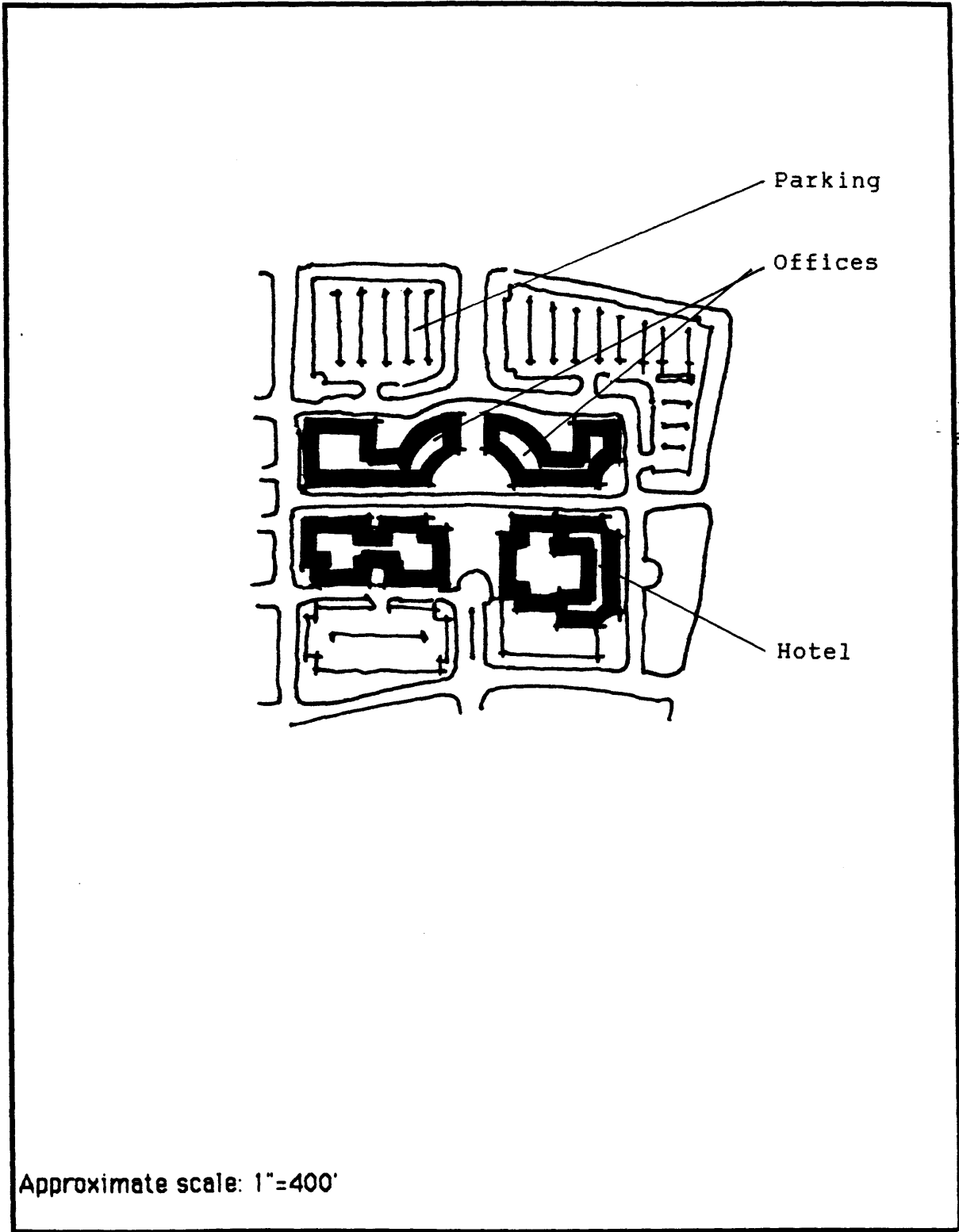
● Comparative Site Plans

Project: Reston Town Center

Location: Reston, VA. Suburban Washington D.C.

Density: 1.4 FAR 1,200,000 total s.f.

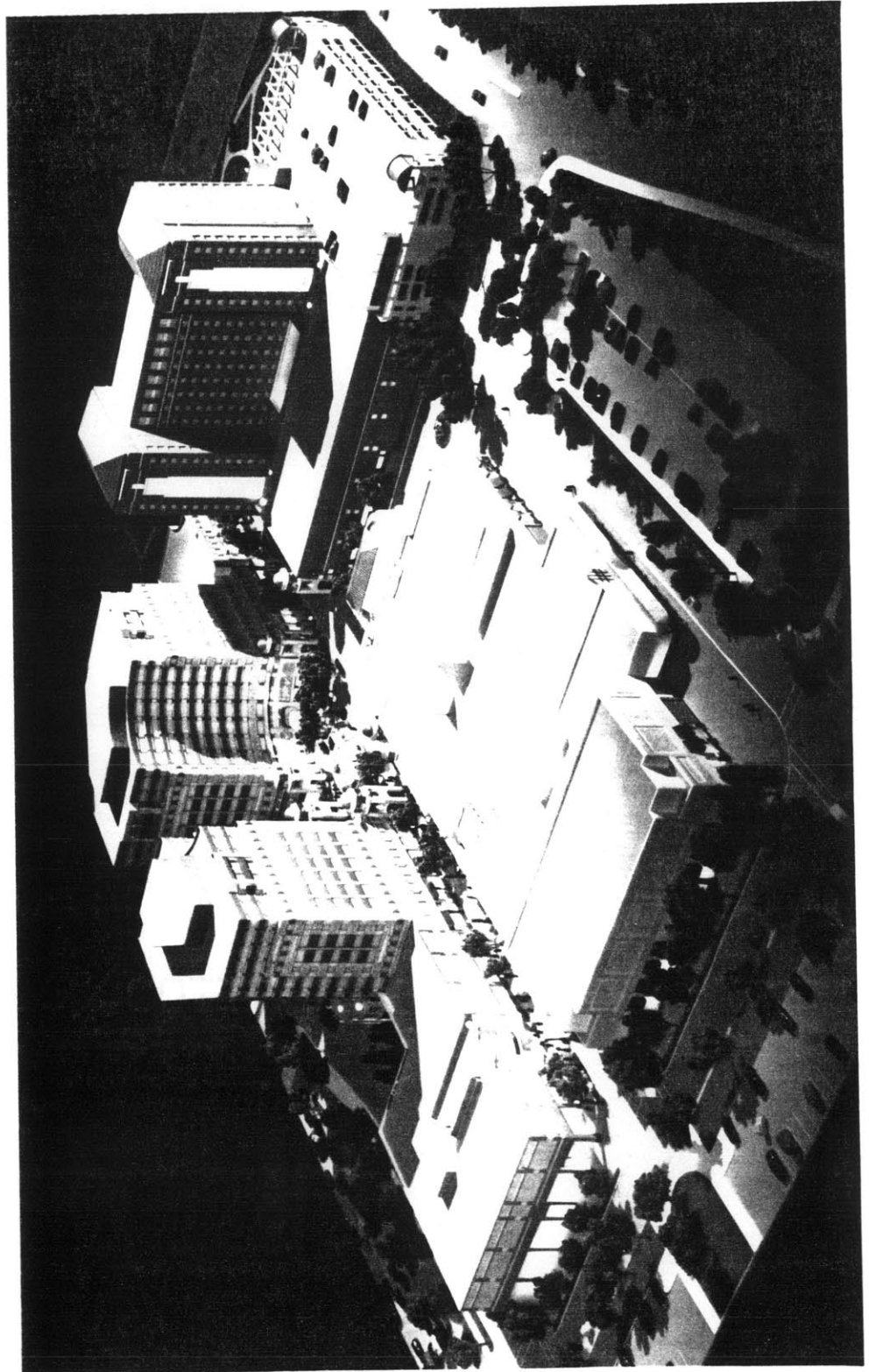
Phase 1: 20 acre site



Approximate scale: 1"=400'

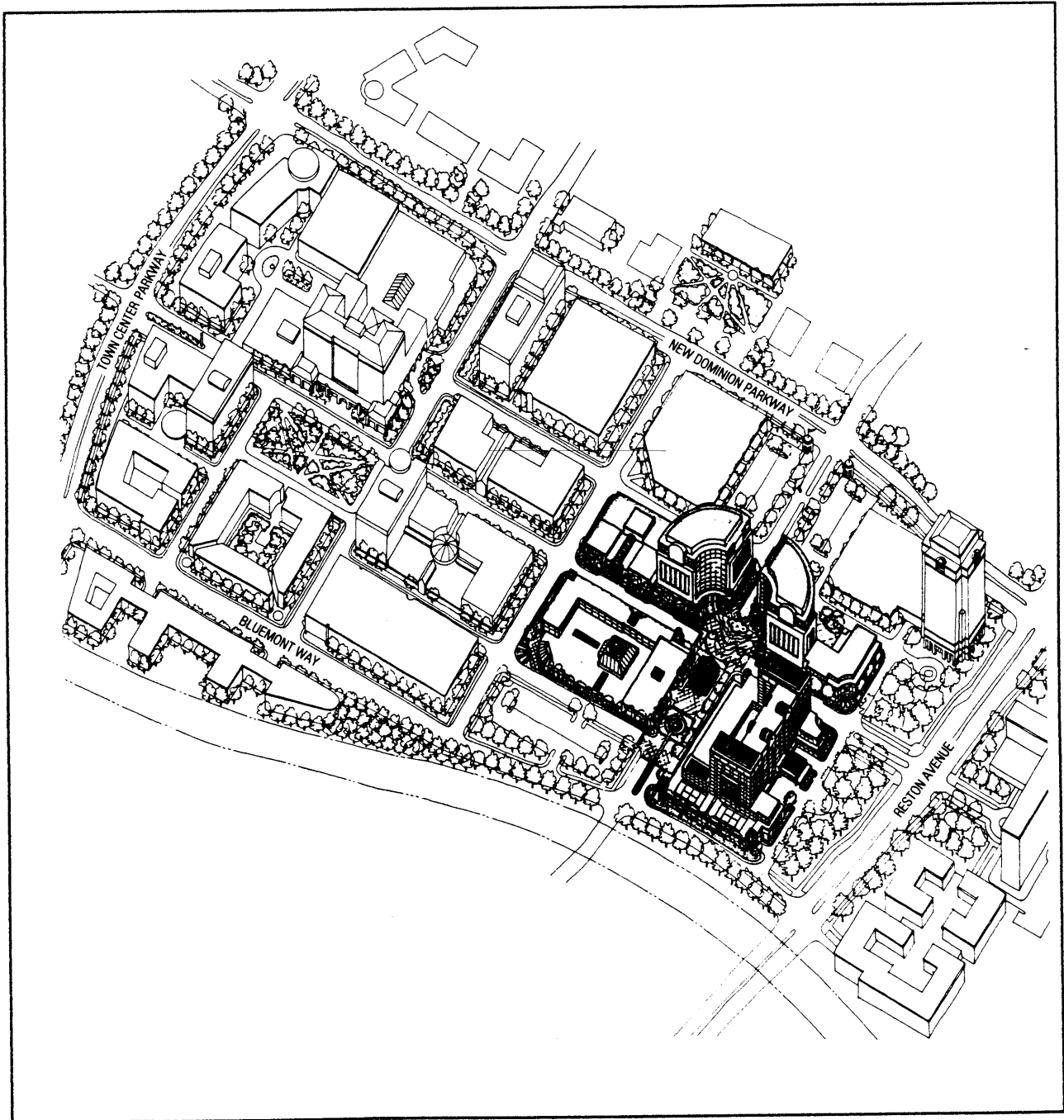
● Reston Town Center

View of the project model showing the retail block in the foreground right, the hotel in the background right and the twin 12 story office towers in the background left.

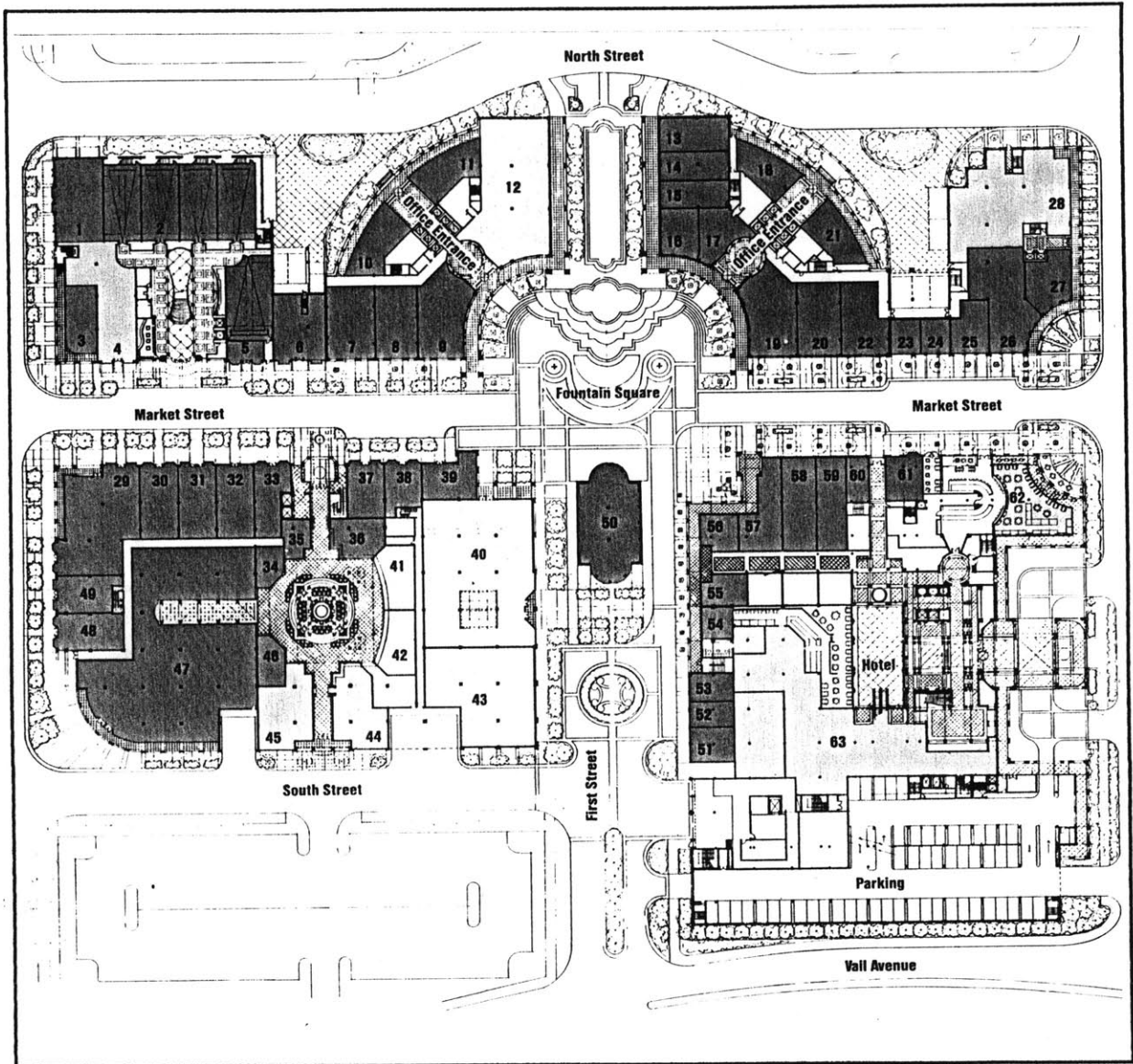


● **Reston Town Center**

Axonometric drawing showing the relationship between the 1.2 million square foot phase one project (buildings are shaded) and the planned 8 million square foot downtown.



● Site Plan /Ground Floor Plan
Reston Town Center



■ Retail **■ Restaurant**

- | | | | |
|-----------------------------|---------------------|-------------------------|---------------------|
| 1. Pharmacy | 16. Footwear | 32. Footwear | 48. Chocolates |
| 2. 2-Level 11 screen cinema | 17. Newsstand | 33. Specialty | 49. Body Care |
| 3. Gifts | 18. Print Shop | 34. Florist | 50. Apparel |
| 4. Cafe | 19. Apparel | 35. Ice Cream | 51. Specialty Foods |
| 5. Gifts | 20. Beauty Care | 36. Kitchen Accessories | 52. Specialty Foods |
| 6. Records and Tapes | 21. Financial | 37. Apparel | 53. Specialty Foods |
| 7. Books | 22. Apparel | 38. Children's | 54. Apparel |
| 8. Art Gallery | 23. Accessories | 39. Jewelry | 55. Prints |
| 9. Apparel | 24. Costume Jewelry | 40. Major | 56. Specialty |
| 10. Financial | 25. Footwear | 41. Restaurant | 57. Apparel |
| 11. Office Furnishings | 26. Apparel | 42. Restaurant | 58. Apparel |
| 12. Restaurant | 27. Jewelry | 43. Restaurant | 59. Apparel |
| 13. Stationer | 28. Restaurant | 44. Restaurant | 60. Accessories |
| 14. Cameras | 29. Apparel | 45. Restaurant | 61. Scents |
| 15. Electronics | 30. Apparel | 46. Deli | 62. Restaurant |
| | 31. Apparel | 47. Gourmet Foods | 63. Restaurant |

Princeton Forrestal Village

Princeton Forrestal Village is a 130 acre commercial center located in the midst of a 1600 acre office/research and residential development. The design concept is intentionally patterned after a traditional New England village, and features typical urban forms such as a public square, a main street, a pedestrian mall, various landmark towers and other small-scale architectural elements. The design, however, also incorporates typical contemporary suburban concepts as perimeter parking and planned vehicular circulation on all sides. The development is claimed to be designed "to be unlike a typical mall", in plan and open orientation. Its small village look creates a strong traditional feel and a pedestrian emphasis. The designer of the project, Richard Galehouse, of Sasaki Associates refers to the project's precedent:

"its framework of square and street should provide the [activity and character] of its urban, retail based counterparts- the festival markets such as Faneuil Hall Marketplace in Boston".⁸

The site of Princeton Forrestal Village is located entirely within a loosely organized, automobile oriented suburban commercial office park. The project is intended to be a shopping center for the adjacent Princeton Forrestal Center office development and a upscale retail center for the Route one corridor between New York and Philadelphia.

The underlying goal of the Princeton Forrestal Village, according to the developers, is to provide an alternative to the suburban office park and typical enclosed shopping center, and take advantage of the captive market surrounding the project. The decision was made by the developer to have the property rezoned (downzoned, losing 300,000 sf of permitted area) from a previously allowed density accommodating three office buildings. It was believed that the greatest long-run value could be created, not by adding more single use office space in the area, but by mixing uses together and creating a retail oriented center with services and high end retail goods.⁹ This solution, it was felt, would better answer the needs of the market, a market in which there was an unmet demand for services and amenities for the surrounding office population. It was thought that this use would also produce less traffic than the previously zoned office use, particularly during rush hours when the problems in the surrounding roads network would be at its worst.

The project configuration is of separate freestanding buildings. But, uses are integrated. As an example, two levels of professional offices are located above ground floor retail shops. A 300 room Marriott hotel is the primary anchor use and provides focal point within the town square. The project contains over 80 retail shops, 20 restaurants, a health club, and a daycare center. The primary parking configuration is that of surface lots

surrounding the village center. Two outlying office parcels adjoining the village will ultimately be completed with the addition of 800,000 s.f. of office space in lowrise buildings.

There are several unconventional features that make it unlike a standard suburban retail project. For example, there are no anchor stores, there are no internal air conditioned corridors, and the project gives over almost a quarter of its area to upper level office space. Another, somewhat unconventional, element for a suburban retail center is second level retail shops, which, more frequently, are found in urban settings (like the arcade structures of downtowns), or in enclosed malls.

The design concept for the village, similar in design to other retail developments, is based upon a tightly organized triangular framework of streets organized around a retail "Main Street" and village squares intended to establish a pattern of paths and destination uses. A public square, fronted by the hotel and also lined with retail uses, is the landmark open space and main anchor of the triangle. Parking is provided at the perimeter of the village in surface lots, but automobiles are also allowed into the square in order to allow browsing from the car and animation of the space during non-shopping hours. People and cars mix in a way similar to what is observed in a small town. The precedent for this concept, according to the designer, is the Country Club Plaza in Kansas City.

A two block long shopping "Main Street" with two level shopping extends from the main square to a food court pavilion adjacent to another open plaza, the second leg of the triangle. The health club is the third anchor of the triangular plan. Throughout the development, retail and food service are located along the ground level while office space is located on the second and third levels. The project includes a "gourmet supermarket" as an important draw, which the developer considers to be a service and amenity to the office workers and the adjacent neighborhoods.

Finally, the village is programmed with events (parades, biathalons etc.) to create activity and help to establish the "feeling of a small town." But, regardless of such efforts, critics have pointed out that the project is a "town" in name alone. They claim that when the retail shops close, the project is also essentially closed and locked up, thus defeating the point of a thriving community. In addition, while the project was modeled after a traditional small town business district, the idea of connecting the surrounding residential neighborhoods was thwarted by fences erected at the request of the neighbors.

The developer has taken steps to provide efficient management of the entire project. As an example, the developer followed the ULI theory that shared parking would be more efficient. They were able to shave 500 spaces from the number that would otherwise be required.

The office space is leased and marketed primarily to small (1000 sf) users and is the least successful part of the project, according to the developer. The space is approximately one third of the projects area, but produces only 20% of the projects revenue. The area has a strong office market: a study done in 1984 claimed that office buildings in the Princeton Forrestal Center (the office park within which the "Village" is located) were obtaining rents 20 percent higher than buildings outside of the park. The developer attributes the current poor performance of the office component to an inefficient office configuration and a poor image for the office space.

The developer has referred to the Country Club Plaza, Kansas City, and various festival marketplace retail developments handled by The Rouse Co. as precedents for this project. Toombs was involved in many of these festival marketplace projects as an employee of Rouse.

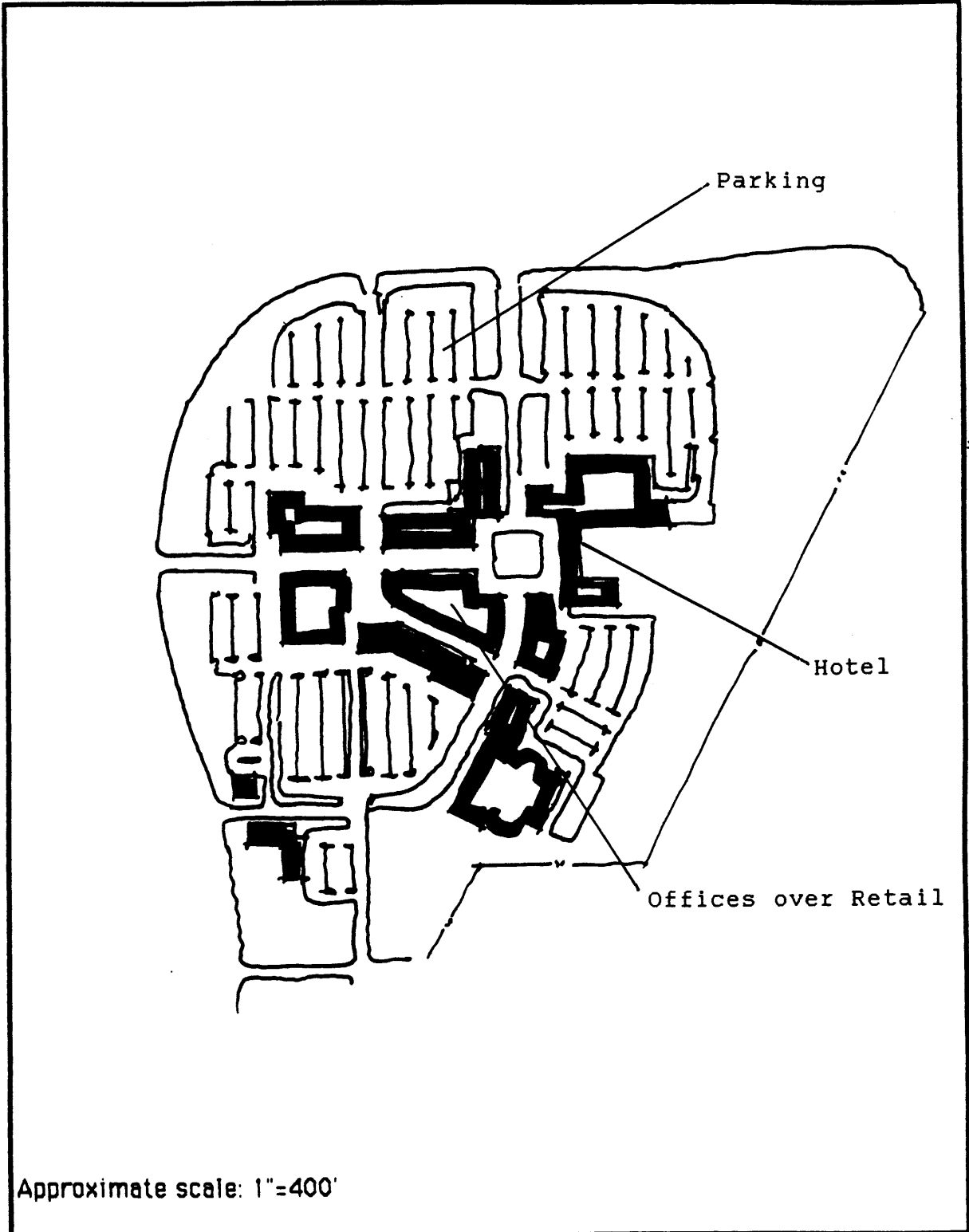
● Comparative Site Plans

Project: Princeton Forrestal Village

Location: Plainsboro, NJ

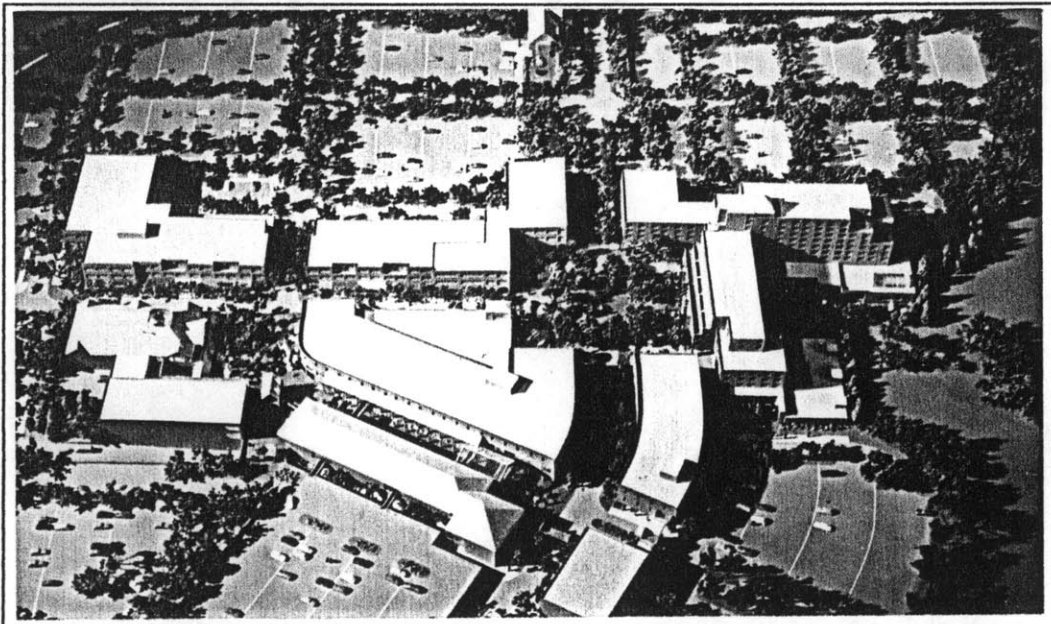
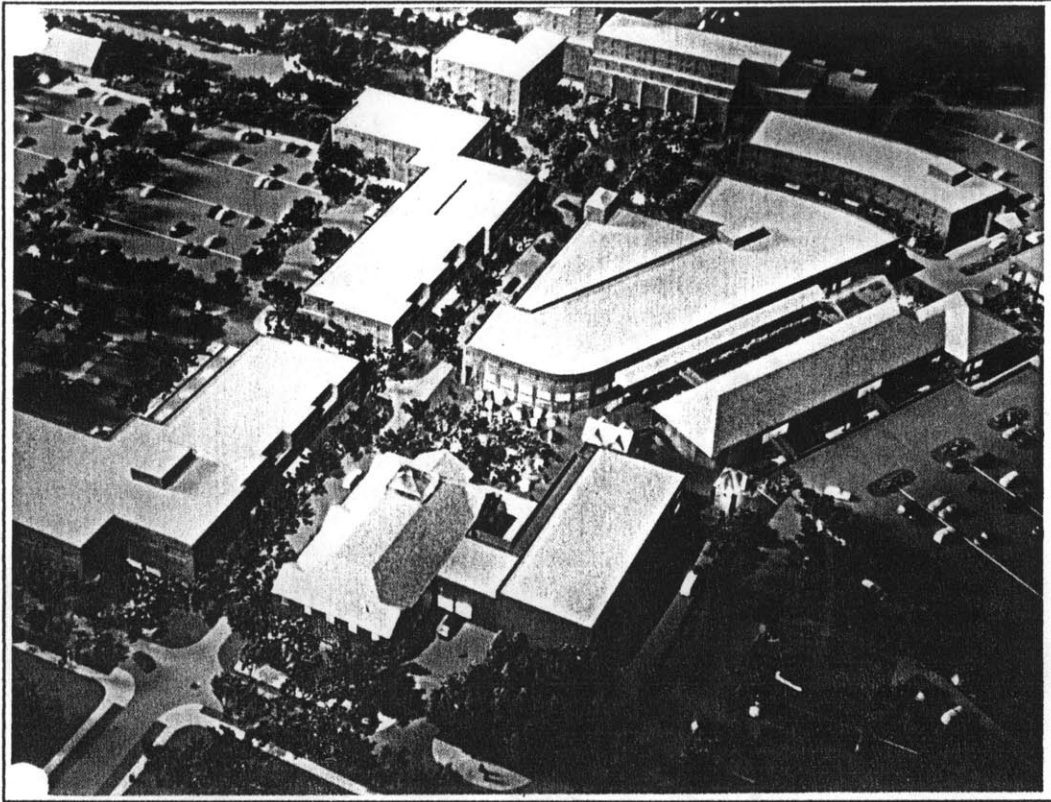
Density: 0.4 FAR 905,000 total s.f.

Phase 1: 57 acre site



● Princeton Forrestal Village

View of model showing the open orientation of the retail shopping street and public square in front of the hotel. The 200 by 200 foot- public square, fronted by the hotel and edged with retail uses, is the key open space to the project. Parking is provided at the perimeter of the development.



Mashpee Commons

The 170,000 s.f. mixed-use development is essentially a small suburban commercial retail center drawing upon early examples of commercial villages for its design framework. It is planned to be a re-creation of a nineteenth century traditional town, combining features of village centers like Nantucket, Massachusetts and Woodstock, Vermont. However, the developers have also incorporated characteristics of contemporary shopping centers, such as easy vehicular access and parking, coordinated common areas, and complete marketing and promotional support.

To establish the design of Mashpee Commons, the developers studied other New England towns and used successful and common elements of those older towns. A designer on the project gives an insight into the developer's thinking by stating that: "the nineteenth-century towns are completely viable prototypes".¹⁰ The developer however, candidly pointed out that since most of these well liked town centers were built before the automobile, they have parking and access problems. These problems have been addressed at Mashpee Commons by providing surface parking lots and vehicular access throughout the village center. However, the parking configuration at Mashpee Commons is outlying surface parking lots, presently making the nineteenth century village idea difficult to visualize.

Unlike most towns on Cape Cod, the Mashpee area is relatively free of development and lacks the kind of village center that other Cape towns have. In the 1970's when the demand for summer homes created a boom in construction in the area, Mashpee was involved in a drawn-out land ownership dispute with the Wampanoag Indians. The effect was that no property could be bought or sold while the case was open. When the town eventually won the suit in 1979, town planners decided to establish a master plan for development that would accommodate the new growth. In August of 1985, Fields Point, the developers of Mashpee Commons, reached an agreement with the town to convert the local shopping center into a town center with a central post office, fire and police stations and smaller stores.

The 74,000 sf New Seabury shopping center provides the core upon which Mashpee Commons is built. Built in 1962, The New Seabury shopping center reflects the typical design of the period by facing the main highways and surrounding itself with surface parking lot. The center is being converted into a small downtown, with shops and upper story offices organized around a series of plazas, walkways and streets. Among the stores planned or currently leased are basic local service establishments and conveniences such as a hardware store, a liquor store and a post office. These are considered important generators of activity even if the rent they can pay does not approach that of other more typical retail uses. An anchor department store is not

planned, although a number of larger upscale stores provide the highest rents.

Buildings are being designed by several architects to meet a specific "Traditional Neighborhood District" zoning code set up by the developer. New residential neighborhoods are planned within walking distance on land adjacent to the center and owned by the same corporation.

A new internal three block long main street runs down the center of the project, its central intersection forming a plaza intended to be the focal point of the new downtown. Eventually, a variety of two story buildings with ground floor retail will line the streets. The new bank building and post office are complete, as are the public library and several retail structures. A 24 unit elderly housing project and a large church parish center are being built. The civic and religious buildings cluster around a new town commons with a bandstand at its center. A town library has been built on one side of the green, The final building facing the green will be either a town hall, built by the town of Mashpee on land provided by the developer, or an inn. The developer points out, in sum, that: "Mashpee Commons will become a true town center providing all the services and shopping opportunities typically found in a well-established community."¹¹

The project, however, has not been without its problems. There has been very little market acceptance of the upper level office space; however the developers feel

that the two story height must be built to create the scale of the downtown. They acknowledge that they are really just warehousing space on the upper level. However, the concept of professional office space used by doctors, lawyers, and other services occupying space in the village as a draw to other patrons is an integral part of the developers concept. The master plan calls for the addition of another 40,000 s.f of upper level office in phase two despite the lack of acceptance of the presently built area.

The developer, Buff Chace, has stated that there are personal objectives that motivate him to do this project in an unconventional manner. First of all, the site was acquired by his grandfather years ago, and Chace feels that with the site "came a deep sense of responsibility." He wanted "to do something we could be proud of".¹² Doug Storrs, one of the developers, highlights some of the non-monetary reasons behind their drive to do something other than the commonplace alternative: "we didn't want to extend a shopping center - for us, the idea of building a town was much more interesting".¹³

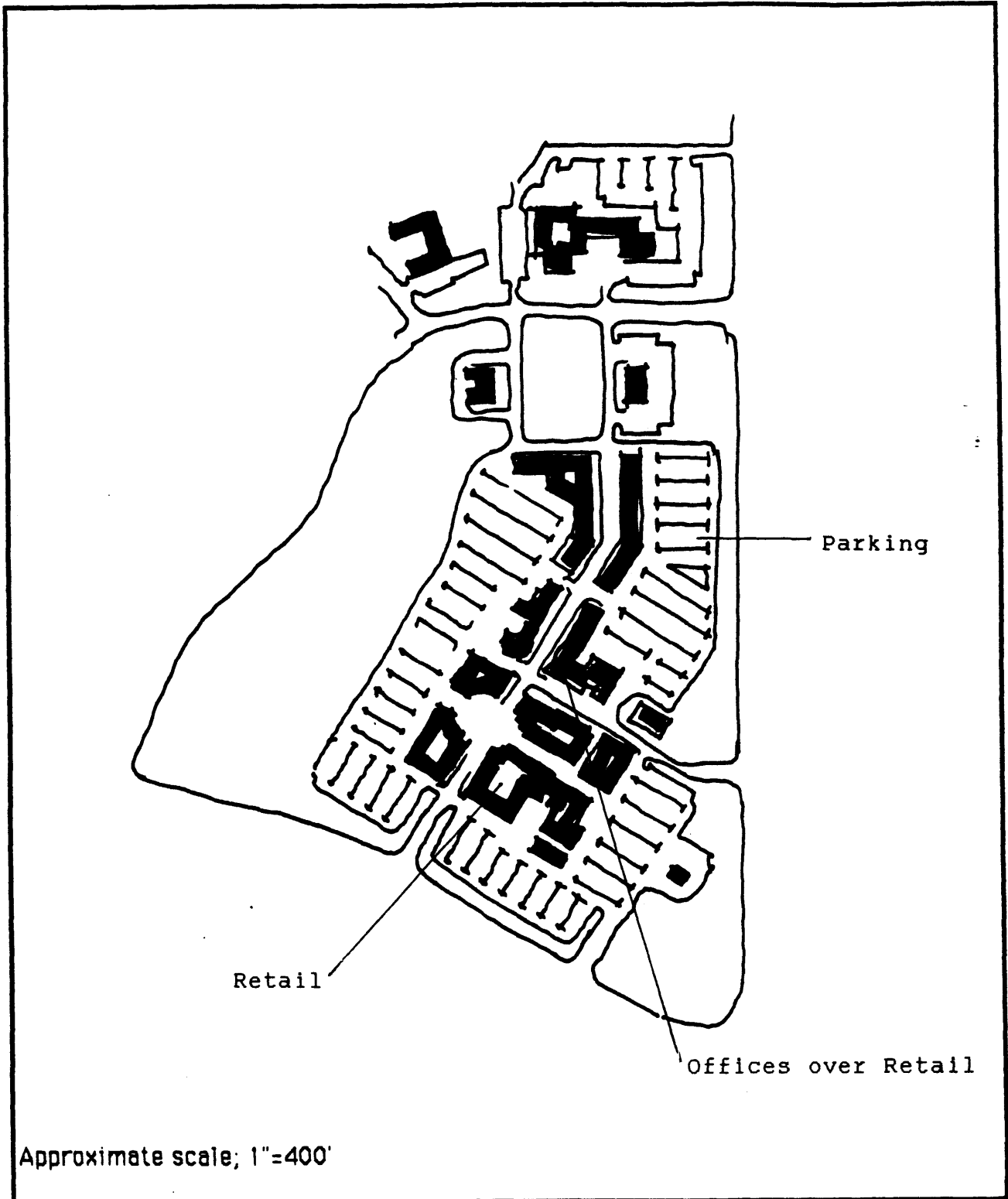
● Comparative Mixed Use Development Site Plans

Project: Mashpee Commons

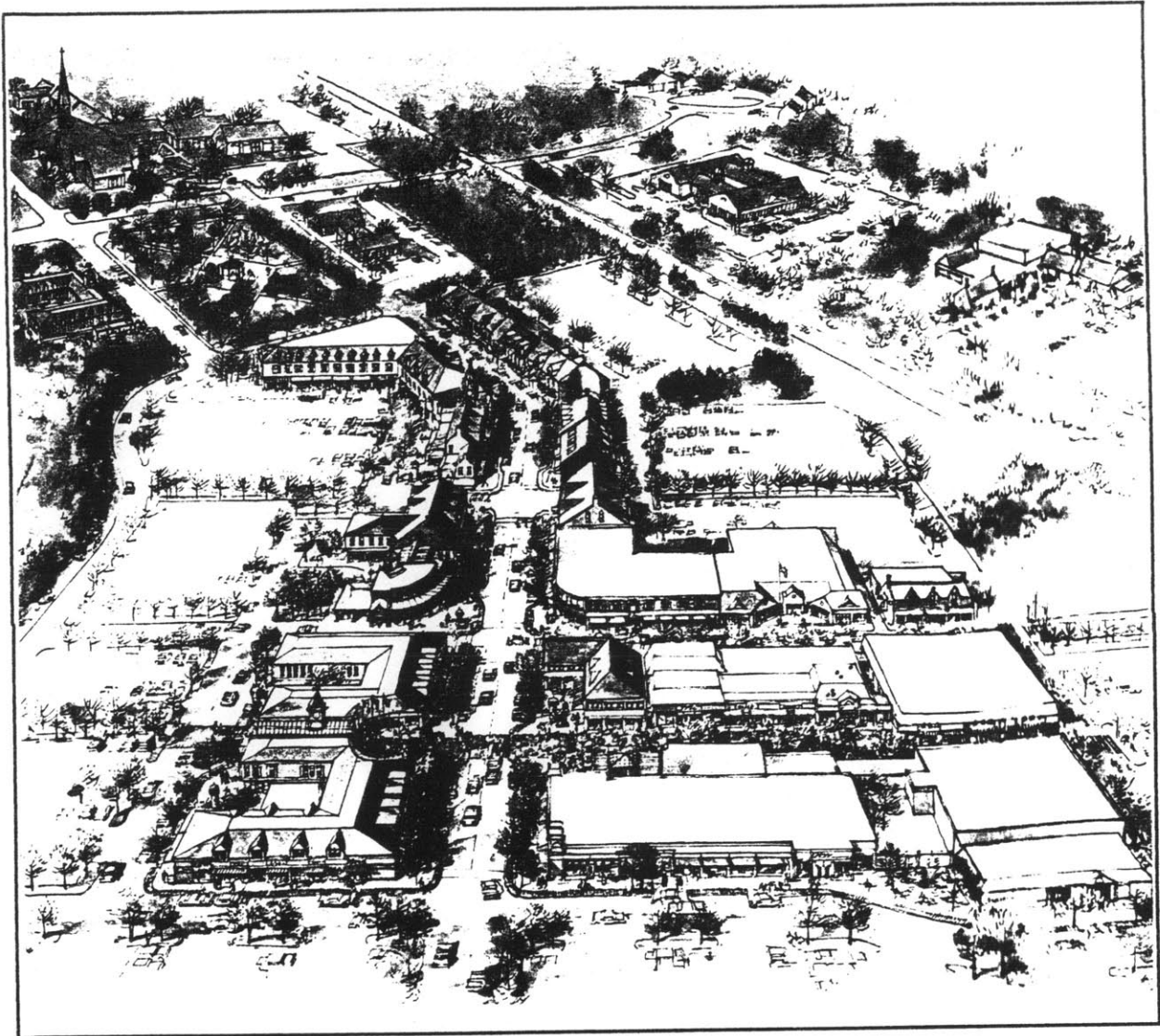
Location: Mashpee, MA

Density: .15 FAR 174,000 total s.f.

Phase I: 38 acre site,

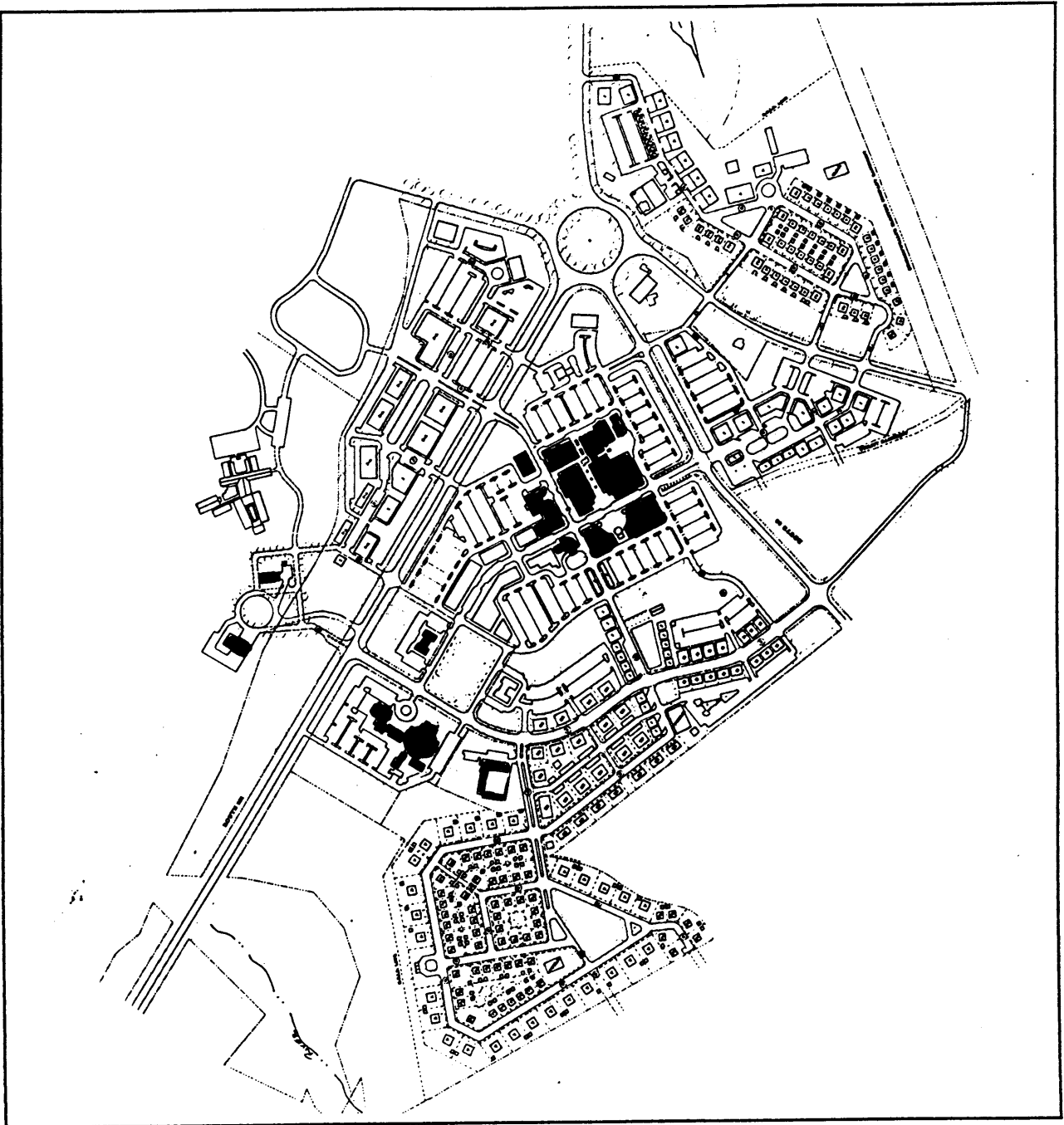


● Illustrative View
Mashpee Commons Development



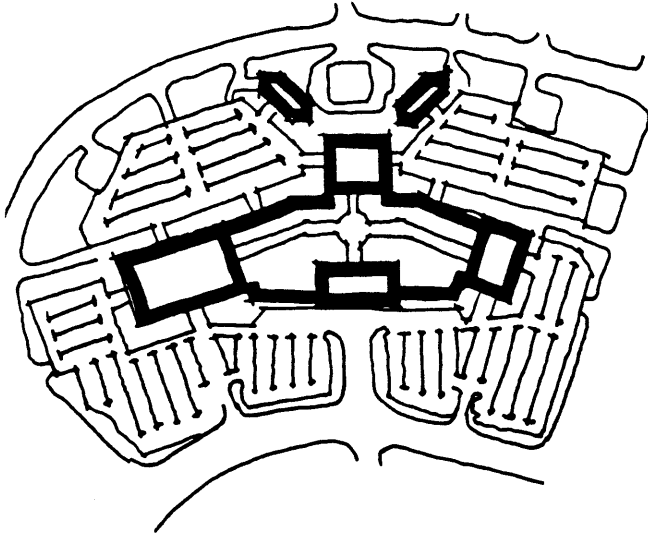
● **Mashpee Commons, Mashpee MA**

Site plan showing later residential phases. Phase one development of 174,000 s.f. is shown in black. The final plan calls for 100 residences, an additional 40,000 s.f. of upper level offices, and 100,000 s.f. more retail.

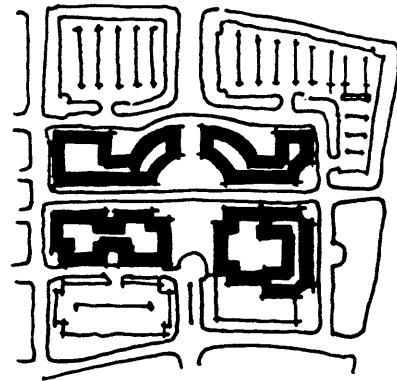


● Comparative site plans of Case Studies

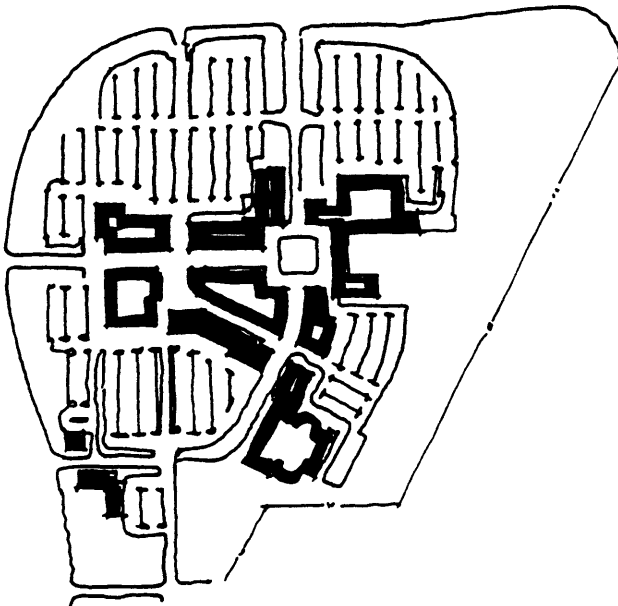
Project: Tysons II
Location: Tysons Corner, Fairfax County, VA.
Density: 0.5 FAR 1,900,000 total s.f.
Phase 1: 85 acre site



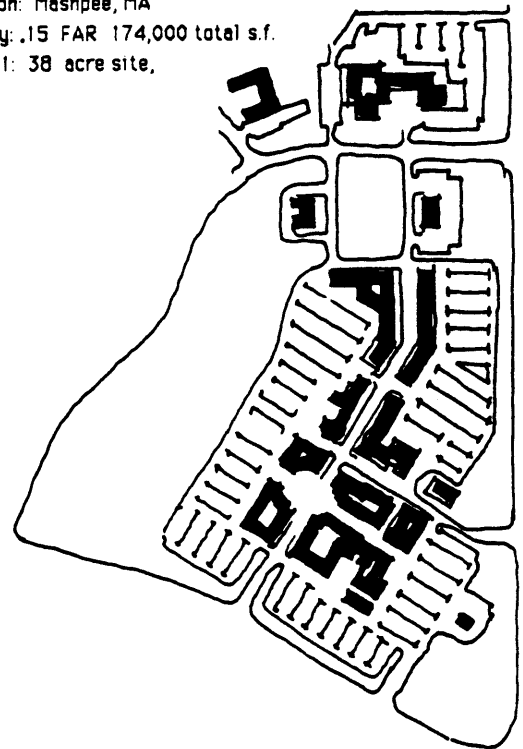
Project: Reston Town Center
Location: Reston, VA. Suburban Washington D.C.
Density: 1.4 FAR 1,200,000 total s.f.
Phase 1: 20 acre site



Project: Princeton Forrestal Village
Location: Plainsboro, NJ
Density: 0.4 FAR 905,000 total s.f.
Phase 1: 57 acre site



Project: Mashpee Commons
Location: Mashpee, MA
Density: .15 FAR 174,000 total s.f.
Phase 1: 38 acre site,



Notes to Chapter 3

- 1 Langdon, op. cit. p. 59-60.
- 2 Tom Grubisich, Reston: The first Twenty Years, Reston Publishing Company, Inc. 1885. In a forward written by Francis Steinbrenner, former president of Reston Land Corp.
- 3 Ken Wong, Senior development Manager, Reston Town Center, personal interview, June 24, 1988.
- 4 Grubisich, op. cit., p. 108
- 5 Dean Swanke, Urban Land Institute researcher, personal interview. June 23, 1987.
- 6 Reston Town Center associates, Project brochure, 1988 p.14.
- 7 Ben Franklin, The New York Times, Downtown Look for a "New Town" Dec. 21, 1986. and ARCHITECTURE MAGAZINE, Feb., 1987.
- 8 Richard Galehouse, Mixed-Use Centers in Suburban Office Parks, URBAN LAND, Aug. 1984, p.11.
- 9 Scott Toombs, The Linkage of Infrastructure Costs to Private Development. The Real Estate Finance Journal, Fall 1987 p.40-43.
- 10 Phillip Langdon, Andreas Duany as quoted in: A Good Place to Live, The Atlantic Monthly, Mar. 1988.
- 11 Doug Storrs, Developer of Mashpee Commons, personal interview, July 27, 1988.
- 12 Mark Muro, Buff Chace as quoted in: The Boston Globe, A Town Rises.
- 13 Joseph Giovannini, Doug Storrs as quoted in: The New York Times, Todays Planners Want to Go Home Again, Dec. 13, 1987.

CHAPTER FOUR: ANALYSIS

Introduction

The final design of a project is the manifestation of all of the behind the scenes decisions, opportunities, and constraints of the development plan. As such, design innovations and solutions that break away from prototypes respond to unique or unforeseen constraints and, sometimes, unique opportunities. At one extreme, innovations are a problem solving response to an event or crises (foreseen or unforeseen) such as accommodating the requirements of an anchor tenant. At the other extreme, the developer establishes enough control over the development and planning process, allowing the developer the flexibility to innovate for reasons other than merely having to adapt to circumstances. An example of this would be to create a striking design concept in order to attract notice.

Regardless of the reason for such innovation, if a project innovation is deemed to work and is thought by developers to be adaptable in other situations to the benefit of their projects, such innovations will become prototypes for new developments. For example, Gerald Hines, the developer of the Houston Galleria, reported that the concept of integrating a number of uses - retail, office, and hotel - targeted to serve high end consumers was a response to extraordinarily high priced site costs.¹

Previous to the development of the Galleria, MXD and shopping mall developers would typically target as tenants middle market retail establishments catering to sales of mid-priced goods and apparel. The Galleria paved the way for duplicating a high end marketing mix in many other MXD projects, a more recent example of such an approach being Copley Place in Boston.

Finally, design innovations can reflect deliberate competitive responses to market factors beyond simply reacting to changing conditions. An example of which would be to create an enticing theme to attract patrons, as can be seen in the concept of South Street Seaport in New York City, or Harbor Place in Baltimore. Taken one step further, we have evidence to believe that there exists a strong desire on the part of the developers of MXDs currently under development to attempt innovative designs as a means, not only to differentiate their projects from others, but also to establish their projects as "trophies" among their neighbors. We see this trend happening in the 1980s particularly as a response to the tremendous growth and increasing popularity of MXDs in suburban areas.

Another important element we have noticed is that, although many striking design innovations can be viewed simply as "marketing" elements bringing a project added "sex appeal", the move to differentiate is also being seen to

NOTES TO CHAPTER 4

1 Joel Garreau, Gerald Hines as quoted in the Washington Post, June 20, 1988, p.a8.

involve the establishment of higher quality. Through greater attention to detailing, creating more amenable environments, and, overall, offering solutions which create a stronger long term attraction, level of comfort and "sense of place" for tenants and patrons, developers of MXDs are striving for a better project.

These foregoing attempts to categorize the various influences on MXD innovation are not meant to imply that the development planning and implementation process itself is all that rational. The project development process tends to involve significant interaction between players, and interpolates between factors of design, finance, market, and management in order to establish progressively more workable solutions until a final plan is accepted. The magnitude of complexity in the planning process and the need to involve specialists is so great in the development of MXDs that such interactions are all the more apparent in MXD development as compared to simpler single-use projects. Thus, it is fair to say that few if any innovations respond directly to only one set of circumstances to the exclusion of others.

As an example, if the Houston Galleria targeting of upscale tenants was only a response to land cost and not a reflection of a valid (if innovative) response to a unique market demand, the project, perhaps, would not have been built. If "vision" in the development field requires innovation, then such innovation must take into account the consequences of all significant factors.

In this chapter, we will explore current prototypes, rules of thumb, and innovations within the context of the various elements and factors influencing the MXD development process. The areas we will focus on are market, finance, and control and management factors. Finally, in the design section of this chapter, we will explore how the various elements of the development process create prototypes and innovations in the final design of mixed-use developments.

Market Issues

The developers response to market factors can be explained by the thesis that innovations in mixed-use development focus on differentiating the project from competition and creating a focus for a project. Michael Buckley, a development consultant spoke to this underlying concern of developers:

The MXD is primarily an effort to create a high quality development (a "trophy" project) as a way of differentiating the project from other competing single- use projects.

The objective is to create a focus (your own 100% corner), but to succeed you need the market and the neighborhood infrastructure in place.

The market factors affecting mixed-use development are broad. At one extreme are the supply and demand factors of a specific market, and at the other extreme are issues of "market context", meaning the habits, expectations and patterns of a specific market and its patrons.

Supply and Demand factors

Markets for different real estate uses are never general or significant on a broad level in the way that global economics influence stock prices. Supply and demand factors, with respect to real estate, are site specific. Even within a narrowly defined region, the market for individual uses and market preferences vary significantly from one location to the next. Mixed-use development attempts to take advantage of locations where three or more such localized markets come together. What is problematic is that the best location for developing one use may not coincide with that of another. A mixed-use development must fit the capacity demands of the market for each individual use, and therein lies the problem of locating a suitable site.²

This leads us to an important observation that developers cannot successfully create a use that does not conform to or compliment market demand on its own and hope that the other uses will bring it along. A popular misconception or speculation is that by developing MXDs and,

² The difficulty in finding a suitable site for mixed-use development may be mitigated if the profitable market areas for a number of overlapping uses are sufficiently broad to allow some flexibility in site selection. Also, a relatively narrow market area for a particular use, such as residential, may be located within a more broadly defined market area for another use, such as retail. At one extreme, the market area for acceptable office building locations can often be quite broad, for example the entire suburban fringe of a city. On the other extreme, development of high end housing may only be profitable within certain narrowly defined neighborhoods.

thus, creating "market" synergy, the success of a particular use can be insured where it would not be successful otherwise. The key to mixed-use development is, rather, developing a site which evidences strong market potential for a number of uses. The author of the 1971 ULI book on MXDs, Robert Witherspoon, comments on this point:

The simple warning on the cover of 1971 MXD book should be: Don't defy the rules of market demand, for each use. The synergy of MXDs will not miraculously make the market happen. A mixed-use project does not create an opportunity to do a project in a weak market.³

An important distinction made by a number of our sources is that, although mixing uses on one site may create value, it cannot create a market demand. Gerald Hines, developer of the Houston Galleria, made an observation on the need to carefully respond to the market:

"You want to be out in front of the market a little bit. One step. But you're not out there five steps ahead. You hope. You better not be. Survival is the most important thing for a developer."⁴

Mashpee Commons, one of the mixed-use case studies highlighted in this paper, exemplifies when a developer fails to tailor each component use to the existing market. The small mixed-use center is comprised of retail, office, civic uses, and in later phases will include housing, but

3 Robert Witherspoon, personal interview, June 23, 1988.

4 Garreau, *op. cit.*, Gerald Hines as quoted p.a8.

retail is currently the driving force behind the project. The retail space has leased well at the center. However, the small amount of office space has not leased up. The reason they built the space in the first place was that they felt that it was important to build the "downtown" buildings to a height of two stories. Their thematic idea of creating a "neo-traditional" town plan for the project called for erecting buildings similar to the height that is found in traditional towns. They planned for office space to take up the second floors of the buildings as the best alternative between office or retail use, although the developer acknowledged that an excess of office space currently exists in their market. In this case, it is clearly demonstrated that the benefits of the mix of uses did not make up for a lack of demonstrated market support for office space.

At Tysons II, both the office buildings and the retail space offer what is considered to be a conventional arrangement. The conventional arrangement in the Washington D.C. suburban market is simply what potential office users want. These features are as follows: the office users have separate entrances, the office floor plates provide around 22,000 contiguous square feet of leasable area at 85% net leasable area to gross area, and has numerous corner offices. Tysons II was therefore designed with these features. At Reston Town Center, the same holds true: market considerations are respected in the design and mix of uses. Prospective tenants for each use will receive the

same set of goods that they would get elsewhere. The value added by MXDs is to deliver the additional amenities created by other uses, without sacrificing the expected market standards.

Princeton Forrestal Village also provides an insight into market factors operating at MXDs. The project is essentially a standard retail configuration as found in urban festival malls. This is not surprising considering the developer's previous experience as a project manager at the Rouse Company, developers of several successful festival malls. The problem encountered at this site involved placing office space above the retail area, much in the same manner as at Mashpee Commons. The office space has not leased as well, although the developer makes a claim that this is largely because the office space did not have a standard office configuration and strong sense of identity. This is a critical market factor for office users, especially given the competing alternatives a tenant would have in nearby conventional "signature" office space.

Mixed-use developments are being developed in areas that exhibit similar project supporting demographics and market characteristics. Although MXD development is becoming more popular and widespread, as evidence presented in the Urban Land Institute study clearly shows, it is

predominantly happening in a relatively few number of regions:

Only seven metropolitan markets account for 70% of new mixed-use projects. This distribution and concentration is explained by the fact that the country's currently most active real estate markets are also the hot spots for MXDs.⁵

It is the contention of developers who are doing MXDs that these areas also exhibit similar market and demographic characteristics which would favor the creation of multiple use projects. As an example, Norman Elkins, Senior Vice President of Urban Investment and Development Corporation, states that there are presently only a handful of so called "first tier" cities that can support urban mixed-use development involving a major residential component.⁶

Two of our chosen case studies are being built in the suburban Washington, D.C. area. The phenomenal growth in the region in recent years, predicted to combine both the

5 ULI Development Trends 1988, p. 48.

6 These cities are: New York, Boston, Chicago, San Francisco, Washington, D.C., and Atlanta. Other cities that will become important in the opinion of Elkins are Philadelphia, Minneapolis, Seattle, and Los Angeles. In additional comments on urban housing Norman Elkins of UIDC, points out housing becomes a viable alternative in downtown mixed-use development, if a large demand for inner city housing is coupled with the historic desire for urban living similar to the model of Back Bay, Beacon Hill, Upper East Side, or Nob Hill. Typically, inner city housing in a MXD is prohibitively expensive to build if the market for such housing is related only to a desire for more affordable living. UIDC, which specializes in MXDs involving a luxury housing element, only builds in those cities in which there is a market for urban luxury housing.

Baltimore and Washington metropolitan areas by 1990, may explain the overall desire to build MXDs in this market.⁷

In suburban Washington, the increasing scarcity of available land and rapid growth is requiring land owners to consider markets for several uses. As an example of this phenomenon, developers in Washington D.C. are proposing housing in locations which, until recently would not have been considered residential areas. This is, in turn, fueling a breakdown of traditional boundaries of discreet single market areas. This is a suburban phenomenon based largely on the interdependencies of a service based work force not requiring nor desiring to work downtown, companies which desire to locate in the suburbs for various reason,⁸ and the desire and necessity of having conveniently located shopping in the suburbs. Added to this is the fact that, until recently, mass transit between downtown and the suburbs has not been readily available, thus, promoting a predominantly automobile oriented suburban work force and, consequently, great traffic congestion problems along suburban transportation arteries.⁹ This congestion requires

7 The ULI reports that there are currently 14 MXD projects being developed in the entire Washington, D.C. market.

8 These companies are located in the suburbs, according to Wayne Angle, First Vice President of Homart Development Co, and project manager of Tysons II, due to proximity to their employee base, regional servicing (as opposed to servicing only the Washington downtown area, and economics (reduced wages due to reduced commuting expenditures, and taxes).

9 Other factors contributing to the rampant growth in suburban Washington are: greater availability of land as compared to older more established suburban areas in the country (The land surrounding Washington D.C. prior to

longer driving times between destinations, and as a consequence, developers are finding that people are willing to live closer to retail and office locations to save driving time. These trends are important to note in examining the market factors of MXDs because many see the growth of suburban Washington as a forerunner of what is only beginning to occur in other suburbs of the country.¹⁰ The growth of these areas and the unique market conditions occurring in such locations coincides with the fact that, statistically, MXD development has become increasingly more popular during the 1980s (refer to chapter 1) and, increasingly, are being built in the suburbs.

Local Market Context Issues

On the other side of the market factors are the issues of local market context, particularly issues concerning why projects take the form that they do. The market context partially explains why the developers of MXDs we studied differentiate the project by adopting an appropriate market orientation.

Developers are adapting not only to the general phenomenon of how separate use markets overlay one another, but to the unique market characteristics of each setting. In this sense many important development innovations can be

World War II was largely used only for agricultural purposes), and also, lack of sophisticated master planning combined with rapid growth, particularly in northeastern Virginia, which has created an environment of urban sprawl.

10 Joel Garreau, The Washington Post, June 20, 1988, p.A1.

explained as really a matter of fine tuning a previous successful example. As the case of Tysons II points out, the project is a virtual duplication and refinement of the Houston Galleria prototype, both in terms of design and in terms of tenant and usage mix. This project is characterized by the office/hotel/retail uses and focusing upon the upper end of the retail market. Driving this solution are the use patterns of the local market. Tysons Corner, considered by the Washington Post to be the epitome of the "city built from scratch," is the setting for Tysons II, and the main characteristics are the reliance on the automobile and lack of emphasis on the pedestrian use, combined with a need for a climate controlled and secure environment. Wayne Angle, the developer of the project states:

Tysons II is a downtown - we will have more space than Annapolis, the only difference is you don't need to go outside. Main street isn't outside, for our market.¹¹

Although Angle claims a direct adherence to the galleria prototype, as built in Houston or Dallas, he stresses that an MXD must also adjust to the idiosyncrasies of the local market, and for this reason, they have designed each use with a clearly separate identity. The Tysons Corner area is characterized by large amounts of newly built freestanding high image office buildings and, in the face of

¹¹ Wayne Angle, personal interview, June 23, 1988.

this competition, Tysons II must at least offer a similar office environment.

Because Tysons Corners itself tends to be typical of similar automobile oriented suburban locations around the country, it is not coincidental that market specific solutions in each area will tend to resemble each other. The similarities of the local market context offers an explanation as to why the Houston Galleria and Tysons II are also similar. Suburban growth has given rise to a number of different forms of urban growth centers and these forms are considered as typical development patterns that are occurring in other parts of the country.¹²

We have found two approaches which make up the range to which MXD relate to their market context. On one extreme is the idea of establishing a focus to a particular market, if the project has the critical mass to do this. This approach is clearly represented by the Tysons II project. The project is intended to be the focus for the entire region. In the words of the developer Wayne Angle:

"We are tying up with a bow, the entire Tysons corner region. In one final major development we will provide the focus that the region otherwise lacks. This project is going to be the new downtown of Fairfax county"

12 The Washington Post cites four distinct types of suburban formulations developing in the Washington metropolitan area. These are: "uptowns," [having] histories of settlement that predate the automobile, "From Scratch," [which are] cities that rose from raw ground in the last three decades, "Planned" [cities] such as Reston and Columbia, and "Future" [cities,] emerging cities that are expected to achieve critical mass in the next decade.

Mashpee Commons takes an opposite approach by creating a base of amenities and services to eventually add to the desirability for dense housing and other residential oriented uses. By creating an increased demand for the outlying land, the project eventually will be the center of its market as well.

Whatever the approach to the market, it is interesting to note the significance developers give to the importance of creating a focus for the surrounding community. The developers of each of the four cases claim that the incorporation of local service facilities, such as day care, full services banks, travel agencies and health clubs will better facilitate repeated use. The marketing mix of stores which will ultimately serve a more locally based housing market as a part of the MXD is an advantage in engendering a residential market. The underlying idea, however, that of creating a focus for the community, is the same objective offered by the early mixed-use developments.

A common trend found among all of these MXD developers is that they feel their projects must be located at the center or at the cross roads of what they feel is the most significant market location for each use. Given a site which is within a dispersed suburban community, the developers will go to some extreme to create a central focus, especially through the creation and building of transportation arteries ultimately designed to establish their own "100% corner" in the region. Reston Town Center

and Tysons II have shown the extent to which developers will go to improve the road network, needed to create a focus. The developers of Tysons II have spent 5 years in planning and 15 million dollars on road improvements to practically insure that the roads lead patrons to the project. The underlying rationale is that if the Tysons II does become the "downtown" or focal point of the region, around which other development is related, it's long term value will be maximized.

Residential Uses

Of all of the uses typically found in MXDs, housing is typically the most problematic for developers of MXDs. First, the selling of housing units in the early stages of a project often does not correlate with the generally long term rental strategy of MXD owners. Second, most developers of mixed-use projects do not understand housing development as well as other types of development. Many of the skills required for housing production are not directly applicable to development of commercial properties. Third, when housing is added to an MXD, the developer runs the risk of decreasing the full value potential of the property, particularly because foreign investors, currently a strong player in the United States real estate market, do not have the market knowledge to effectively evaluate local housing markets. Fourth, as mentioned before, housing is typically too costly to develop given the premium paid for

construction in a multiple use building. Finally, discrete housing markets tend to be more geographically constrained and invested with strong neighborhood precedents. In addition, housing does not easily co-exist with commercial uses, except under special circumstances.

However, housing is clearly becoming an increasing concern of governmental agencies, and strong incentives can be offered to induce development of housing in the context of a mixed-use development. In Washington D.C., an upgrade from a floor area ratio (FAR, a measure of building density on a site) of 3, to an FAR of 6 under a special mixed-use zoning (CR zoning) will be granted to developers in certain districts of the city if they include residential or hotel uses in a project. Nonetheless, it has been reported that Boston Properties closed off an attempt to build on a site near downtown Washington because of this housing requirement. Behind this fact is that the economic value of dense urban housing in Washington D.C. has stabilized while larger and more affordable units are available in the suburbs. Prices for residential space in the inner-city have gone from \$135 per square foot to only \$150 per square foot since 1980, while the growth in value of other uses has outpaced this.¹³

13 The discussion of the residential sales prices is based upon a personal interview with Tom Carr, of The Oliver Carr Companies, developers of several MXDs in the Washington area. The discussion of the Washington D.C. mixed-use zoning district is from the same interview and: Stuart Rogel, *ULI 1983-84 Development Review and Outlook* pg. 117.

Two of the cases included herein, Mashpee Commons and Reston Town Center, propose the placement of housing within the mixed-use development plan. They both directly respond to a substantiated market demand for such housing. In both the Mashpee Commons and Reston Town Center cases, the idea is to create a critical mass of retail and office space which will eventually provide a focal point and service center for a ring of more dense housing to be added later. In the case of Reston, this housing will relate outward to a population of 50,000 pre-existing residents. The planned housing in the Reston Town Center will create a transition, needed to fully integrate the new town center to the surrounding low density residential neighborhoods.

Perhaps a more innovative approach currently being tried is the development of dense cluster housing at Ballston Plaza, being developed by The Oliver Carr Co., as part of a MXD located over a metro transit stop. Although this does not break the formula of answering a proven market, it responds to the strong relationship between increased housing value and public transportation, and uncovers what was a hidden market opportunity for the developer.

Hotel use

With the rise of large scale suburban development, the hotel industry has responded by offering a wider diversity of rooming types, chief among them are the upscale

"businesspersons" all suites hotel, and convention hotels. These different forms offer developers a number of choices to better fit their specific MXD concept. Ken Wong, the senior development manager of Reston Town Center sees this as a recent trend by the hotel companies away from fairly rigid hotel development formulas toward a more finely tuned adaptation to local markets. Mashpee Commons, at one extreme, proposes a 30 room "Inn", while Princeton Forrestal Village has a 300 room conference hotel serving the nearby office space. In this case the market innovation exists in better defining and differentiating between the specific needs of local clientele. Given the right mixture of rates, room types, and amenities, a hotel mix can be custom designed to best fit the local market. This offers support to our contention that one reason for MXD innovation is to fine tune the project to meet its specific market context.

Office Use

Office space is also becoming segmented and targeted for more particular uses, as competition in an overbuilt market drives the need for fine tuning to match the demands of the market. This trend is developing in response to the growing market for different types of office space. For example, high-tech or research and development space, which is designed with flexible areas in order to facilitate shared office services, is being included in mixed-use developments around the United States. An example of this is

"University Park" project which is located in Cambridge, MA.¹⁴ Both Mashpee Commons and Princeton Forrestal Village are, by design, attempting to orient their offices to the professional office market, comprised of such users as doctors or lawyers (typically seeking only 1000-2000 sf.) rather than headquarters and large branch office users. In both cases, although the orientation toward "professional" office market is deliberate, the nature and configuration of the office space is actually established by a design limitation imposed on the office space by virtue of the low scale retail character of the development. This occurrence confirms the statement by Ken Wong of Reston Town Center that "by giving potential tenants more, by virtue of mixed-use development", the developer must "also be careful not to take anything away". It is conceivable that another configuration at Princeton Forrestal Village would have allowed the office component to be more conventional, thereby enabling it to achieve higher rents or a faster lease-up period.

Retail use

Although a range of innovative design elements are apparent in the retail components of our four case studies, each conforms fairly deliberately and vigorously to accepted

¹⁴ Currently being developed in Cambridge Mass, by Forest City. The program calls for research and development facilities and offices in a low rise open oriented development.

retail prototypes. Although two of these projects are intended to be "neo-traditional" new towns, it is surprising that this design element does not steer the project substantially away from accepted retail mix prototypes. Princeton Forrestal Village shares strong similarities with urban festival marketplaces, such as Boston's Faneuil Hall. In its establishing of small specialty stores, food court, lack of large anchor department stores, a gourmet grocery and a host of upscale shops drawing upon surrounding office tenants, it is replicating a tested retail pattern. Tysons II offers a mix of three different large anchor department stores, each responding or targeted to different aspects of the market and 125 smaller stores, as in a regional mall. On the other extreme, Mashpee Commons is a neighborhood scale development which contain a Post Office and Hardware store and other service oriented retail shops, similar to the suburban convenience shopping centers with which it is in competition.

Control and Management Issues

We have mentioned that large mixed-use development, by virtue of their size and inherent complexity, involve a greater degree of risk than do smaller single use projects. The risk profile for mixed-use developments, as seen over time, tends to be less steep than for single-use developments. But the earlier risks are seen to be justified by a stronger return: 44 percent of mixed-use projects

surveyed by the ULI reported higher rental rates than competing single use projects.¹⁵ In other words, the planning stage of an MXD involves substantially more risk than does its single-use counterparts, but the stage of development after ground breaking tends to involve less risk than its single-use counterparts. Many of these front-end risks are the same for MXDs as they are for single-use developments but are compounded by the number of uses that go into a project, and consequently, the prolonged planning process and the magnitude of the up-front investment. There is also an additional tier of risk in MXDs associated with fitting each component together. The irony is that these developments are popular development vehicles and, in many cases, are favored by lending institutions.

At the risk of generalizing, one reason that the rewards of these projects can be realized is that the substantially higher front end risks are often mitigated by a greater amount of control exerted by the developers, particularly in the planning stage. Ultimately, this greater control allows the developer to create a less risky project after ground breaking. Control also allows for deliberate innovation.

¹⁵ Dean Swanke, *Mixed-Use Development Handbook* (Washington, D.C.: The ULI - The Urban Land Institute, 1987.) p.348.

The overall MXD performance statistics reported are as follows: 44% of MXDs surveyed have higher rental rates than single use projects, 38% are no different, while 2% are lower. 17% of the projects performance statistics were not available.

Before discussing the specifics of how some of these developers achieve these levels of control, we will first describe how the risks and rewards of such projects are balanced in contrast to single-use projects.

First, as mentioned before, perhaps the greatest benefit offered by mixed-use developments is that the mix of uses allows for a longer cycle of activity and longer hours of operation during the day. Developers state that this is because certain uses feed others. As an example, the incorporation of the National Theater in Quadrangle Corporation's National Place in Washington D.C. gives the restaurants in the project a reason to stay open longer and maintain a large and steady evening business. In more general terms, office workers and business trade are thought to promote restaurants and conference facilities in adjacent hotels. Adjacent housing can also help to keep restaurants open in the evening. And, any evening activity can help to extend evening retail hours. Also, the mix of uses allows shared facilities such as parking to be used at higher capacity over an extended period of time.

Second, each use is thought to provide a diversification hedge in the sense that less than optimum performance of any particular use may be made up by the performance of other uses. It is also claimed that the velocity of lease-up activity is heightened and the present value of a projects cash flow is thereby increased. As evidence of this, the ULI reports that 45 percent of MXDs

surveyed have faster lease up rates than single use projects.¹⁶ As further evidence, the developers of Reston Town Center have based their pro forma on the assumption that the mix of uses will influence a higher speed of absorption.

In contrast, the downside of the mixed-use development process is particularly strong in the planning stages. First, regardless of whether land acquisitions tend to be more or less expensive than for single use development (our case studies show strong evidence that the actual price of land, if an issue at all, may not be as significant as the substantial unfinanced investments of capital placed on the property prior to ground breaking), the time involved, the project magnitude, and not being able to easily assemble the required land in the right location creates a substantial risk. Also, once assembled, although a site may have tremendous value, it may also be substantially more difficult to sell intact considering the relatively few developers able to undertake a project using the entire site. Also, the carrying costs involved with holding such a piece of land for an extended period of time may be terrific. In all of our case studies, none took less than five years, and many took much longer between initial planning and ground breaking. As a response to this, the developers of MXDs typically desire to hold the property and realize their vision for the project for a long period of

¹⁶ *Ibid.* p. 348.

time. For example the Reston Town Center has taken 25 years to develop the city to the point where it makes sense to do the commercial core. The promotional literature for Mashpee Commons also gives us a keen insight into another developers time frame:

for more than 50 years, ...[the corporation] have taken a leading role in comprehensive planning. The corporation has owned the shopping center since it was built in 1962...[and] will continue its ownership of Mashpee Commons as part of its long-term commitment"

Next, from a management perspective, the long lead time required for planning makes it difficult to maintain continuity if key players on a development team leave. The cost of maintaining and coordinating consultants and assistance, from legal, engineering, architectural, or leasing, can be exorbitant. Also, the developer runs a substantial risk in not being able to assemble the proper anchors and management agents (in the case of hotel). In the case of Copley Place, it took four years from initial contact for UIDC to obtain a lease from Neiman-Marcus and obtain Marriott as the hotel operator (which also became a joint venture partner). Also, as the sheer social impact of such projects are so large, developers frequently must spend much time and effort fending off hostile actions from interest groups.

Finally, and most importantly, the effort required to get a plan right and workable from all angles is tremendous. It should be noted, however, that construction of such

projects, once ground is broken, does not take substantially longer than single use projects. Ken Wong of Reston Town Center claims that construction of Phase one of Reston Town Center will take no longer than 18 months, which is typical for single use commercial projects.

We have noted that a number of these developers exert a surprising amount of control over their developments, and exhibit an extraordinary level of commitment to getting the details of the project and mix of tenants right. At Mashpee Commons the developer has chosen to leave space vacant rather than merely lease a tenant who does not add to the drawing power of the project. In the case of Tysons II, Homart Development is spending \$15,000.000 to build new roads connecting their project to the surrounding highways. Although this is a joint planning effort between Homart and the local transportation district, the road system is clearly designed with the idea of placing Tysons II at the center of the Tysons Corner region, and it is promoted as such by Homart.

In the case of Reston Town Center, the owner of the surrounding Reston property, Mobil Land Development Co, has the ultimate control of the design and plan. The development rights were originally granted to Himmel/MKDG in 1983 on the basis of a development proposal and design competition. Mobil subsequently gave Himmel/MKDG practically free reign to plan and implement the project without the involvement of hostile groups or other

unforeseen influences. In this case the innovations of the project are partially explained by the ability of the developer to deliberately control the outcome.

In the case of Mashpee Commons, the Fields Point Partnership has owned the land since the early 1960s, and it was free and clear of debt at the inception of the new master plan. They have taken it upon themselves to develop their own set of town zoning codes, an act far exceeding the standard modifications to zoning rules and regulations offered by most single-use developers. In this case, they have implemented very strict architectural standards and have established exact street widths, sidewalk widths, and stylistic and quality standards. In addition, they have gone to the extreme of hiring a number of architects in order to establish the more diverse look of a real town. We have been told by their construction lender that they can afford to, and have chosen to, be extremely selective of tenants in order to get an appropriate mix. This goes so far as to subsidizing a hardware store at \$6 per square foot on the basis that the "town" needs a hardware store.

Finally, Princeton Forrestal Village, although subject to local zoning ordinances, has been built on a ground lease to Princeton University, who owns the 1600 acres of surrounding land. Like Reston Town Center, the developer, Toombs Development Co., was chosen in response to a design competition. It is important to note that the major land owners, Mobil, Princeton, and Fields Point all exerted the

requisite level of control to allow the developer or joint partner the freedom to propose and carry out designs which were largely not compromised.

As mentioned before, one of the key elements required to establish and maintain control of a project, and consequently, to establish enough credibility with a construction financier and, ultimately, a permanent financier, is to come in to the acquisition and planning process with substantial funds. We have already mentioned the substantial amount of funds spent on roads and infrastructure by Homart Development. In the case of Mashpee commons, the substantial financial strength behind the owners of the property, and the fact that the land was free and clear of debt and generating income by way of the existing supermarket, allowed for a non-recourse construction loan, which is a relatively unheard of device.¹⁷ Much of these funds, in the initial phase, are being used to develop a water treatment plant, build parks and secure a church and other civic uses for the project. This points to the developer's long term commitment in that

¹⁷ The loan is structured on the current cash flow generated by the existing tenants, (of which there was one in place at inception) and the future leases to be put in place. Non-recourse construction funds are disbursed at roughly a 10% cap on current and future NOI. As more tenants are added, more funds are disbursed. The partners may borrow more as negotiated at any time, but on a recourse basis. Because the partnership is willing to make strong rent concessions up front in order to secure the proper tenants, the bank has agreed to look at future income on a stabilized third year basis.

such expenditures will offer little return for dollars spent in the initial phase.

The unique aspects of mixed-use development allow for a stronger separation of developer risk and bank risk. In the case of Reston Town Center, although substantial time, effort, and funds were sunk into the project well before ground breaking, such planning and control allowed for securing a strong anchor tenant for the hotel. The office portion of the Reston Town Center project is being built in the midst of a strong office market. Consequently, as permanent financing was being arranged simultaneously with ground breaking, in June of 1988, it was reported that offers by no less than four financing sources were beyond the developers highest expectations.¹⁸ This contrasts with the development of a typical speculative office project in which the lenders share the development risk until the final leases are signed.

It is important to note however, that control cannot always shield a developer from the substantial risks until project stabilization, particularly where funding does not provide a back up. A case in point is the problem Princeton

¹⁸ It should not be construed that the project phase after ground breaking is always less risky as many developers believe. The problem is that, often, the only real measure of success is the initial expectation for a project. However, as large MXD projects typically take an inordinate amount of time to plan, expectations change. Also, projects of this nature are not as easily measured for success in the early stages due to a typically long maturation cycle which can see a hotel stabilize after as much as five years.

Forrestal Village has had in obtaining permanent financing. The design of the project was arrived at by mutual agreement between Toombs Development and Princeton University, the owner of the land. There were evidently a number of problems in the design of the project which did not help the leasing of the project, such as orienting the retail frontage away from the traffic on Route One and placing the office space over the retail space in an unconventional layout. Nevertheless, the ratio of equity to total development costs and the financial backing of the developer is minimal compared to those of the other projects we have studied. The developer put up \$300,000 himself and raised capital from 9 other investors in addition to signing a personal note for the balance required. The remaining development costs were all funded through construction proceeds. Mutual Benefit Life, which originally had planned on taking a 25% share of the project in return for funding shortfalls, is out of the project. So, despite the control that Toombs was afforded in the early planning there is presently no permanent financing in place on the project, although the project has been open for 20 months.

It is important to note that Princeton Forrestal Village's leasing problems parallel that of Mashpee Commons. The difference is that the developer of Mashpee had provided for funding the lease-up short falls out of his own pocket. We were told by the developers' construction lending source that it has been the financial strength and track record of

the developer which ultimately proved to be the strongest drawing card for lenders. Although there is currently no permanent financing on Mashpee Commons, the construction financing source believes that obtaining it should not prove to be a major problem. The advantages of a track record and financial backing has been expressed by all of the developers of our case studies.

As a final point, one reason why developers of MXDs may exhibit a great control over the design and general implementation of their projects is that communities and governments are encouraging MXDs due to dissatisfaction with single use districts and traffic concerns (as noted in chapter two). As communities see the inherent advantages of having mixed-use developments within their communities, they may be more inclined to allow a developer more control over the project planning, or at least less resistance.¹⁹

Finance Issues

In the previous section, we covered the way in which developers attempt to control their fate through keeping a tight rein on the planning process. One aspect of this involved funding with a particular focus on the funding requirements demanded of MXD developers, and the kind of financial strength required by lenders. In this section, we will explore some of the important innovations and

¹⁹ Richard Galehouse, Mixed-Use Centers in Suburban Office parks. URBAN LAND Aug. 1984, p.2-4., Phillip Langdon, A Good Place to Live, THE ATLANTIC MONTHLY, Mar. 1988., Swanke op.cit. pg. 8-9

constraints within the area of MXD financing, and explore whether such factors help or hinder the developer's ability to step away from proven formulas.

It was mentioned by many of the experts and developers we interviewed that the lenders establish an inordinate amount of control over the development process. This is predominantly true in the sense that a developer must "sell" their project to the lending institution. It has been stated to us that, in this way, lenders don't finance projects they have a hard time understanding, and often feel more comfortable with projects that have the characteristics and hallmark feel of other successful projects, regardless of perhaps bleak market outlooks. This outlook is substantiated by the fact that Princeton Forrestal Village - by deviating from certain rules of thumb such as facing retail away from the street frontage to an interior site location, by not enclosing the "shopping mall" under a weather resistant canopy, and by placing the office space over the main street retail shops - has had a difficult time obtaining permanent financing. Although it is true that the office space for the project has helped to slow down the leasing program, we contend that this is not entirely to blame. Compare, for instance, the Princeton Forrestal Village situation to the many occasions in which office buildings in weaker markets than the Princeton/Route One corridor, are financed. We speculate that it would be easier for a developer to finance a major office building

with an anchor tenant taking less than half the space than it would to finance a more innovative project such as Princeton Forrestal Village, which has leased over 85% of its retail space and has established an anchor for the hotel, bringing the entire leasing to over half of the project. (This is merely a speculation and is based on random observations rather than as a result of a hard survey.)

The answer to the question of whether lending institutions inhibit forward thinking development is that they have a significant impact, but only in a negative sense: there is a fear on the part of the developer that the project will not be understood by the lender, and thereby, will not receive financing. It is up to the developer, who is dependant upon the permanent lender, to figure out what the lender wants, and will understand. If the developer does something in a peculiar or unusual way, the chances increase that the lender will not be sold on the project. The developer must tailor the project to fit the expectations of the lending institution.

On the other side of the issue, a number of important innovations have occurred in the financial markets within the last decade which offer large projects a better chance of survival. The heavy carrying costs associated with the long planning processes, funding infrastructure improvements at the front end, and longer stabilization periods upon commencement of operations of large MXDs projects virtually

require such innovations. As an example of the long period of time required to achieve stabilization, Ken Wong of Reston Town Center estimates the following stabilization targets for the components of his project: retail-one year with maturation over a 3 year period, office space: 18 months @ 95% occupancy, hotel: 4-5 years @ 75% occupancy. This implies that a financing source must be able to understand the specific nuances of a mixed-use project and structure a deal to accommodate these requirements.

Many of the innovative financing techniques, or "bells and whistles" used for financing single use projects apply equally to MXDs. Some of the more important techniques that are currently playing a role in the financing of large real estate projects are:

- o Accruals of a portion of the full interest charged per payment period, usually with the lender having the option to participate in equity after a certain number of years.
- o Open ended or extended construction loans, offering the ability to carry a project past opening, and prolong the period before a permanent takedown.
- o Short-term loans between construction financing and permanent financing, called "mini-perms," used as a "stop-gap" measure, and usually extended for 3-5 years. These are also found in the form of combination mini-perm/construction loans, extending for 5-7 years. These loans often help the take projects through

extended lease-up periods, and can also allow a developer to ride out a high interest rate period without requiring refinancing and large consequent fees when interest rates fall.

- o In the case of a housing component, the using of equity from sales of units to reduce the debt on that component or on other components.
- o The use of a wide array of hedging techniques including interest rate swaps, collars, and caps.
- o The use of more innovative public financing tools, such as grants or bonds, below interest loans, and tax increment financing.²⁰
- o Also, a number of means of equity and debt financing through the placement and sale of commercial paper and other limited partnership shares.
- o More public/private joint venture arrangements.
- o More creative land lease arrangements.

(Most of these financing refinements are well documented in another sources).²¹

With more specific reference to MXD financing, we have mentioned that MXD projects provide a diversification hedge

20 Michael Buckley, Co-Financing Initiatives For Mixed-Use Development. National Mall Monitor, May, 1988

21 A paper summarizing the "Mixed-Use Insights" conference proceeds at the Toronto Hilton Harbor (Ap. 15, 1983). Especially a session chaired by Donald Cresswell of Campeau Corp., on Mixed-Use Financing Innovations, lists the variety of financing tools that have recently emerged. The speaker was Daniel Sullivan, Director and Vice President of McLeod Young.

due to their balanced mix of uses, although this is not substantiated by data reviewed by us. It has been suggested to us that this and other, more undefined benefits, such as "investor security" and "familiarity" account for the popularity of such MXDs among investors, from venture capital concerns to buyers of small lot commercial mortgage backed securities. Such a perception of security would, theoretically, lower the cap rate on sale of the project, thus creating a higher ultimate return. This would offer a justification for early year interest accruals or forgiveness in return for a stronger position at the sale or refinancing. This can be seen in cases where pension funds provide lower current interest payments and accruals in exchange for upside through conversion options at a later date.

As a general rule, it is most desirable from the developer's point of view to ensure that the different components of a project are able to stand independent of each other in terms of debt. This would allow an individual component to carry itself without encumbrance from another component. Thus, the strong performance of a component would not be jeopardized by the weak performance of another. Also, if each component stands alone, the project is more manageable if the developer wishes to sell or refinance individual components. The dilemma is that lending institutes would rather see cross-collateralization between components rather than to run the risk of foreclosing on a

badly performing component while the developer maintains a performing property.

There are ways, however, to treat component uses individually while maintaining a single financing source. Basically, lenders can create an umbrella loan with tiers or branches to cover individual components, but from which all funds flow to the same source under the same loan commitment. In this case, we have been told of methods by which the selling of units (for example condominium units) can not only pay down the existing debt on those units, but also on other components of an MXD, such as retail. One of the bank's concerns in setting up these tiers or branches is to keep the budgets for each component in order, especially on a construction loan, and not to over-fund one component at the expense of another.

The ability to obtain a single financing source for an entire project is, often difficult. It is known, for instance, that five different lenders took part in the financing of Copley Place. One important reason for this according to the ULI's Mixed-Use Handbook is that:

"Government regulations force many lenders to restrict their investment in any one project to no more than 10 percent of their assets. As a practical matter, however, national lenders limit any one commitment to a much lower percentage- 3 to 4 percent on a joint venture and only 1 percent on straight debt. Thus, developers are often forced to obtain financing commitments from several lenders for a large MXD.²²

22 Dean Swanke, Mixed-Use Development Handbook, (Washington, D.C.: ULI - The Urban Land Institute, 1987.) p.112.

Added to this is the problem that many lenders restrict their lending to only certain uses, or will not lend by policy on a particular use within a particular market but feel insecure in lending on less than the full project for reasons of not obtaining enough collateral. For example, as of June of 1988, Equitable Life Insurance, a major real estate lender, is not financing hotels at all. This is a dilemma not easily overcome for developers of MXDs. It can be solved through a combination of cross collateralization, more than one lender sharing risks, and the establishment of a strong track record by the development entity.

One way that financial institutions have recently attempted to avoid these barriers is by putting themselves, somewhat in the role of investment banker. Although it is typically too risky for a bank to literally underwrite a project, a large lead institution will often, in a risky deal, lead a financing consortium of a number of lenders (Rowes Wharf had 10-12 lenders under The Bank of New England), and keep 25 to 50 basis points in current interest payments over and above that which is earned by the supporting banks. The lead lender, in turn, provides the staff support and servicing for the project. We are told that, except for this premium, members of these consortiums usually share equally in all aspects of a project.

The role of the lead bank is important and highlights the fact that there are few institutions willing and able to

finance large mixed-use ventures.²³ In the area of commercial lending to companies, return business is important, whereas the financing of large real estate projects are becoming increasingly the province of "money center" banks, and such projects are increasingly being "shopped around". This means that the more national and international players are willing to break traditional regional bounds and often must do so in order to find the best projects. On a smaller scale, however, regional lenders still play a strong role in financing these projects and personal bank connections remain important (in the case of Mashpee Commons, the general partner was a long time customer of the bank).

Two important instruments we are told have become more prominent in financing MXDs are so called "mini-perm" and extended interim financing vehicles. The construction loan on Princeton Forrestal Village is a combination mini-perm and extended construction loan. The underlying assumption in a mini-perm is the 5-7 year time period to take out, which allows 2 years for construction and 5 years to stabilize the project, but with a 25 year amortization. Typically, a mini-perm will be given to a developer providing matching funds can be arranged so that the bank does not carry the debt itself, but rather, places it in the

²³ Sullivan, *op. cit.* p. 1.

Any project over \$20 million is considered large in the eyes of lending institutions and it is noted that most MXDs exceed \$100 million.

money market through short term notes matching the term and debt service.

As a case study, it is important to highlight some of the more important reasons why the construction lender on Mashpee Commons was attracted to such an ostensibly innovative project. First, the bank did not view the project as a mixed-use development as much as a residential-retail development with incidental office space. The bank characterized the project as more of a service center catering to the needs of local customers. In this respect, the project fit in well with what the bank saw to be an important demand in the area. Although in terms of the substantial amount of residential units and office space planned for the future, the project more closely resembles a MXD, the retail component provided the main thrust for the first phase. They were also enthusiastic about the extended hours of operation.

Basically, they did the deal for three reasons. First, the principals had assets and a strong track record. Second, the land was debt free. Third, the bank placed strong emphasis on zoning and felt that the principals were well represented and carried substantial influence in Falmouth and Mashpee. The fact that the principals are very selective with tenants was good, providing the developer could fund some of the wait and did not delay leasing for an extended period in order to find the "right" tenants. As mentioned in the previous section, the developers were able

to obtain non-recourse construction financing to the degree of 100% of required costs. The project has leased very well with the exception of some "warehoused" office space, and has strong anchors including The Gap, Bennetton, and Carroll Reed. The developers are currently looking for permanent financing. The construction lender, who would like to offer permanent financing on all but the housing, believes that the way to go now would be with a mini-perm. They can offer a mini-perm with a term of 3-5 years with 20-25 year amortization at approximately 1.5% over prime, which, they believe, is no worse than the terms that would be received on a full permanent loan. They believe, that this would be the best option, because an insurance company specializing in providing full permanent financing would not be enthusiastic about the year one operating statement, which includes some substantial concessions in order to attract tenants.

Design Issues

The projects we reviewed were described by their developers as merely refinements of past prototypes or efforts to recreate and improve upon traditional, well-liked places. As an example, the "Kentlands" new town project proposed at Gaithersburg, Maryland to be developed by the Alfandre Development Company, is essentially a traditional town plan grafted on to a standard retail mall prototype. (Small stores organized around a central mall, between

anchor department stores, surrounded by parking). Nevertheless, this minor adaptation of two development prototypes is considered by many recent authors to be a pioneering development project. This illustrates the fact that, in real estate development, even design innovations which, on the surface are most startling, tend to be either minor improvements on recent projects or borrow well tested ideas from proven norms, and present them in new settings. Rarely are such innovations truly original. But, whether or not such innovations are only refinements or are innovations, we have noted and highlight in the following section several design issues that developers are presently experimenting with which promise to further refine the form of MXD's.

One common characteristic that we note is that developers strive to create a gathering place or focus for the larger surrounding community when planning MXDs, and believe that this is a key ingredient to insure economic success. The promotional literature for the Mashpee Commons project optimistically reports that

"[the project] will in fact become the bustling commercial center for the people of the area. Which means that foresighted retailers will have a chance to become village founders"

Similarly, the Tysons II design objectives promotes the idea of place making:

"to enhance revenue in each of the individual uses through the design and development of a unique project, planned to be the place in northern Virginia to office, shop, entertain and stay"

How place making is actually done depends upon a number of factors, such as the appropriate scale and character, climate, site constraints and so on, but developers believe that the creation of a "sense of place" is a hallmark of successful MXDs. A large component of innovation in design is the manner in which developers rethink or modify the orientation of the project in order to create this intended focus. The range of possible design solutions is broad, running the gamut from plazas or town green to atria and gallerias, however, the underlying objective of drawing crowds of people to these places is given great significance by developers.

Tysons II and Mashpee Commons represent quite divergent solutions to the design objective of creating a focus. The former development is an internally oriented galleria, whereas the latter development seeks to create a successful commercial setting through its active street life and public open spaces. Both developers stated that their developments were merely a recreation of an earlier successful example: Tysons II is a descendant of the Houston Galleria, while Mashpee Commons is a cousin of a "New England village".

In the case where developers do not or cannot substantially borrow a prototype in whole, they will look for smaller, but proven, design ideas or patterns found either in other MXD projects or in successful projects. Reston Town Center is claimed to be a pioneering example in which the overall form has not been done elsewhere, but

where the individual pieces have recognizable precedents. The designer of the project referred to the ability to drive through the project and shop from your car as "like the Kansas City, Country Club Plaza" while the retail street is "like a traditional downtown Main Street" and the plazas and open spaces are modeled after other successful urban precedents (the plaza at Lincoln Center is referred to). Commenting on this fact, Scott Toombs, developer of Princeton Forrestal Village stated: "The design of projects is essentially a cut and paste". The explanation is that developers borrow proven urban elements as a way of insuring that their project will work as intended. This is based on the presumption that concepts can be freely adapted to other settings. However this may not always be the case. The challenge of the design stage is to evaluate the contribution each design precedent lends to the total effect.

Another feature of recent MXDs which we have noted is that developers are striving to create more readily comprehensible designs which are intended to clarify and simplify the layout and, in turn, better orient the user. The developers we spoke with spent significant amounts of time planning to insure that the projects organization is able to be understood clearly by patrons. Criticisms of multiple use projects has informed developers of critical issues to consider in planning, among them the need for a logical way of finding a logical path through the

development. Renaissance Center in Detroit has been publicized for being confusing to patrons. It has been partially fixed by a recent 27 million dollar effort meant to establish clearer paths and boundaries between uses.²⁴ In an unpublished development plan, proposed by the Oliver Carr Co. for a MXD near King Street Station in Washington D.C., the developers spent nearly two years in design and oversaw the refinement of more than ten plans to create the clarity and separation of uses that they felt would insure that customers can clearly understand the layout of the project.²⁵ The importance given this idea of creating a unified and comprehensible urban design can also be explained as an effort by developers to establish MXD projects as a landmark piece of the city, and by doing so create value for the project. This aspect will be discussed in greater detail in the concluding chapter.

The emphasis on open, more comprehensible designs can be also explained by the fact that developers are seeking to maintain a greater identity for separate components. While different uses need to be integrated within a MXD project in order to generate synergy, stronger component identity is found to have a marketing advantage and thus greater value. In this way the latest MXDs have had the chance to adapt

24 John Bussey, A Mazing Place: RenCen's Lost Souls May get some Help. Wall Street Journal, June 7, 1988, p.1 25. and Stephen A. Horn, Detroit's Renaissance Center, URBAN LAND, July 1987, p. 6-11.

25 Tom Carr and David Richards, Principals at Oliver Carr Company, personal interview June, 22, 1988.

lessons learned from earlier projects. As an example, the designers and developers of the Houston Galleria, in designing the more recent Dallas Galleria (over twelve years later), felt that the office buildings should not be an integrated part of the retail structure. One major innovation of the Tysons II project to the Galleria prototype concept is the fact that the office and hotels have been constructed essentially as freestanding buildings, separate from the retail shops, and facing their own plaza and "address" street. In contrast, the office space at Princeton Forrestal Village has not performed well, in part because the project is thought of as essentially a retail project. The office space, by being placed over the retail shops, has little streetfront identity.

Whatever the underlying rationale, open oriented MXDs such as Mashpee Commons are different from internally oriented projects built only a decade ago. One strong example of this trend are the number of MXDs being built using traditional urban forms, orienting to their surrounding settings, or emulating traditional cities in form. Projects such as Princeton Forrestal Village are tightly organized in their designs and open to the weather, as opposed to insular, closed off, and unrelated to the surroundings, as was more typical in earlier MXDs. It is thought by developers that by merely recreating "cookie cutter" development, people are simply not drawn to such projects. These controlled environments are thought to be

lacking in the diversity and vitality that tightly configured urban settings promise. However, on the other side of the issue, the developer of Princeton Forrestal Village has admitted that, because the project is open to the weather, it has not proven to be an economic advantage. There are also a large set of disadvantages property managers will need to address such as security and weatherization, problems that open oriented projects are more subject to.

Although many authors claim that this design trend responds to the failure of controlled, enclosed developments to offer a interesting environment, this argument overlooks the fact that such projects which feature internally focused, controlled environments such as Water Tower Place and Copley Place are economically successful projects, attracting many visitors every year. We argue, rather, that developers believe an open orientation effectively differentiates a project from its surroundings, and particularly from its competing projects. It should be noted that, in the case studies, the developers are positioning their projects as alternatives to more conventional single-use projects. The fundamental rationale is that developers have had to innovate to create a project which will create a strong image and more clearly define the project within its market. This means that developers are more receptive to open oriented and tightly planned centers which offer the image of a small downtown.

Guidelines for MXD design

Those engaged in MXD design and planning cannot ignore the specific functional requirements of the different uses. According to all developers we spoke with, the established patterns of building relationships, honed by experience, and the well known rules of thumb for each use, can not be overlooked without disastrous economic consequences.

First, MXDs must provide the same set of arrival sequences, and image and functional layouts as can be found in other single use projects. Some of the characteristics of these patterns, such as the retail design practice of drawing people past small specialty shops to the destination high volume establishments are published in ULI's Retail Development Handbook. However, when attempting complex design schemes, the competing demands of various building types and uses may clash. According to Michael Buckley, a mixed-use development consultant, the vitality created by overlapping use configurations found in MXDs must be in addition to standard activity patterns, and will not make up for inefficiencies or omissions in the functional characteristics of the individual uses. Reston Town Center has carefully considered the functional aspects of the hotel plan, through providing a direct automobile access to the main street, yet providing for the delivery and service needs of the "back of the house". The hotel building is architecturally connected to the rest of the development,

and the possible conflicts with pedestrian traffic are great. The reason for this concern is that the guest arrival, drop off, and reception sequence at a hotel is considered crucial to the hotel's success.

Second, the well known "rules of thumb" for various uses that are used by developers, such as those concerning retail access and visibility, destination and path, are applicable at different scales. As an example, the rules of retail pedestrian flow in Princeton Forrestal Village are essentially the same as at Tysons II. Although the projects are quite different in many respects, each is characterized by "anchors" interconnected by pedestrian paths lined by smaller shops. In another example, although Reston Town Center has skillfully integrated the office use within the new downtown core, the basic layout of office floor plates, efficiencies, entry sequence, image, access, servicing, ability to lease, are entirely typical with other office space (refer to Exhibit 1). In contrast, although it is in a proven and desirable market area for office space, the upper level office space at Princeton Forrestal Village has been a failure. Besides the identity problem noted earlier, other functional difficulties noted are that office lobbies are not clearly segregated from shopper circulation and the office layouts are not able to be efficiently subdivided for their intended small users. According to the developer, the office development consequently has proven to be a poor economic performer to the overall development in the early

phase, providing only 21% of the current revenue while representing over half of the leasable area in the present development.

Developers and consultants also state that certain critical masses for individual uses dictate a minimum size threshold for a mixed-use development. New freestanding hotels, for example, must be of at least 300 rooms to justify the inclusion of conference and food facilities, an important profit source for hotels. Office users tend to cluster around each other, it was noted. Therefore, below a certain threshold, stated to be 150,000-200,000 s.f., market demand for office space falls off. Also floor plates of at least 15,000-24,000 s.f. insure an efficient layout for large tenants. Similarly, retail users must have enough shops to establish a destination, and fewer than 200 residences have management overhead expenses to overcome. These are just a few of the more important rules of thumb offered by developers. It is interesting to note how they are vigorously adhered to by practitioners without a great deal of investigation as to the explanation or underlying rationale.

To underscore the importance of "playing by the rules" developers consistently mentioned that they employ outside consultants, experts in each particular use, to scrutinize the layouts of each use within their MXDs and verify that each component's specific requirements are accommodated. This practice clearly demonstrates the fragile architectural

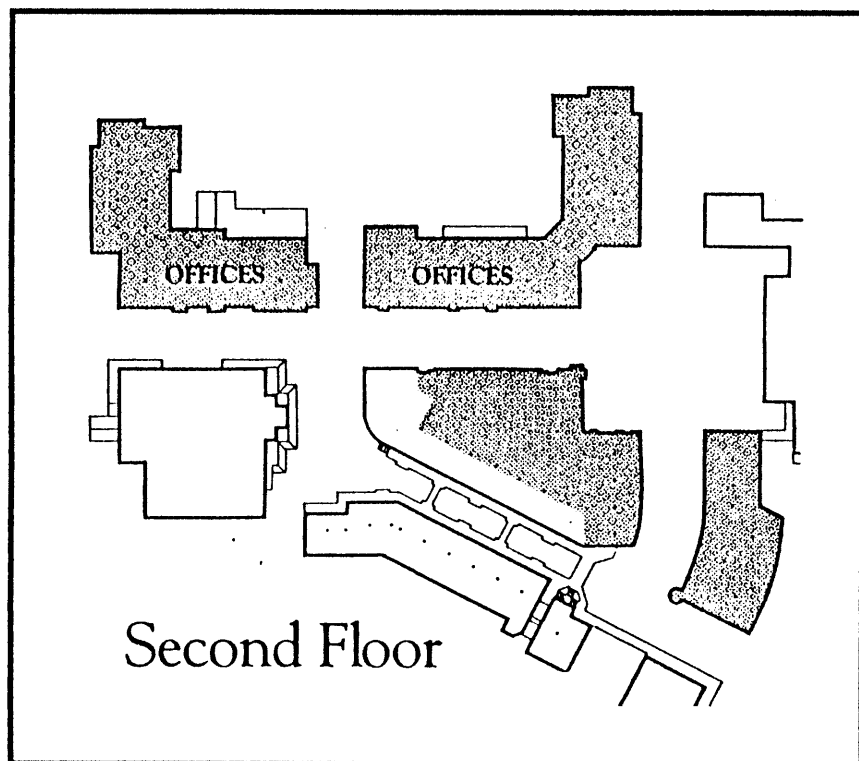
relationships which make or break the ability of the layout to work as planned. In turn, the ability to provide functional layouts have a great impact on the economic performance of an MXD.

Comparative Office Floor plates

Exhibit 1

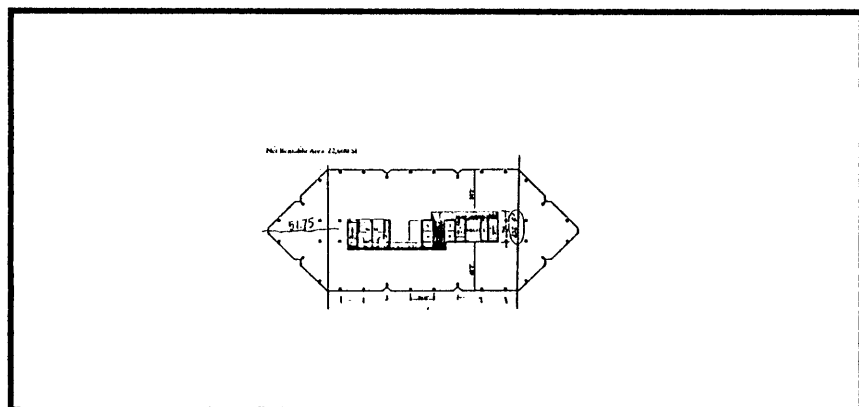
Princeton Forrestal Village:

Office space (210,000 s.f. on two levels) in 4 separate buildings.



Tysons II:

Office space (750,000 s.f.) in 2 17 story, separate buildings . Floor plans provide 22,300 - 22,600 s.f. per floor.



CHAPTER FIVE: CONCLUSION

In chapter one we proposed five reasons why developers of MXDs will break from standard formulas or prototypes.

These are:

1. That developers adapt to site specific circumstance.
2. That developers learn from experience and try to avoid past mistakes or make refinements to existing formulas in order to improve their chances for success.
3. That developers will create a new or novel "look" for their project in order to attract attention and to give the project stronger thematic unity and a unique identity.
4. That developers will exceed the mere application of novelty in order to attract attention and attract more business by creating a more hospitable environment.
5. That developers allow innovative or attention getting designs to be built as a means for self-expression.

Our basic conclusion is that, as there are different degrees of innovation, developers often go to the most creative extreme of innovation in order to differentiate their project from their competition. This is especially true in situations where developers have a high degree of control over the design of the project and implementation of the development process.

Our analysis shows that differentiation is rationally justified by the argument that it creates more value for a

project. Theoretically, if a project's component uses can stand up in all ways to their closest competitors and offer patrons and tenants at least what they would get in other projects and more, then each use can generate more value than their competitors by virtue of the added vitality that the MXD concept brings. Although developers believe this, it has not been shown conclusively that the most innovative or attention-getting projects perform better than their more prototypical and modest counterpart MXDs. Although the ULI presents findings on MXD performance by location and by mix of use, they do not present any support or evidence to suggest that MXDs incorporating more unconventional designs perform better than their prototypes.

Another important motive that helps explain bold design innovations is the need to make a personal statement. This cannot be denied. A project is the best advertisement of a developer's talents and the best public relations for a developer. Developers can often leverage off of a name or trademark approach where the perception is that such an approach can make the project more desirable. Both reasons, making a personal statement and creating value, therefore, do not need to be incompatible. Also, although personal statements can run toward innovation, personal statements can also be found in more conservative developments. Tysons II, for example, does not substantially break the galleria mold, but in scale and detailing, perhaps advertises the

strength and conservatism for which Sears, Homart's parent company, is known.

A correlation we have observed is that, the more control a developer has over a project's circumstances, the greater the possibility for innovation (as explained in chapter four). A developer's level of control, however, does not explain the desire to innovate but only allows for it. Nor does it dictate that the developer stray from a particular prototype. In fact, we have found that developers will generally adhere to a prototype or well known formula if such formulas are considered good solutions. As an example, whereas Water Tower Place itself proved to be highly innovative in its successful vertical stacking of its component uses, the developer emulated this basic design in their new 900 North Michigan Avenue project while adding a number of important technical and aesthetic refinements (as noted in chapter two). Tysons II, as a representation of the galleria prototype building, required only minor innovations (discussed later in this chapter) in order to accommodate it to its setting. Finally, even though, on the surface, Princeton Forrestal Village contributes an emphatically different design, it still maintains strong elements of past formulas found to be successful in other retail contexts, as discussed in chapter four.

The five reasons for innovation, as represented in the order above, constitute a range of responses roughly

corresponding to the degree to which differentiation plays a part in the design decision. Also, it reflects the level of control generally required to implement a cohesive and deliberate major design innovation(exhibit one). At one end of the spectrum lies response to crisis, unforeseen difficulties, or site constraints. Such adapting to circumstance through innovation and change are not generally taken for reasons of differentiation, but more as a matter of survival for the real estate venture and represents a lack of control over certain elements. Such innovations can run the gamut from out-of-the-ordinary component stacking plans for creating different densities and relationships to value engineering due to cost overruns or lack of funds. It is important to note here, however, that when site constraints exist prior to acquisition, a developer of vision may be able to capitalize on a hidden opportunity through an innovative approach to design. Such may be the case if a site had not been previously valued to reflect a high return for the site.

Next along the spectrum are innovations or refinements which either reflects learning from experience on what to avoid or how to do something better. The concept for the Houston Galleria, although originally conceived as a single megastructure with a three level retail mall at the base and the main office tower rising from the center, was modified ten years later in the Dallas Galleria in order, (according to the ULI) to allow for stronger component identities.1

Although the barrel vault glass ceiling, ice rink, three level mall design, and mix of uses was maintained, and certain shared services were maintained such as parking and vertical transportation, the separation of the office buildings allowed for better management of, financing of, security of, and access to the individual uses. As the Dallas Galleria was built by the same developer as the Houston Galleria (Gerald Hines) and was designed by the same architectural firm, the evolution from the Houston to the Dallas Galleria can be seen as a movement along the learning curve.

As a further step, Homart's Tysons II shares much in common particularly with the later Dallas Galleria in its separation of uses. It also takes a number of design features one step further by replacing the barrel vault glass ceiling with skylights designed to reduce the heat created by the sun load on the glass vault. Component identities for the office and hotel were similarly maintained and interconnected with the mall by passageways. But the layout was also modified slightly to further encourage the suggestion of a slight separation of uses. Whereas the office towers at the Dallas Galleria are directly next to the mall structure, the two office towers of the initial phase of Tysons II are separated from the mall by the hotel. It was explained to us by Wayne Angle, project manager, that this created a smoother progression from public space (the mall) to semi-public space (the

hotel) to private space (offices). This was a refinement due in part to market pressure as it was believed by the developer that tenants in the Washington D.C. suburbs would require the identity and security such separation would bring.

Note, however, that such component identity is not required in all markets, as can be seen at Copley Place, Boston MA, another modification to the galleria prototype. Copley Place is an urban MXD incorporating a central two level mall catering to the high-end of the market, two hotels and an office tower. In contrast to Tysons II, the office space, built above the mall, was given virtually no outward identity of its own.

Another refinement at Tysons II was the inclusion of a plaza within the exterior space formed by the hotel and the two office buildings. This plaza incorporates a fountain and geometric patterns geared toward tying the project together visually. Again, as a refinement to the earlier designs, it was thought that, by maintaining the interconnecting passageways but also providing the option for outdoor public space, the project would be more successful.

The above example shows that, although differentiation may be a reason for refinement, it is not the only reason. These examples, however, do show a level of control and deliberateness that exceeds a response only to site constraints or unforeseen problems.

The progressive separation of uses within the evolving galleria concept and the trend in general to more open orientations within recent suburban projects may also be a response to certain site conditions, such as lower site costs, offering the opportunity for greater economy. As an example, many urban projects had to rely on density and compactness in order to establish an acceptable return on the project. This was mentioned by Gerald Hines (chapter 4) as a reason for the Houston Galleria's configuration. However, such integration drives up the cost of construction. In areas where rents are lower or site acquisition costs are lower, a developer may, by necessity but also by desire, want to spread the project out and separate the uses in order to save on construction costs.

As a counter to this argument, it may be the case that developers of suburban MXDs, in fact, maintain the same overall construction costs on a per square foot basis, but shift a certain percentage of total development costs from structural construction to landscaping, roads and infrastructure. It is claimed, for example, by Ken Wong of Reston Town Center, that the total hard and soft costs of the project are approximately \$200.00 per square foot, a relatively expensive price considering the projects open orientation. In contrast, Princeton Forrestal Village is claimed to be built for \$160 per square foot (total development costs of \$135 Million) which is broken down into components of \$19.50 p.s.f for site work, approximately \$100

p.s.f for hard costs, and the remaining \$40 in soft costs. Note that the ULI handbook uses an average of \$105 per square foot as an example of total development costs for an MXD built on a three acre downtown site.² From the wide range of costs reported, and with no hard project data to compare, the argument as to whether open orientations are more economical is left unresolved.

At the point where developers incorporate innovative designs or introducing a "special quality" into the design in order to better compete for tenants and patrons, it is difficult to determine what is simply a "new look" and what constitutes a "better design solution." Some projects tend toward the former, some can be seen as incorporating elements of both, and some succeed in creating better solutions without being preoccupied with the "look" itself. As an example, we have mentioned in chapter four that Princeton Forrestal Village implements many of the formulas used to create festival malls. This is not surprising in that, Scott Toombs, the developer, spent seven years with the Rouse company learning first hand what the chemistry of retailing is all about. The Princeton Forrestal Village evokes the strong image of a traditional town, with its "village square, fountains, clock tower, airy bustling food market hall, and a two-block main street ringed by 125 shops."³ In order to get this formula right, the developer and design team attempted to incorporate many of the elements that make such areas as Georgetown, Washington D.C.

and Country Club Plaza, Kansas City most appealing to their patrons.

Such an approach was, in fact, taken in a number of other cases such as in creating details for Mashpee Commons and The "Kentlands" in Gaithersburg, Maryland. In these cases, the designers went so far as to measure street and sidewalk widths and entryway dimensions, noted placements of sconces and street lamps and the texture and articulation of materials, and took into account edge detailing, circulation patterns, street parking, heights and scales of buildings, and the characteristics of public gathering places and focal points, among other things. By measuring and emulating the details of such streetscapes, the design moves more toward developing a counter to the more massively scaled typical suburban mall. Beyond this, the developer of Princeton Forrestal Village has incorporated certain services type operations such as a "village tailor, barber, express-mail center and photocopier", as well as a day care center and athletic club in order to provide elements of a true community center responding to the needs of the local work force.⁴ Also, the office space, as mentioned before, is oriented more toward professional offices, as found in traditional village centers, and is integrated into the project as opposed to being set off.

The underlying difference between Mashpee Commons and Princeton Forrestal Village is that Princeton Forrestal Village emphasizes a focus on current retail trends while

the Mashpee Commons plan tends to focus on a more holistic view of what a town center is. Princeton Forrestal Village's retail mix targets "today's double-income couples" who, according to Toombs, "tend to shop by mission, not impulse" and are attracted specifically to streetfront specialty retail areas around the country.⁵ In this sense, the project builds upon the commercial thrust of the larger Princeton Forrestal Center and, as such, its design perhaps provides the best advertisement and promotional vehicle for the activities involved.

In contrast, Mashpee Commons, although also emulating the "look of a New England downtown," focuses more on the possibilities of recreating a more traditional village center in its tight integration of housing blocks interlocking with the town center, and its emphasis on real working traditional amenities and services found in other town centers, such a church and a fire hall. The retail component of Mashpee Commons also tends to be less oriented to a particular group of upscale buyer and concentrates on appealing to local consumers. However, in attempting to get even the most minute details of traditional villages right, it advertises itself through its appeal to nostalgia as much as it promotes or elicits a positive response from patrons to its more timeless qualities of scale, intimacy, and sense of place.

Perhaps the most contemporary looking of these "town center" projects is Reston Town Center. By providing a

central massing of modern office buildings, a hotel and a large "open air" retail mall complete with theaters and an art gallery, this town center claims to provide a focus and "downtown" for the planned community of Reston. The town center attempts to implement many of the planning refinements established for both Princeton Forrestal Village and Mashpee Commons in its use of a main street as the central organizing feature. Yet the architecture of the buildings themselves tend to be less contrived and less evocative of a bygone era. Rather, the project indicates that up-to-date architectural treatments can exist in their own right while the site plan, scaling of buildings, and details can still offer better solutions for creating a sense of scale and place.

Last, but not least, it is important to note the importance of the personality types that go in to creating such projects. We have found that the boldest projects provide a strong analogue to the personalities behind the projects. It is true that even the most formula driven projects can be a personal statement for a developer. However, as mentioned before, it is apparent that a number of developers are willing to take larger risks, sacrifice short term and perhaps long term profits, and limit other potential activities in order to be involved and associated with projects which "interest them." In the case of Scott Toombs the developer of Princeton Forrestal Village, he was quoted in the New York Times as preferring to pursue "weird

real estate," and mentioned to us later that he could be "living better off in Nantucket by building strip centers and housing."⁶ Douglas Storrs of Mashpee Commons sees his role as staying with the development of his project for many years at the exclusion pursuing other ventures. Joseph Alfandre of Alfandre Development Co, and the developer of the newly planned "Kentlands" development in Gaithersburg, Maryland, claims that he "cannot not go back to doing typical suburban housing again."⁷

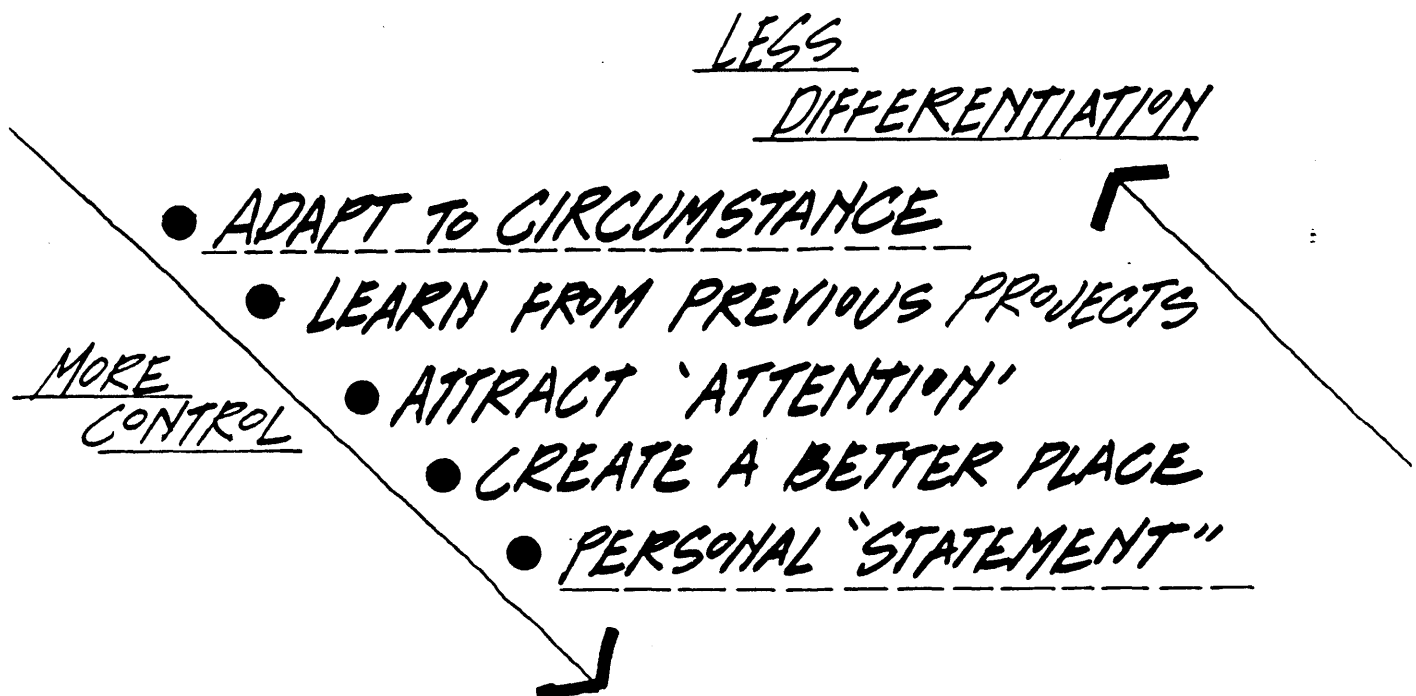
But, if these developers are sacrificing profits to be made elsewhere, perhaps these developers have already made their financial statement and that these developments offer them other intangible benefits. When asked how he could afford to take a different approach, Alfandre stated that he has the where-with-all to control the situation, and mentioned, as was also reported in a New York Times article, that he paid \$40 million to secure the "Kentlands" site. He also claimed that he is not interested in being a "power player" but instead is more interested in taking the time and effort to create the best project he can. Tom Carr of Oliver Carr Company makes the point that Oliver Carr's father started in suburban housing, Oliver Carr, Jr. made his name in office buildings, and the company is currently making its name in mixed-use development after the successful completion of the Willard Hotel and other projects. Tom Carr states that "we could never go back to

building housing" and that mixed-use development represents what the Oliver Carr Company is "all about today."

Our final observation is that, perhaps, the biggest problem in analyzing these large mixed-use developments is that it is so difficult to analyze the reasons behind their being what they are without taking into account what motivates the people behind the projects. Even the most elaborate rationalizations on the part of developer can often be inconsistent with the risks and realities of a project. However, although mixed-use developments tend to be largely formula driven, it is perhaps the need for self expression beyond the profit motivation that continues to drive mixed-use development to better solutions when more commonplace alternatives are available.

Notes to Chapter Five

- 1 Dean Swanke, *Mixed-Use Development Handbook* (Washington, D.C.:ULI - The Urban Land Institute, 1987) page 162.
- 2 *Ibid*, page 103.
- 3 Eric Garland, Building a Cozy "Village" for Suburban Shoppers. THE NEW YORK TIMES Sept. 13, 1987 p.6
- 4 *Ibid*
- 5 *Ibid*
- 6 *Ibid*
- 7 Joe Alfandre, personal interview, June 24, 1988, The Kentlands is a "new town" project currently being planned which will combine retail, office, and a traditional town center.

Exhibit I

APPENDIX: CASE STUDY-PROJECT DATA EXHIBITS

PROJECT NAME: Princeton Forrestal Village

PROJECT TEAM:

DEVELOPER:	Toombs Development Co.
OWNER:	W. Scoot Toombs
ARCHITECT:	Bower Lewis Thrower
PLANNER	Sasaki Associates
PERMANENT FINANCING SOURCE:	None
CONSTRUCTION FINANCING SOURCE	Bank of New York (Delaware) Wilmington, Delaware Mutual Benefit Life: Back up equity source

PROJECT TIMING:

PLANNING STARTED:	10-1-1983
SALES/LEASING STARTED:	5-01-1985
SITE PURCHASED/LEASED:	4-28-1986
CONSTRUCTION STARTED:	4-28-1986
PHASE 1 COMPLETED:	9-17-1987
NUMBER OF PHASES:	3
PERCENT COMPLETED	50%

OWNERSHIP AND EQUITY INVESTORS:

Toombs Development Co. is the primary equity source, but there are also several limited partner investors.

Construction Loan: A 7 year Mini-perm which assumes 2 years to build and 5 years to stabilize occupancy and then refinance.

APPROVALS:

SPECIAL PUBLIC ACTIONS WERE NECESSARY IN THE DEVELOPMENT PROCESS: Rezoning was needed to allow mixed uses. Provision of public infrastructure was required.

TIME REQUIRED: 20 months.

CONDITIONS OF APPROVAL: Donation of off-site housing and on-site low income housing.

LAND USE/BUILDING INFORMATION: Princeton Forrestal Village

	<u>COMPLETED</u>	<u>TOTAL PLANNED</u>
SITE SIZE:	57.0 acres	138.7 acres
BUILDINGS:		13.0 acres
PARKING/DRIVES:		53.5 acres
OPEN SPACE:		72.2 acres
NUMBER OF BUILDINGS	9	14
PARKING SPACES :	2197	4580
OFFICE NET RENTABLE AREA:	210,000 sf	980,900 sf
RETAIL GROSS LEASABLE AREA:	208,000 sf	285,000 sf
HOTEL ROOMS:	300	400
HOTEL AREA (Estimated)	469,000 sf	625,340 sf
DAY CARE:	12,900 sf	12,900 sf
MARKETING OFFICE/ENTRANCE:	5,000 sf	5,000 sf
HEALTH CLUB:	25,000 sf	25,000 sf
TOTAL GROSS BUILDING AREA:	905,000 sf	1,600,000 sf
FLOOR AREA RATIO (FAR)	.4	.26

ECONOMIC INFORMATION:

LAND BASIS	\$ 15,225,000	
(Land leased from Princeton University)		
SITE IMPROVEMENT COSTS:	\$ 19,600,000	
CONSTRUCTION COSTS:	\$ 89,805,000	
OTHER SOFT COSTS:	\$ 34,862,000	
TOTAL PROJECT COSTS	\$144,267,000	(\$160/s.f)
OFFICE RENT:		\$23.50/sf
RETAIL RENT:		\$25.00/sf
PERCENTAGE LEASED:		85%- (Sept. 87)
AVG. HOTEL RATE:		\$112/night
COMMON AREA MAINTENANCE CHARGE		\$7.50/sf

Revenue sources:

RETAIL	45%
HOTEL	33%
OFFICE	21%

LOCATION: The project is 8 miles from a major radial arterial highway (New Jersey Turnpike) and abuts U.S. Route 1. It is 8 miles from a regional shopping center, 49 miles from the Philadelphia CBD, and 40 miles from New York City. The project is 33 miles from a major interregional airport.

PROJECT NAME:

Tysons II

PROJECT TEAM:

DEVELOPER: Homart Development Co. and
Lerner Enterprises

ARCHITECT: The Architects
Collaborative Inc.

PLANNER Sasaki Associates
HOK

MARKET CONSULTANT: GA Associates

PROJECT TIMING:

PLANNING STARTED: 1979
PLAN APPROVED Fall 1984
CONSTRUCTION STARTED: Spring 1987
PHASE 1 COMPLETED: Fall 1989
NUMBER OF PHASES: 8
ESTIMATED TIME TO COMPLETE 10-15 years
PERCENT COMPLETED 40%

OWNERSHIP AND EQUITY INVESTORS:

Homart Development Company is the commercial real estate development arm of the Coldwell Banker Real Estate Group, which is a subsidiary of Sears, Roebuck and Co.

Lerner Enterprises is the largest regional shopping center developer in the metropolitan Washington Area.

APPROVALS:

WHAT SPECIAL PUBLIC ACTIONS WERE NECESSARY IN THE DEVELOPMENT PROCESS: Approval of the master plan. Coordination and approval of infrastructure improvements with transportation association.

HOW MUCH TIME REQUIRED: 5 years

CONDITIONS OF APPROVAL: \$14-\$15 million in roads and roadway reconstructions, phased over the period of the project's construction. All road improvements were funded by the developer.

LAND USE/BUILDING INFORMATION: Tysons II

	<u>COMPLETED</u>	<u>TOTAL PLANNED</u>
SITE SIZE:	85 acres	117.0 acres
BUILDINGS:		16.0 acres
PARKING/DRIVES:		66.0 acres
OPEN SPACE:	(30%)	35.1 acres
NUMBER OF BUILDINGS	4	13
PARKING SPACES :	(Estimated at 2 spaces per 1000 sf GLA) 3,800	9,800
OFFICE NET RENTABLE AREA:	750,000 sf	3,000,000 sf
RETAIL GROSS LEASABLE AREA:	800,000 sf	800,000 sf
HOTEL ROOMS	350	720
HOTEL AREA: (ESTIMATED)	350,000 sf	720,000 sf
TOTAL GROSS BUILDING AREA:	1,900,000 sf	4,600,000 sf
FLOOR AREA RATIO (FAR)	0.5	0.9

LOCATION: Located in Fairfax County, Va. within an area of suburban commercial office buildings and regional shopping centers. The site is adjacent to major radial arterial highways, and 15 miles from downtown Washington D.C. Tysons II is 17 miles from Dulles airport and 25 miles from National airport and located at the capital Beltway(I-495) Route 123 and the Dulles Toll road.

PROJECT NAME:

Mashpee Commons

PROJECT TEAM:

DEVELOPER:

Fields Point Limited
Partnership

ARCHITECTS:

Various architects have designed buildings within the project: Orr and Taylor are designers of the Plaza and Village Common. Ellenzweig, Moore and Associates are the architects of the Bank Structure.

PLANNER:

Duany, Zyber-Plater, et al

CONSTRUCTION FINANCING SOURCE

Bank of Old Colony,
Providence, RI

PERMANENT FINANCING SOURCE:

None

PROJECT TIMING:

MASTER PLANNING STARTED:

1979

APPROVAL GRANTED

8-1985

CONSTRUCTION STARTED:

1987

SALES/LEASING STARTED:

1986

NUMBER OF PHASES:

9

EXPECTED COMPLETION:

12 years- 2000

PERCENT COMPLETED

40%

APPROVALS:

WHAT SPECIAL PUBLIC ACTIONS WERE NECESSARY IN THE DEVELOPMENT PROCESS: Approval of the master plan and zoning changes, acceptance of deeded land for library, elderly housing.

HOW MUCH TIME REQUIRED: 3 years of planning and discussion to get master plan approval.

LAND USE/BUILDING INFORMATION: Mashpee Commons

	<u>COMPLETED</u>	<u>TOTAL PLANNED</u>
SITE SIZE:	38.0 acres	73.6 acres
CHURCH SITE (sold)	7.2 acres	
NUMBER OF BUILDINGS	10	200
PARKING SPACES :	750	1250
OFFICE NET RENTABLE AREA:	40,000 sf	80,000 sf
RETAIL GLA:	146,300 sf	250,000 sf
HOTEL ROOMS		30
RES.UNITS FOR SALE:		100
<hr/>		
TOT. GROSS BUILD. AREA:	186,300 sf	330,000 sf
FLOOR AREA RATIO (FAR)	0.11	0.10

ECONOMIC INFORMATION:

CURRENT LAND VALUE: \$ 2,500,000

Phase 1 Budget:

SITE IMPROVEMENT COSTS: \$ 3,190,000
 CONSTRUCTION COSTS: \$ 5,616,880
 OTHER SOFT COSTS: \$ 5,201,067
 TOTAL PROJECT COSTS \$ 14,000,000 (\$75/s.f.)

RETAIL RENT: \$12.00/sf-\$18.00/sf

LOCATION:The site is centrally located between two of the largest population centers on Cape Cod; Hyannis and Falmouth. Specifically, the center is located at the Maspee Rotary where Routes 28, Route 130 and Route 151 intersect. Route 28 is the major east/west highway in the area with average daily traffic of 15,422 vehicles in the summer. The project is 60 miles from Boston and 11 miles from regional shopping center at Cape Cod Mall at Hyannis.

PROJECT NAME: Reston Town Center

PROJECT TEAM:

DEVELOPER:	Reston Town Center Associates (Himmel/MKDG)
LAND OWNER:	Mobil Land Company
ARCHITECT:	RTKL, Baltimore, MD
PLANNER	Sasaki Associates
MARKET CONSULTANT:(Hotel)	Laventhol and Horawath
PERMANENT FINANCING SOURCE:	
CONSTRUCTION FINANCING SOURCE	

PROJECT TIMING:

PLANNING STARTED:	10-1-1983
CONSTRUCTION STARTED:	6-23-1988
PHASE 1 COMPLETED:	9-1-1990
NUMBER OF PHASES:	3
PERCENT COMPLETED	0%

APPROVALS:

WHAT SPECIAL PUBLIC ACTIONS WERE NECESSARY IN THE DEVELOPMENT
PROCESS: Provision of public infrastructure.

LAND USE/BUILDING INFORMATION: Reston Town Center

	<u>PHASE 1</u>	<u>TOTAL PLANNED</u>
SITE SIZE:	20.0 acres	85.0 acres
OPEN SPACE:	10.0 acres	acres
NUMBER OF BUILDINGS	5	24
PARKING SPACES :	3000	8000
OFFICE NET AREA:	550,000 sf	5,000,000 sf
RETAIL GLA. :	240,000 sf	350,000 sf
Fashion/soft goods	125,000 sf	0 sf
Gourmet food market	20,000 sf	0 sf
Restaurants	42,000 sf	0 sf
12 screen theatre	53,000 sf	0 sf
HOTEL ROOMS	500	1,100
(mtg. rooms)	350,000 sf 53,000 sf	
RES.UNITS FOR SALE:	000	1400
<hr/>		
TOT. GROSS BUILD. AREA:	1,200,000 sf	8,000,000 sf
FLOOR AREA RATIO (FAR):	1.4	2.0

ECONOMIC INFORMATION:

LAND COST \$12,375,000 (20 acres)
 TOTAL PROJECT COSTS \$240,000,000
 (assumed at 200/SF- not including land cost)
 OFFICE RENT: \$25.00/sf
 AVG. HOTEL RATE:
 (comparable to the premium hotel rates in Washington.)

Revenue assumptions

RETAIL 95% occupancy within 18 mos of occupancy
 HOTEL 74% occupancy- 4-5 years to stabilized
 OFFICE %

LOCATION: The site is 1 mile from major radial arterial highway, 8 miles from regional shopping center and 18 miles from Washington CBD. 6 miles from Dulles International airport.

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