

DEVELOPMENT FEASIBILITY STUDY:  
450 WESTERN AVENUE, BRIGHTON , MASSACHUSETTS

by

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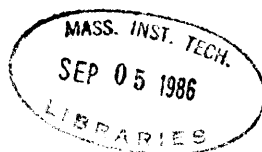
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ABSTRACT

This thesis is a site specific development feasibility study for a 0.85 acre urban site located at 450 Western Avenue, in Brighton, Massachusetts. The owner of the site currently operates a wholesale electrical supply company at this location, and he has requested that the feasibility of developing a 35,000 square foot mixed-use facility be investigated. The initial development plan consists of warehouse and office space for the electrical supply company, as well as a 10,000 square foot soundstage for television and film production. In addition to this mixed-use structure, two other development alternatives are analyzed. A light industrial building and a first class office building are also considered for development potential.

The soundstage facility would be developed specifically to suit the highly specialized needs of one of Boston's largest soundstage operators. The development of such a highly specialized structure induces a large amount of development risk into the project, as few alternative tenants would be interested in renting such a large facility. The Boston film production industry is investigated to understand the nature and health of this small, specialized market. With a thorough understanding of the dynamics of this industry, the development risks associated with the mixed-use alternative can be better understood.

The site at 450 Western Avenue is located within the Allston/Brighton Interim Planning Overlay District (IPOD), which further complicates the development of this parcel. Any future development which takes place at 450 Western Avenue will have to be compatible with the goals established for the IPOD.

After considering the development risk associated with each of the the proposed development options, as well as the character of the surrounding area, the light industrial appears to be the most appropriate use for this site.

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## INTRODUCTION

The purpose of this paper is to explore development options for an industrial zoned 0.85 acre site located at 450 Western Avenue, in Brighton, Massachusetts.

The site is currently owned and occupied by the George H. Wahn Company, and is the home of their wholesale electrical supply business. Directly across Western Avenue is a 10,000 square foot sound stage used in the production of a national, prime time television series. The soundstage is operated by a company called Filmarts, and they have expressed interest in expanding their facilities.

The Wahn Company is considering developing a new mixed-use structure on their site to accommodate both their own needs, and the needs of Filmarts. An initial architectural schematic design has been produced, soil borings have been taken, and an preliminary construction cost estimate has been obtained from an experienced general contractor for this proposed mixed-use facility.

In addition to the sound stage proposal, two other development alternatives are investigated. The first alternative is a light manufacturing structure, and the second is a class A office building.

For each of the proposed options, the development and investment criteria of George Wahn must be considered. The primary development and investment criteria for this study are discussed below:

1. Increase the value of the site.

The Wahn family has owned the land at 450 Western Avenue for the past twenty two years, and George Wahn believes that a new use would increase the value of site.

2. Provide space for George H. Wahn Company's operation.

Wahn's primary criterion is that the George H. Wahn Company remain in the electrical supply business. However, if a superior development option is discovered which cannot accommodate the physical space requirements of the Wahn Company, then George Wahn would consider relocating his electric supply company to an alternate site.

3. Mitigate Project Risk.

George Wahn does not want to develop a speculative structure, and will proceed with development only if a substantial portion of the project is pre-leased. George Wahn sees himself primarily as a businessman, and does not feel comfortable as a speculative real estate developer.

4. Obtain a satisfactory return on investment.

The selected development proposal should have a minimum eleven percent first year total return on capital. Copley Real Estate Advisors, the real estate development arm of New England Life Insurance Company, often uses this measure

to determine the financial feasibility of a proposed development project. For comparison, the one year Treasury Bill rate of return is approximately six percent annually, as of July, 1986.

The 450 Western Avenue site is located within the Allston-Brighton Interim Planning Overlay District (IPOD). An amendment to the Boston zoning code is currently being drafted by the Boston Redevelopment Authority and a citizens advisory committee, to define goals and objectives for future development in this area. Any future development which is considered for this site must be compatible with the objectives established for the IPOD.

The development of a highly specific facility such as a soundstage makes this project unusual, and creates additional risks not often considered in the development of more traditional commercial structures. In the Boston area there are many users of general office space which might be prospective tenants in a new office project, and various manufacturing users might be accommodated in a light manufacturing structure. However, there are relatively few tenants which would be interested in a "state of the art", 10,000 square foot soundstage. If for any reason Wahn and Filmarts fail to reach an agreement concerning lease terms, or if Filmarts' business fails after occupying the space, a replacement tenant will be difficult to find.



On the other hand, the development of a mixed-use structure results in a building which is 100 percent pre-leased prior to construction, as the George H. Wahn Company and Filmarts would lease the entire facility. Virtually all of the leasing risk is removed from the project, and attractive financing terms could therefore be arranged. In addition, the soundstage facility could be designed to allow easy conversion to a manufacturing use if required at some later date. The heavy floor capacities and large, high, columnless spaces of the soundstage would make ideal manufacturing space if the soundstage operation was discontinued.

After considering the investment objectives of George Wahn, the present market conditions in the Allston-Brighton area, and the risks associated with each development alternative, it appears as if the light manufacturing structure is the best development choice for this parcel. The most appropriate use for this site seems to be an industrial type of use which would be designed to be compatible with the adjacent residential neighborhood. Such a facility will satisfy the space requirements of the Wahn Company, and also provide space for additional income-producing tenants. From an investment standpoint, a first year return on capital exceeding eleven percent can be expected.

The first chapter of this paper considers the site characteristics and zoning procedures in the City of Boston. The second chapter assesses the health of the film production industry in Massachusetts, and considers the role of Filmarts within that industry. Various market considerations for each of the three alternatives are discussed in Chapter Three. Chapter Four is an economic analysis for the three proposals under consideration. The final chapter addresses several broad issues raised by this proposed development.

## CHAPTER ONE: SITE CHARACTERISTICS

This chapter describes the general physical characteristics of the site including existing use, access, abutters, and geotechnical considerations. A discussion concerning the current zoning requirements and the Allston-Brighton Interim Planning Overlay District is also included.

### Site Description

450 Western Avenue is a 0.85 acre industrial site located in the Brighton neighborhood of Boston as shown in Figure 1. The site is bounded on the north by Western Avenue, on the south by Abby Road and on the east and west by adjacent structures. Approximately 60 percent of the site consists of the existing George H. Wahn Company warehouse, which is a one story masonry structure measuring 110 feet by 150 feet. The remainder of the site is composed of surface parking facilities for the Wahn Company.

There is no vegetation on the site, and very little topography. Grade elevations range from +23 feet Boston City Base at Western Avenue to +27 at Abby Road.

This area of Western Avenue can best be described as a confusing hodgepodge of existing uses. Auto repair shops, used car dealers, storage facilities, single family homes,

and convenience stores line this portion of Western Avenue. A large strip shopping center consisting of a Caldor department store and a Star Market grocery store is located approximately one half mile east of the Wahn site.

The general feeling one gets in this area is one of noise, congestion and neglect. It will be difficult for a single, small development project to reduce this hodgepodge feeling when the site is surrounded by small taverns, parking lots, and auto body shops. This small project cannot change the character of the neighborhood by itself, but it may be able to set an improved standard for future development in this area. The use of high quality building materials, buffer zones between residential and industrial uses, and landscaping along Western Avenue are several elements which can be incorporated into this project to make this area of Allston-Brighton more appealing.

### Access

Western Avenue is an arterial street which provides direct access to Soldiers Field Road, Memorial Drive and the Massachusetts Turnpike. Cambridge's Harvard Square is only five minutes from the site, while Boston's financial district is a fifteen minute drive. The Mass Pike provides easy access to routes 128 and 495, which are major interstate highways which circumscribe the greater Boston area.

Two Massachusetts Bay Transit Authority (MBTA) bus routes travel down Western Avenue and stop directly in front of the site. These buses provide public transportation to Cambridge, Brighton and Watertown. The bus can be used to connect to the MBTA rapid transit subway system in Harvard Square, which provides access to points throughout metropolitan Boston.

One of this site's advantages is the fact that it is strategically located and provides convenient car access to the various business centers and interstate highways in and around Boston. Users of the future facility will also benefit from the ability to utilize public transportation to get to and from their workplace.

#### Existing Use

The site is currently being utilized by the George H. Wahn Company, one of the oldest electrical supply companies in the Boston area. Since 1915, the Wahn Company has been providing industry, municipalities, and contractors in the New England area with a full range of electrical products. Mr. George H. Wahn is the third generation of his family to run the company, and the firm has been located at 450 Western Avenue for the past twenty two years.

The existing building totals approximately 15,000 square feet. Three thousand square feet is used for office space, and the remainder is storage and warehouse space.

The paved area of the site is larger than what is required by the Wahn Company, as there are currently nineteen employees in the firm, and most employees either walk to work or take public transportation. Only one truck dock is required by the Wahn Company at present.

Currently the space requirements of the Wahn Company are satisfied with this simple structure. Materials are moved manually through the warehouse, and are stored on basic metal shelving. The office and storage areas are adequate, and no future expansion space is anticipated. If a new industrial building is constructed, the shipping, receiving, storage and office requirements can be accommodated in an inexpensive structure. If the office building option is selected, it should be fairly easy to find inexpensive off-site warehouse space to meet the needs of the Wahn Company.

### Utilities

The site is well serviced with all utilities. Water, sewer, storm drain, gas and electric service connections can all be easily located in Western Avenue, as shown in Figure 2.

### Abutters

A closer look at the abutters of the Wahn site reveals the diversity which is found throughout the Allston-Brighton area. The north of the site is bounded by Western

Avenue, a heavily traveled fifty foot wide, two lane arterial road. Cars park on both sides of the avenue, which often results in a restriction of vehicular flow and causes much congestion. Across Western Avenue are several large warehouse and office facilities. To the east, directly abutting the existing Wahn Company structure is another warehouse owned by the Shuman Construction Company. One of the tenants of the Shuman structure is the Massachusetts Auto Body Shop, which repairs collision damaged cars. To the south of the site lies a residential neighborhood consisting of two and three family rental units. Abby Road, which is a cul-de-sac, terminates directly behind the Wahn site. To the west of the site is the "Stadium Pub", a small 2,000 square foot tavern which shares a common ten foot wide "right of way" with the Wahn Company.

There has been little development activity in this portion of Western Avenue recently. Several buildings have been renovated along Soldiers Field Road, but these structures do not improve the character of Western Avenue, as these buildings address Soldiers Field Road, and create large asphalt parking lots along the Western Avenue frontage.

A new building was recently constructed at 460 Western Avenue, across the street from the Wahn site, however it is a showroom and service facility for used foreign cars, which further strengthens the automobile-repair context prevalent in this portion of Western Avenue.

### Geotechnical Considerations

The firm of Haley & Aldrich, Inc. of Cambridge, Massachusetts, has conducted a thorough geotechnical investigation to determine the subsurface soil and groundwater conditions of the site, and submitted a report on April 15, 1986. The geotechnical investigation consisted of five test borings and one machine excavated test pit.

The soil profile is composed of approximately three feet of fill, overlaying a seven to twelve foot thick layer of dense sand. Below this layer of natural sand is a stratum of Boston Blue Clay, a stiff marine clay with occasional seams of silt or fine sand. The clay becomes less stiff with depth. One boring went to a depth of seventy feet, and this clay layer was still not penetrated.

Observed groundwater levels were noted to be some ten feet below the surface of the ground. This relatively high groundwater level must be taken into consideration in both the design and construction of the proposed project.



If excavation is required below the water table, a carefully designed, installed and monitored lateral earth support system and dewatering system is recommended by the geotechnical consultant. A soldier pile/wood lagging system in addition to sump pumps or well points is suggested. Good control of groundwater will be necessary to reduce the risk of settlement of adjacent structures.

Haley & Aldrich recommends that the future structure can be supported by reinforced concrete footings or mats, bearing on the natural sand or clay. Care must be taken to assure that the subgrade is undisturbed and has adequate strength and bearing capacity.

#### Boston Zoning Review Procedures

All new construction, including extensions and changes to existing structures are subject to the zoning regulations of the City of Boston. The city is divided into various categories of residential, business, and industrial districts. The boundary between the M-1 district (restricted manufacturing) and the R-.8 district (multi-family residential) cuts directly through the Wahn parcel.

Zoning review is initiated by a request for a building permit. The applicant must submit an application for a building permit to the Inspectional Services Department (ISD) of the City of Boston. ISD then inspects the application for compliance with the zoning code. If the

application complies, then a permit is issued. If however, ISD determines that the plans do not comply with the code, then a refusal letter is issued. The time frame for this review is anywhere from two days to two weeks. A prefiling meeting with a member of the Plans Examination section of ISD is recommended as a method of expediting this zoning review phase.

If ISD determines that the plans do not meet the Building and Zoning Code, the developer has the alternative of seeking a variance. In order to secure a variance, an applicant must demonstrate that special circumstances exist which make the property different from others in the district, and that these differences, such as lot size, lot shape or topography create an unnecessary hardship for the owner of the property.

According to a Boston Redevelopment Authority (BRA) planner, very few development projects have been done completely "as of right" in the Allston-Brighton area. Relief from on-site parking requirements, and height limitations have been successfully achieved by developers in the past, and similar variances may be necessary to make this project financially feasible.

The request for a variance will add a minimum of four months to the development schedule, and will require that the developer be willing to work with both the BRA design staff and various neighborhood groups. The Allston-Brighton community groups are well known for being visible

and vocal concerning any type of development in their community, and will certainly take an active role in any variance proceedings.

#### Current Zoning Regulations

Eighty percent of the 450 Western Avenue site is currently zoned M-1, Restricted Manufacturing, with an allowable Floor Area Ratio (FAR) of 1.0. The remaining twenty percent of the site is zoned R-.8, which allows multi family residences and apartments with a maximum FAR of 0.8. Due to the residential neighborhood bordering the south of the site, a thirty foot buffer zone is required in the M-1 zone. A major zoning consideration is the Interim Planning Overlay District (IPOD) which is presently being drafted for the entire Allston-Brighton area. A description of the IPOD and its possible effects are discussed below.

#### Interim Planning and Overlay District (IPOD)

The current Boston Zoning Code and Maps were adopted by Chapter 665 of the Enabling Acts of 1956. Although there have been several amendments made, these changes did not reflect any kind of comprehensive, city-wide analysis. In November, 1984, the Zoning Commission approved the creation of the IPOD mechanism as a direct response to community concerns regarding outdated and perhaps inappropriate zoning.

The Boston Redevelopment Authority (BRA), the quasi-governmental office which is charged with planning and redevelopment of Boston, recognizes that the zoning code is outdated, and perhaps an overhaul of the current zoning code is necessary. The BRA also recognizes the unique neighborhood character of Boston, and feels that the most appropriate way to rezone will be neighborhood by neighborhood.

The Allston-Brighton IPOD is a method for the community to become actively involved with the planning and zoning of their neighborhood, and to draft a set of goals and objectives for future development in the area. The IPOD is not created as a way to stop development.

The first IPOD was for the Port-Norfolk section of Dorchester. The Allston-Brighton IPOD is more ambitious, as it covers a larger area, and will include the first Planning and Zoning Advisory Committee (PZAC) comprised of twenty one community members. The Allston-Brighton IPOD is seen by the BRA as a prototype for other neighborhoods to follow, and Mayor Flynn and his administration have given their full support to assure that this IPOD is a success.

Development projects that are proposed during the two year IPOD period must adhere to the following process: Applicants for a building permit, change in use permit or change in occupancy permit (which are not exempt under the IPOD regulations) will have to receive an "Interim Planning Permit" from the Board of Appeal before the Inspection

Services Department can issue the requested permit. If a developer must go to the Board of Appeal for the requested permit, there will be up to ninety days of community and BRA review. At the end of the ninety day period, there will be a public hearing to determine if the proposed development is consistent with the objectives of the overlay district. If the Board of Appeals finds that the proposed project is in fact consistent with the IPOD objectives, a permit will be issued. If the Board decides that the project does not address the needs and concerns of the community, then the request is denied.

#### Allston-Brighton Profile

The Allston-Brighton neighborhood is located to the west of downtown Boston, and is one of Boston's distinct and identifiable neighborhoods, along with Charlestown, Dorchester, Chinatown, and the South End. Allston-Brighton is bounded by the Charles River on the north, the town of Newton to the west, and the town of Brookline to the south. Brookline disrupts Boston's boundary in such a manner that Commonwealth Avenue is the only direct link that Allston-Brighton has with the rest of the city.

In 1980, Allston-Brighton was the most populous neighborhood in Boston, with a population of approximately 65,000 residents, or 22.5 persons/acre. From 1970 to 1980 the population of Allston-Brighton increased 3.6 percent, while the percentage change for the entire city of Boston

was only an increase of four tenths of one percent. Therefore, the Allston-Brighton area was growing at a rate nine times that of the city as a whole.

Allston-Brighton grew in the early 1900's as a street car suburb independent of the private automobile. The "green line" of the Massachusetts Bay Transit Authority still runs down Commonwealth Avenue in Brighton, and abandoned trolley tracks can still be observed on Brighton Avenue and Washington Street. Due to this streetcar availability, homes and retail establishments were built close together, and few provisions were made for off-street parking. Increased vehicular traffic, added to double parked cars on major connector roads has led to serious traffic congestion. Traffic and parking are now two of the primary problems which impact the Allston-Brighton community, and the developer of this parcel must be prepared to address these issues of community concern.

#### Neighborhood History

As the Back Bay and Kenmore Square areas of Boston began to be filled in the late 1800's, the street car lines were being extended west, towards the Allston-Brighton area. The result was that high quality, residential developments were built in the southern and western portions of Brighton. However closer to the Charles River, near the Wahn site, stockyards, slaughterhouses and meat packing operations were built. As the nation grew and

expanded west, and refrigerated rail cars were introduced, the Brighton stockyards declined in importance.

In the early 1900's, the failing stockyards were replaced with industrial plants, warehouses, and in some cases residential homes. Development lacked an overall plan, and resulted in residential, commercial and industrial uses being mixed together. The effect of this original lack of zoning and planning can still be observed in many parts of Allston-Brighton. Western Avenue is a prime example of the result of this lack of planning, as various noxious uses, such as auto body shops can be found adjacent to single family residences.

In 1986 the character of Western Avenue is one of congestion and neglect. Vehicular traffic is almost always heavy, and cars parking on both sides of Western Avenue further restrict the flow of traffic. Used car lots and auto body shops are the predominate use, although some retail and residential uses are present. The large asphalt lots, chain link fences, and cars in various states of disrepair do not make for an esthetically pleasing or comfortable environment. Many of the owners of the structures along Western Avenue have done little to make the exterior of their buildings visually appealing, which further adds to the feeling of neglect. Green spaces and trees are virtually non-existent in this urban location.

Despite these negative factors, many residents of this area of Allston-Brighton feel that there is future development potential for Western Avenue. As rent rates for commercial space continues to climb in downtown Boston, some firms are beginning to look to Brighton as an alternative location. Proximity to Boston and Cambridge, good access to the Massachusetts Turnpike, access to MBTA public transportation, and low rent levels may make Brighton an attractive location for office or light industrial users.



## CHAPTER TWO: THE MASSACHUSETTS FILM INDUSTRY

Based on preliminary discussions between the George H. Wahn Company and Filmarts, a Boston based film production company, Wahn is considering the development of a new mixed-use structure at 450 Western Avenue. The new structure would include an elaborate soundstage to meet the highly specific needs of Filmarts, as well as warehouse and office space for the Wahn Company.

The film production industry in Massachusetts is a healthy and growing industry. The Massachusetts Film Bureau has been successful in attracting feature length film and television series production work to Boston which is the type of activity needed to support a major soundstage. Most of the present soundstages in Boston are small, and cater primarily to industrial clients. Filmarts would like a facility which would be considered "state of the art" to accommodate large scale, New York and Los Angeles style users.

For the Wahn Company to consider the development of such a highly specific use structure, it is important to understand the nature and structure of the film industry in Boston. All development projects have inherent financing, construction, and leasing risks. However, if a soundstage is built to suit Filmarts, the risk of the film industry must also be considered.

The film production industry in Massachusetts is composed of several distinct segments: industrial films, commercials, feature films, and equipment rentals. The relative growth and health of this industry is discussed in this chapter. A discussion concerning Filmarts, their competition, and their reliance on the production of a weekly prime time television program, is also included.

#### Film and Video Production in Massachusetts

Massachusetts firms engage in a wide variety of film production activities. Although highly visible and prestigious, feature length films are only one aspect of the film industry in the state. Commercial, industrial, and educational productions are actually the backbone of the industry. Increased demand, new filmmaking techniques and greater filmmaking creativity have all helped to fuel the growth of the Boston film industry. Below is a short description of each of the major film production segments.

#### Industrial and Educational

This sector is the largest source of income of film makers in Massachusetts, and includes training films, public relation work and internal communications for large companies. Approximately one half of the \$43 million worth of production work generated by the film industry in the state falls into this sector. The ease and accessibility of video equipment is rapidly replacing film in this

segment of the market. Industrial and educational films are relatively inexpensive to produce as they often do not require location shooting, the production staff is small, and the equipment is inexpensive as compared to commercial production.

### Commercials

Commercials by local production houses for both local and national consumption generated about \$5.5 million in 1983, and grew to \$8.0 million in 1984. This figure does not include commercials produced by local television stations for their own use.

There is a very talented and successful advertising community in Boston, which now finds it easier to shoot commercials in Boston rather than travel to New York. Loretta Jeneski of Boston's "Duck Productions", a Boston commercials production house, notes that clients are looking for alternatives to going to New York to make commercials, and that "for the amount of money you have to spend in New York, one can do much more per dollar in Boston and really turn out work of national caliber."<sup>1</sup> A reflection of the intense growth of this segment of the film market is the fact that Jeneski's firm grew 100% in 1984. Advertisements for many national, European and Japanese accounts have recently been filmed in the state.

### Feature Films

Large budget, feature film production in the state of Massachusetts is done primarily by outside production companies from Hollywood to work for full length movies, television series and television pilots. Approximately \$6.1 million was spent in 1984 in this market segment. Local production companies, as well as local technical people and facilities benefit from this type of outside production as their services and expertise are usually utilized by the Hollywood productions.

There are also many small local production companies in the Boston area. These Boston film producers are able to take advantage of the diversity and flavor of the neighborhoods in the area to produce inexpensive, yet powerful films.

#### Equipment Sales and Rentals

This is the smallest segment of the production industry in the state, and accounted for about \$2 million in 1984. The activity in this segment is directly tied to the activity of the film production industry in general. As more feature length films and on location shooting is required, equipment rental and support services will also grow.

A large portion of Filmarts revenue is due to the rental of film production equipment, and this is a very lucrative niche for the firm. As film production within Massachusetts and New England continues to grow, Filmarts

will benefit from the increased demand for rental equipment.

As shown in Figure 3, industrial and educational production accounts for nearly half of all production revenue in Massachusetts, but commercial production is growing faster than any other segment.

Feature film and television production revenue dropped slightly in 1984, but this is due to the exceptionally large number of location productions shot in 1983. It should be noted that revenue from feature film and television production has been growing steadily over the past five years. The spurt in 1983 was followed by a correction in 1984, and similar spikes can be assumed to occur in future years. However, despite these inherent spikes, the feature film and television production segment have shown a healthy overall growth rate of 14% per year over the past five years.

Figure 4 shows the overall growth pattern for the Massachusetts film industry for the years 1980 through 1984. The health and vitality of the Massachusetts production industry is exhibited by the average annual growth rate of 22 percent during that time.<sup>2</sup>

#### Massachusetts Film Bureau

Los Angeles and New York have traditionally been the top two film production areas of the country. However, as production costs in those two centers continue to

escalate, many television and film production companies are leaving those cities to do their work in other areas. Massachusetts has taken advantage of this situation by creating a government agency called the Massachusetts Film Bureau to attract and encourage film production in the state. According to the film bureau, film production spending in Massachusetts has increased 25 percent each year since 1980, and reached \$43 million in 1984.

The Massachusetts Film Bureau (MFB) is committed to provide assistance to film, video and cable companies in every phase of film production. In its glossy 150 page "Massachusetts Production Manual" pre-production, production and post production services are listed, and individual and company profiles are included. In order to assist and expedite film production in the state, the film bureau also provides the following services free of charge to producers:

- o Assist in location selection
- o Permit acquisition
- o Liason between state agencies and production companies
- o Assist in negotiations with local union officials
- o Arrange for police to provide traffic control
- o Arrange accommodations for scouting crew and production personnel
- o Provide a MFB representative to work with production company during location filming.

The primary function of the MFB is to attract feature length film and television series to the Boston area. In order to convince Warner Brothers that on location filming would enrich their "Spenser: For Hire" television series, Governor Michael S. Dukakis was recruited to go to Los Angeles to pitch for the state. A Hollywood style gala dinner at the posh Beverly Hills Bistro Garden was orchestrated by the MFB to convince Warner Brothers that Massachusetts was comfortable with Hollywood. Dukakis continues to keep the state in the limelight, as the governor has made a cameo appearance in the popular television show "St. Elsewhere", which is set in Boston. Although "St. Elsewhere", an NBC weekly prime time drama series is actually produced in Los Angeles, the Boston production industry still benefits, as the weekly show acts in effect, as a free commercial for the state.

#### "Runaway Production"

The term "runaway production" is used to describe the fact that many Los Angeles production companies are taking their work to other locations due to the spiraling costs associated with film projects, and the fact that filmmaking is often easier in other locations. The film production is a non-polluting industry that can pump millions of dollars into a local economy. Virtually every state, and some cities, now have film bureaus to attract film production. While New York, Texas and Colorado are the leaders in

attracting film production away from Hollywood, the Massachusetts Film Bureau is also among the most successful agencies of its kind.

The strength of the Hollywood production related unions is one reason for the increased costs of making a film or commercial, and production companies are now finding it economical to come to Boston to shoot. Los Angeles based Harmony Productions shot several segments of a Budweiser Beer "Salute to the American Worker" ad campaign in and around Boston. The reason that Harmony chose to shoot in Boston was that they were allowed to shoot "real people in real situations, and were not limited to a casting pool approved by the unions",<sup>3</sup> according to Thomas Tyson of Harmony.

One of the many services of the the Massachusetts Film Bureau is to provide assistance in arranging meetings with local union officials and also assist in the negotiations with the local unions. With the influence of Governor Dukakis and Secretary of Economic Affairs Joseph D. Alviani, the film bureau is able to get extensive cooperation from the Boston union leaders.

Such union cooperation is a recent occurrence. Boston is still fighting a reputation of having difficult unions due to an incident involving the Teamsters union during the filming of "The Brink's Job" movie in 1978. This \$12 million production, directed by Academy Award winner William Friedkin and produced by Dino DeLaurentis, resulted



in prison terms for two members of Teamsters Local 25 in Boston for racketeering charges.

The state of Massachusetts also has a diversity of scenery and locations which further attract outside production crews. Harmony Films was able to find authentic fishermen, mill workers and high-tech engineers within a fifteen mile radius of Boston. New England town greens, rolling farmland, vibrant urban activity, and the Atlantic Ocean provide a wide variety of natural backdrops for filmmakers. The four seasons also contribute to the variety of the natural and manmade environment.

Figure 5 is a schedule of television or feature films shot on location in Boston. A major Los Angeles production company such as MGM/United Artists, Columbia Pictures, Warner Brothers, or Paramount Studios was involved with at least one project per year since 1977.

Although only six major projects took place in Boston in 1985, one of them was the ABC network prime time detective series "Spenser:For Hire", which shot twelve episodes during a sixteen week schedule, entirely on location in and around Boston. The Massachusetts Film Bureau believes that the production of "Spenser" will have a tremendously positive impact on the economic health and visibility of the Boston film production market.

For example, when "Spenser" shot the first two hour pilot during a twenty two day period in 1985, Warner Brothers employed 345 local people through eighty five

separate vendors in that four week period. With the assistance of the Massachusetts Film Bureau, Warner Brothers was able to get extensive cooperation from local unions, state and local agencies, and private owners.

### Filmarts

One of the largest beneficiaries of the "Spenser:For Hire" Massachusetts production work has been Filmarts Production International, Ltd., the owner of New England's largest soundstage. Filmarts has a 10,000 square foot Hollywood scale soundstage located at 1380 Soldiers Field Road, directly across from the Wahn site.

According to the Massachusetts Film Bureau Production Manual, there are eight soundstages listed in the Commonwealth of Massachusetts. During the course of personal interviews with various Boston production people, the question was posed "Which is the major sound stage facility in Boston?" Filmarts was always acknowledged as the major facility. There are other sound stages in and around Boston, but the facilities are much smaller, and are not suitable for television productions. Most of the other sound stages rely primarily on commercial and industrial clients. Figure 6 shows the summary of comparable sound stage space in the Boston and New York areas.

In 1978 Filmarts was founded as a film production company which primarily rented cameras, lights and grip equipment to the New England film industry. In 1980 Filmarts converted a light manufacturing building into a soundstage and film production center. About ten separate production companies now rent space in the Filmarts facility at Soldiers Field Road. Filmarts' goal is to offer a total production center for Boston's film industry. While the soundstage is the major attraction of this facility, Filmarts continues to operate an active equipment rental business from the Soldiers Field Road location.

Warner Brothers and "Spenser" is a very important client for Filmarts, both in terms of income and visibility. For the sixteen week shooting schedule, Warner Brothers will have the entire sound stage occupied from June through November. Instead of having a series of small clients doing three and five day shoots, Filmarts now has the relative stability of a single long term tenant.

In addition, just as "Spenser" and Warner Brothers brings notoriety to the Commonwealth of Massachusetts, "Spenser" brings the same notoriety to Filmarts. By landing a major client such as Warner Brothers, Filmarts is improving its reputation in the national film industry and proving that Boston has the facilities and technical talent to produce top quality feature films.

According to Filmarts officials, the financial strength of Filmarts is not entirely dependent upon the success of "Spenser". Due to the vitality of the industrial and commercial production segments in Boston, if ABC-TV cancelled the weekly show, then local small production companies would actively book the soundstage facility. In addition, the equipment rental business helps to diversify the Filmarts operation.

While Filmarts may be the largest facility in the Greater Boston area, it does have two other large competitors, both affiliated with area television stations.

Studio 5 Productions, which is a subsidiary of Channel 5 in Boston, began its operation in November of 1985. The Studio 5 facility is 5,600 square feet, as opposed to the 10,000 square feet at Filmarts. However, Studio 5 has the advantage of being affiliated with a major local television station, and can take advantage of Channel 5's technical expertise and reputation. Channel 5 decided to open this studio to the Boston market after determining that the greater Boston facilities could not support the demand for corporate and industrial production. Although Studio 5 is one of the most advanced production studios in the northeast, their focus to date has been on cable television productions, television conferences and commercial production. The studio size limits their ability to compete with Filmarts for a weekly television series type of

production work, although it can be very competitive for corporate and commercial work.

WGBH, the Boston affiliate of the Public Broadcasting System, has two soundstages which they actively market to independent film and commercial producers. Like Studio 5 Productions, the WGBH soundstage can also offer the technical expertise of a major television production company.

The film production industry in Massachusetts is healthy and growing, with all segments of the industry enjoying rapid growth. The Massachusetts Film Bureau has been successful in attracting feature length films and television series to Boston, which is the type of activity needed to support a major soundstage facility. While most of the current soundstages in Boston are small and cater primarily to industrial clients, Filmarts, Studio 5 Productions, and WGBH are the only local firms which can accommodate large scale, Los Angeles style users.

### CHAPTER 3: MARKET CONSIDERATIONS

The proposed soundstage is designed to be the finest facility of its kind in Boston. The design requirements of the soundstage are very specialized, and result in a costly structure. If, for any reason, Filmarts decides not to lease the space, the Wahn Company will be left holding an expensive structure, with a unique use. This chapter will discuss why the proposed soundstage is so specialized, and offer alternative uses for consideration.

The initial architectural design includes two isolated concrete foundation slabs to prevent transmission of noise and vibration into the studio, as well as twelve inch thick masonry interior partition walls for interior acoustic control. The interior sound partitions alone are estimated to cost \$400,000. The stage also requires ninety feet of open, column free spans, and the structure must have the capability of supporting a heavy lighting grid. To accommodate these design criteria, long span steel trusses weighing 200 pounds per linear foot are required. The resulting structure is acoustically efficient, although very expensive.

The typical Boston soundstage is much smaller in size, and is usually a renovation of an old warehouse or manufacturing facility. The clear height to the ceiling is usually about fifteen feet, which is adequate for filming

commercials and industrial work, but is inadequate for television and feature film production work. Sound and vibrations from street traffic are sometimes a problem in these renovated facilities, as the sound companies simply do not have the capital required to undertake extensive renovations to the structure of the converted warehouse space. The proposed stage will give Filmarts the chance to design the studio to fit their exact requirements. However, these specialized criteria will lead to large construction costs, which in turn must be translated into higher rent levels for the tenant. The proposed studio may be very expensive from a tenant's perspective, although it will unquestionably be the finest facility of its kind.

It is estimated that Filmarts is now paying in the area of eight to ten dollars per square foot, net, for the current space at 1380 Soldiers Field Road. One of the largest considerations is to determine if the structure can be built at a cost which can be translated into an affordable rent for Filmarts.

A second consideration is the fact that currently in Boston Filmarts is the only user which would be interested in this type of large, specialized space. It is highly unlikely that there is enough production work to support another full scale, 10,000 square foot soundstage in Boston. Despite the healthy 20 percent annual growth of the film production industry in Boston, and the 125 percent growth in the past five years, only a small percentage of

that work requires the use of such a major soundstage. The only way for Wahn to proceed with the construction of the soundstage would be if Filmarts agreed to commit as a long tenant. With the building virtually 100 percent pre-leased, attractive financing terms could be arranged, thus reducing Wahn's development risk.

Along with stringent physical requirements, Filmarts will also bring stringent schedule requirements which must be accommodated. A large portion of Filmarts' income is due to the sixteen week production schedule for "Spenser: For Hire." Construction of the new soundstage would have to be closely coordinated so that the facility could be completed in time for the full season of "Spenser" work. Construction would have to start immediately in order to have the soundstage operating for the 1987 shooting schedule. At present, only schematic design work has been completed, and no permits have been acquired. A spring 1987 start is more likely, and would allow for a summer 1988 opening.

Filmarts' reliance on the success of "Spenser: For Hire" is another major market consideration which warrants considerable thought. The success of a prime-time television show cannot be guaranteed. Although "Spenser: For Hire" is a popular favorite now, there is no way to determine how long the show will continue to enjoy its high ratings. If "Spenser" is cancelled by ABC-TV, the impact that cancellation would have on the financial strength of



Filmarts must be carefully considered. While Filmarts management is confident that short term users will result in full utilization of the soundstage in the event of "Spenser's" cancellation, a long term, financially stable client such as Warner Brothers is clearly advantageous. Wahn must carefully consider the financial strength of Filmarts, because if Filmarts goes bankrupt, then Wahn will be left with a new, highly specialized facility with a large debt service, and a replacement tenant will be difficult to find.

#### Manufacturing Use

Due to Wahn's reliance on a single tenant with limited financial strength, it may be wise for Wahn to consider building the soundstage in such a manner that it can easily be converted into light manufacturing or industrial use. The high floor loading requirements and large height requirements of the soundstage will be ideal for a manufacturing use. If the structure can be designed and built in an economical manner so that the effective rents will be competitive for industrial use, then Wahn will be limiting his downside risk if Filmarts either backs out of the deal, or fails after several years of occupancy. Such items as independent footings and double foundation slabs would be ideal for vibration isolation, although the costs may be prohibitive. If Filmarts could agree to a less

sophisticated and therefore less costly structure, then Wahn will be limiting his development risk considerably.

The television and feature film production market in the Boston area which Filmarts relies on can be described as a market of spikes--short peaks followed by sharp, rapid declines. Historically, the commercial real estate market has a more cyclical trend. Every real estate project has inherent risk. However when the spikes of the television and feature film production industry are added to the ever present risk of a development project, Wahn may determine that the total risk is unacceptable. As an alternate consideration to a soundstage, a first class office building should also be considered.

#### Office Market

While building a first class office building on the Wahn parcel is a possibility, there is considerable risk associated with developing that type of use on Western Avenue. At present there are only two first class office buildings in this area of Boston. One is "Harvardview", a 50,000 square foot structure located at 230 Western Avenue, about one half mile east of the Wahn parcel. The second is 214 Lincoln Street, a 92,000 square building about one-quarter mile south of the Wahn site. Harvardview opened in late 1985, and by mid 1986 is approximately 75 percent leased. 214 Lincoln Street, completed in early 1986 is approximately 92 percent vacant.

Although a Western Avenue location does enjoy the benefit of good access to the Mass Pike and proximity to Harvard Square and Downtown Boston, the Western Avenue location is clearly not a visually attractive area. There are few amenities for office users, and there is a general feeling of neglect in this area whose predominant use is auto body shops, used car lots and storage facilities.

Despite this locational perception, Harvardview was constructed at 230 Western Avenue. Joseph Caruso of the real estate leasing firm which represents the owners of Harvardview claims that Harvardview created an office market where none had previously existed. Although originally projected at twenty to twenty three dollars per square foot, most of the leases were signed at eighteen dollars.

214 Lincoln Street can be seen from the Mass Turnpike, but does not have direct access to the Pike. The 92,000 square foot, five story office building has had 7,000 square feet rented, and is currently for sale. The building was offered for sale immediately upon completion of construction which has severely hindered the leasing progress of the building.

An office user who is considering the Allston-Brighton area is a price sensitive user, and must be virtually esthetically insensitive. If an office user has very little personal client contact at this place of business, is enthusiastic about reducing his overhead costs, and at

the same time wants a Boston address, then a Western Avenue location may be ideal. Such prospective tenants might be the home office of a temporary employment agency, office space for a courier service, or the office for any type of firm which does a considerable amount of telephone sales work.

One of the difficulties with the Allston-Brighton area is that office users considering that location will also be looking at space in Newton and Cambridge. Although these two markets might be slightly more expensive than Allston-Brighton, they are also more established and recognizable office markets with virtually the same locational benefits. Dennis Finnigan of Hunneman, Inc., a Boston real estate brokerage firm, has noted that when a tenant is considering a Allston-Brighton location and a Cambridge location, most tenants choose the Cambridge location, even if the rent rate in Cambridge is slightly higher. With the current softening of the Cambridge market, there is now little, if any difference between the rent rates in Allston-Brighton as compared to Cambridge.

Concerning vehicular access, there is virtually no advantage to locating in Allston-Brighton as compared to Cambridge. In addition, the Cambridge markets of Massachusetts Avenue and Kendall Square are both directly served by the "Red Line" of the Massachusetts Bay Transit Authority subway system. This access to a rapid transit

line is a significant tangible advantage enjoyed by the Cambridge office users.

While there is a general softening in the Cambridge market, and the Boston vacancy rate also continues to rise, the current Allston-Brighton market is bleak. As shown in Figure 7, there is currently a 66% vacancy rate in the Allston-Brighton area for large buildings with over 15,000 square feet of space. The Allston-Brighton office market is so limited at present that few major brokerage firms in town keep statistics on the area.

Another consideration concerning a proposed office building at this site is the fact that the current allowable FAR is 1.0. If adjacent parcels are not acquired, or if a variance is not sought, then the building size must be limited to approximately 30,000 square feet. If a variance could be obtained which would allow more floor area or greater height, then the economics of an office building may begin to become more attractive.

The Harvardview project located at 230 Western Avenue was successful in obtaining variances for seven different items of the building and zoning code, and it took only four months to go through the variance procedure. One of the most important variances which was granted was that the height restriction of thirty five feet was waived, and a building which is sixty feet high was constructed. It should be noted that like the Wahn site, 230 Western Avenue is adjacent to a residential neighborhood.

One way for Wahn to limit his financial risk associated with this project would be to locate an office tenant who would be a joint venture equity partner. There are many firms in the Boston area who are anxious to become owners, rather than renters, of their office space. If such a tenant could be found, then the tenant would bring both equity and stability to the project. Since the tenant would be pre-leasing virtually all of the office space, a prospective lender would be inclined to provide financing at attractive terms. Computer related or financial service firms might be likely joint venture partners for Wahn to consider. In addition, the joint venture partner benefits by having a facility designed to meet the special space requirements that they might have, in addition to a distinctive building with a corporate identity. By bringing in a joint venture partner who will become a tenant in the future building, Wahn will be removing much of the development risk associated with an office project in the Allston-Brighton area.

Each of the three alternatives--soundstage, light manufacturing, and office use, have inherent project risk. However the soundstage and the office building appear to be considerably more risky than the light manufacturing use.

The building of a soundstage may be attractive, as the project will be virtually 100% pre-leased prior to the start of construction. However, there is considerable uncertainty concerning a major tenant which relies on the

production of a single television series. If, for any reason, Filmarts goes out of business, a substitute tenant which will be able to utilize the specialized building characteristics will be difficult to locate. Some of this risk can be reduced by developing a less expensive structure which would suit the needs of Filmarts, and at the same time be easily adaptable to a manufacturing use if Filmarts decides it can no longer be associated with the project.

The development of a first class office building on this site also contains a large element of risk. The Harvardview developers consider themselves to be "pioneers" in the sense they have developed an office use where none had previously existed. The conversion of the Barrett School into office space will bring an additional 30,000 square feet of space to the market in late 1986. However it must be noted that these two projects are located at the eastern end of Western Avenue, and offer better access to Harvard Square and the Mass Pike than does the Wahn site. It does not appear as if George Wahn is willing to assume the risk of developing an office building in a market where the strength of the market is doubtful.

## CHAPTER FOUR: DEVELOPMENT PROPOSALS

Three separate development proposals will be considered in this chapter. The first is a mixed-use facility consisting of a soundstage, warehouse space and office space. The second proposal will be an industrial/light manufacturing building. The third proposal will be for a first class office building.

Copley Real Estate Advisors, the real estate development arm of New England Life Insurance Company, uses a first year return on total capital of 11 percent as a hurdle rate when reviewing projects for their portfolio. For comparison, the present yield on a one year Treasury Bill is approximately 6 percent. By using this measure, one can quickly discover the merit of a particular proposal without getting into a sophisticated after tax analysis. If the project has an 11 percent return in the first year, before tax, then the return will only improve with time, and after tax considerations are taken into account.

Each of the three alternatives will be analyzed using this first year rate of return measure.

### Mixed-use structure



The first proposal is a 35,000 square foot, two story, mixed-use facility consisting of a soundstage and office space for Filmarts as well as warehouse and office space for the Wahn Company.

The 35,000 square foot facility will have a 8,335 square foot sound studio, and 12,000 square feet of office space for Filmarts or other tenants. The Wahn Company will have 8,000 square feet of warehouse space as well as 3,000 square feet of office space.

Parking requirements are a major design consideration. Due to the four truck loading bays required by Filmarts, and one additional loading bay for Wahn, on-site surface parking as required by the zoning code cannot be accommodated.

One design alternative utilized a below grade structured parking arrangement. An initial feasibility cost estimate provided by a national construction company reflected a cost premium of \$1.25 million to provide this below grade parking structure. This cost included sheeting, shoring and bracing, as well as dewatering and excavation costs.

Faced with this large premium cost, the developer has several options. The first floor of the structure could be raised to accommodate parking; an off-site parking facility to meet the zoning requirements might be acquired; or a variance from the parking requirement could be sought.

The zoning code allows off-site parking, provided that it is within 1,200 feet of the parcel. There are two parcels which have been identified as potential off-site parking lots. In addition, due to the small amount of traffic which will be generated by this project, a variance may be a possibility. Both the off-site parking alternative and the variance alternative will require a Zoning Board of Appeals hearing and will add several months to the development schedule.

Shown below are the major assumptions used in this first mixed-use proposal:

Building Gross Area.....	35,000 square feet
Hard Cost.....	\$100/square foot
Soft Cost.....	20% of Hard Cost
Total Development Cost (exclusive of land)	
	\$4,500,000
Long Term Debt..	30 yr term, 10.5% interest
	100% of development costs
Vacancy rate.....	5%
Contract Rent Rate.....	\$22/square foot
Real Estate Tax.....	\$2/ft
Land Contribution.....	\$500,000
Off-site Parking Allowance.....	\$100,000

As shown in the economic analysis in Figure 8, the first year return on capital is 11.7% for the base assumptions, which exceeds the hurdle rate of 11%.

Currently Filmarts is paying 8 to 10 dollars per square foot for their present location at 1380 Soldiers Field Road. Based on preliminary discussions between Wahn and Filmarts it appears very unlikely that Filmarts will be willing to double their current rent overhead, even for more advanced facilities.

The \$22/sf rent rate yields a debt coverage ratio (DCR) of 1.18, which is a fairly conservative figure. If the rent is lowered to \$20/sf, then the DCR falls to 1.06. At \$18/sf, the debt service can no longer be covered by the net project income.

A sensitivity analysis of first year return was performed as shown in Figure 8, which varies the total project cost (exclusive of land), and at the same time varies rent rates. If a \$3,000,000 project was built, and if Filmarts was capable of absorbing a rent cost of \$16/sf, a 11% rate of return would result. At a rent rate of \$12/sf, the owner would receive a 11% return if the total development cost was \$2,000,000.

A \$2,000,000 project (exclusive of land) would make the rent comparable to Filmarts' present quarters, and would show an adequate return to the owner. At a rent rate of \$12/sf, the DCR would be a conservative 1.27, and the first year return would be 11%. However, significant

redesign would be required, as at present the current design criteria to meet the requirements of Filmarts result in a \$100/sf construction cost. For a \$2,000,000 project, the hard construction costs would have to be significantly reduced to \$45/sf.

In order to accommodate the design requirements of Filmarts, the rent level would have to be in the \$22/sf range to satisfy the debt coverage and to provide the required first year return on capital. This rent rate is comparable to first class office space rent, and cannot be paid by Filmarts nor can it be paid by the George H. Wahn Company. If a drastic redesign is undertaken, such that the project costs are reduced to \$45/sf, then the rent rate becomes a more reasonable \$12/sf.

Warehouse/Light Industrial Scenario

The second proposal is for a warehouse/light industrial building. The construction of this type of structure will be much simpler than the previous film studio, and it is estimated that the hard construction costs will be fifty dollars per square foot. As in the first proposal, a \$100,000 allowance is included for an off-site parking lot. The financial assumptions for this proposal are similar to the first proposal, and are shown below:

Building Gross Area.....	35,000 sf
Hard Cost.....	\$50/sf

Soft Cost.....20% of Hard Cost  
 Total Development Cost  
     (exclusive of land).....\$2,300,000  
 Long Term Debt...30 yr term, 10.5% interest  
     100% of development costs  
 Vacancy rate.....5%  
 Contract Rent Rate.....\$13/sf  
 Real Estate Tax.....\$2/sf  
 Land Contribution.....\$500,000  
 Off-site Parking Allowance.....\$100,000

Assuming a rental rate of \$13/sf is achieved, an 11.4% first year return results, as shown in Figure 9. If the rental rate slips to \$10/sf, then the debt can not be covered by net operating income.

Based on an August 1985 market survey conducted by Leggat, McCall and Werner, a Boston based, full service real estate brokerage firm, rents in the Brighton, Newton, and Waltham areas range from four to twelve dollars per square foot. This large variation is due to the various physical characteristics and location of facilities included in the study. For a new facility, with a Western Avenue location, this proposed R&D facility should achieve the higher end of the rent spectrum.

As shown in the sensitivity analysis included in Figure 9, if the total development cost (exclusive of land) increases to \$3,000,000, then a \$16/sf rent rate

would be required to have a conservative debt coverage ratio, and adequate first year return. If however, the development costs can be reduced to \$2,000,000, then the rent could be reduced to \$11/sf and still satisfy the return and debt coverage requirements.

Considering the site context of Western Avenue, a light manufacturing use seems to be the most appropriate use of this site. This type of structure would provide the space requirements of the Wahn Company, and would also satisfy George Wahn's desire to remain in the Brighton area. In addition, the Wahn Company could remove much of the project risk by leasing 30% of the facility for its own use.

However it must be noted that at present the Wahn Company is paying less than \$5/sf for its current space. Since space in the new manufacturing facility will be \$11/sf, it may be financially advantageous for Wahn to relocate his operation to less expensive quarters, and rent the new building at a higher rate to other users.

#### First Class Office Building

The third alternative is a 29,000 square foot first class office building, with hard construction costs of \$100/sf, and a total development cost of \$3,580,000. Financing terms remain the same as in the previous two options. A gross rent rate of \$25/sf is assumed.

The following assumptions were used in this office building alternative:

Building Gross Area.....	29,000 sf
Hard Cost.....	\$100/sf
Soft Cost.....	20% of Hard Cost
Total Development Cost (exclusive of land).....	\$6,100,000
Long Term Debt...30 yr term, 10.5% interest 100% of development costs	
Vacancy rate.....	5%
Gross Rent Rate.....	\$25/sf
Real Estate Tax & Op Expenses.....	\$5/sf
Land Contribution.....	\$500,000
Off-site Parking Allowance.....	\$100,000

As shown in the economic analysis in Figure 10, the first year rate of return is 11.3% for the base assumptions, which exceeds the hurdle rate of 11%.

However, as noted earlier, the class A office market has not yet been established in this area of Boston. 214 Lincoln Street is being offered at \$15/sf, and is 92% vacant. Harvardview originally hoped to get in the low twenties for their space, but signed most of their deals in the eighteen dollar range. Based on current market demand, the Allston-Brighton market cannot attract \$25/sf tenants in the near future.

An analysis which measured the sensitivity of the debt coverage ratio as the market rent rate varied was performed for this alternative, and is included in Figure 10. In the base case, the DCR is 1.18. If the rent level drops from \$25/sf to \$22/sf, then the project debt can no longer be covered by the net operating income.

A second sensitivity analysis was performed which measured the sensitivity of the first year return as both the total project costs (exclusive of land) and the rent varied. This analysis revealed that if the scope of the project could be reduced to \$3,000,000, then a rent rate of \$22/sf could be charged, and the return to the owner would be 11.2%. With these criteria, the DCR would be a fairly conservative 1.18. Assuming 20 percent for soft costs, this 29,000 square foot building would have a construction cost of eighty six dollars per square foot. A major general contractor in the Boston area has indicated that a first class office building, including all tenant finish work, could be constructed for approximately eighty five dollars per square foot.

There is considerable market risk in developing a class A office building at this time in Western Avenue. Rent rates in the low twenties will be necessary to meet the first year return criteria of 11 percent. At this time it is unlikely that tenants will be willing to locate in Brighton, when alternatives such as Newton, Cambridge and



Waltham offer more attractive locations and amenities at the same level of rent.

In addition, the George H. Wahn Company would have to relocate their present operation under this Class A office scenario. It should not be very difficult for the Wahn Company to locate acceptable office and warehouse space as their needs are very basic. However, the costs associated with the initial move, as well as any increase in rent would have to be factored into the analysis.

Figure 11 is a comparison of the three development options discussed. The soundstage proposal generates the highest return, however the \$22/sf rent rate is prohibitive for both Filmarts and the George H. Wahn Company. While the office and manufacturing scenarios have virtually identical rates of return, the development of a manufacturing facility contains substantially less risk as compared to an office use for this site.

## CHAPTER 5: BROAD CONSIDERATIONS

This final chapter will attempt to discuss some of the broader considerations involved with a future development for this site. The effect of the Interim Planning Overlay District and methods for the Wahn Company to reduce the project risk will be considered.

### Effect of Interim Planning Overlay District

When making the decision as to which development alternative to select, one must carefully consider the effect of the Interim Planning Overlay District (IPOD), and the concerns and objectives of the community.

The IPOD is currently in the process of being drafted by the community Planning and Zoning Advisory Committee. By October 1986, the IPOD will be drafted and become an amendment to the Building and Zoning Code. George Wahn should investigate how the proposed uses will be affected by the IPOD by conducting informal conversations and meetings with the zoning staff of the BRA and the leaders of the Allston-Brighton community groups. At the organizational meeting for the PZAC, such issues as affordable housing, quality of retail establishments, and traffic and parking concerns were raised.

The Wahn site is zoned primarily for industrial, and its location on Western Avenue does not make it appropriate for a residential use. As long as the proposed development plan provides a use which is compatible within the context of the area, there should not be much community opposition to a new structure at this site. In fact, if George Wahn can demonstrate that a new light industrial facility will provide easily accessible jobs for Allston-Brighton residents, and will not create early morning truck activity which would disturb the adjacent residents, then perhaps the community groups will lend support to the proposed project.

Although the soundstage proposal may have prohibitive rent rates at present, if the studio could be redesigned so that Filmarts could afford the rent, then the developer could expect the full support of the Massachusetts Film Bureau concerning this project. In fact, the MFB has already taken an active role in lobbying for the support of the development of a music production studio in Dorchester which is being proposed by Robert Giosia of Global Productions. Since the MFB is a division of the Commonwealth of Massachusetts Commerce and Development Department, the MFB may be able to exercise considerable influence to convince the BRA and the community groups of the importance of the new soundstage. The production of feature films is a glamorous, quiet, non-polluting

industry for the area, and should be welcomed by the Allston-Brighton neighborhood.

Methods for Wahn to Reduce the Development Risk

In each of the three proposals discussed, the Wahn Company has limited its risk by not investing any cash into the project. The contribution of the Wahn Company has been limited to the value of the land.

The sound stage proposal should only be considered if Filmarts was committed as a tenant prior to the start of construction. With Filmarts and the Wahn Company as tenants, the structure would be 100 percent pre-leased, and would remove much of the development risk in this project.

Although the film production industry in Boston is a healthy and rapidly growing market segment, there does not appear to be a great demand for additional large soundstages. If Filmarts and Wahn cannot come to a pre-construction agreement concerning long term lease terms, then it would not be feasible to build a soundstage as a speculative venture.

Development of a Class A office building also contains a large amount of development risk, as it is unlikely that this portion of Western Avenue will ever be considered the premier Allston-Brighton location. Soldiers Field Road, which enjoys better vehicular access and views of the Charles River has more potential to be developed into prime office space. Pre-leasing would help to reduce leasing

risk considerably, but based on current market conditions, it is doubtful that such pre-leasing could occur.

The option which has the least overall development risk is the manufacturing/industrial proposal, since such a use would be consistent with the present use in the area. In addition, the Wahn Company would be able to pre-lease approximately 30 percent of the facility for its own use.

In conclusion, after considering the varied development objectives of the George H. Wahn Company, the light manufacturing proposal appears to be the best alternative. Although the mixed-use facility would generate the highest rate of return, the rent level necessary to cover the project debt makes this alternative infeasible. If Filmarts could be accommodated with a less expensive structure, then perhaps a soundstage facility could be developed.

The manufacturing proposal will best satisfy the varied development objectives of George Wahn. Increasing the value of the site is the first objective of George Wahn. By constructing a new, income producing facility which will replace the present neglected structure, the value of the land will increase. Through thoughtful design and use of materials, the new structure may also encourage renovation of adjacent commercial and residential properties, thereby improving the character of the area.

George Wahn would prefer that any new development on this parcel provide space for the Wahn Company electrical supply business, and the manufacturing alternative would satisfy this requirement. George Wahn feels a strong commitment to his long term employees, many of whom either walk or rely on public transportation to get to work. A Boston address is also preferred, as the company has always been located in Boston. By locating his business at 450 Western Avenue, George Wahn can maintain both his valued employees and a Boston business address.

Mitigation of project risk is the third objective. While it is evident that both the light manufacturing proposal and the office proposal generate similar rates of return, additional risk must be recognized for the office project. The manufacturing/industrial use could be 30 percent pre-leased to the Wahn Company, thereby reducing the project risk. In addition, it is doubtful that the twenty five dollar per square foot rent needed to support the office proposal will be achieved at this location at this point in time.

Wahn's final development objective is that an acceptable rate of return on investment be achieved. The manufacturing alternative exceeds the initial hurdle rate of 11 percent for the first year return on capital. The project will have a positive before tax cash flow beginning with the first stabilized year, and can be expected to increase with time. Long term benefits of appreciation

will also improve the investment performance of this project.

NOTES

<sup>1</sup>"Lights, Camera, Money.", Boston Globe, 21 April 1985, Boston Globe Magazine, p. 77.

<sup>2</sup>The Economics of Film and Video Production in Massachusetts, Butterfield Communications Group, March, 1984. p. 9.

<sup>3</sup>Alex Beam, "Hollywood's New Star: The Streets of Boston," Businessweek, September 30, 1985. p. 40.



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FIGURE 1





Figure 3  
 Film Production Revenue By Production Segment  
 In Millions of Dollars

Segment	1983	1984	Percent Change
Industrials	\$16.0	\$20.0	25%
Commercial	\$5.5	\$8.0	45%
Features and TV	\$7.5	\$6.1	-19%
Documentary	\$4.0	\$5.0	25%
Equipment	\$1.6	\$1.9	13%
Other	\$ .9	\$2.0	122%
Total	\$35.5	\$43.0	21%

(Source: The Economics of Film and Video  
 Production in Massachusetts)

FIGURE 4

SCHEDULE OF MAJOR FILM AND  
TELEVISION PROJECTS FILMED ON LOCATION IN MASSACHUSETTS

Year	# of Projects	MGM/UA	COLUMBIA	PARAMOUNT	WARNER
1977	4	X			
1978	4	X		X	
1979	10			X	X
1980	8	X	X		
1981	16	X	X		
1982	14			X	
1983	10	X			
1984	8		X		
1985	6				X

(source:Film Investment Symposium '86)

FIGURE 5

# Revenue of Mass. Film Industry 1980-1984 By Production Segment

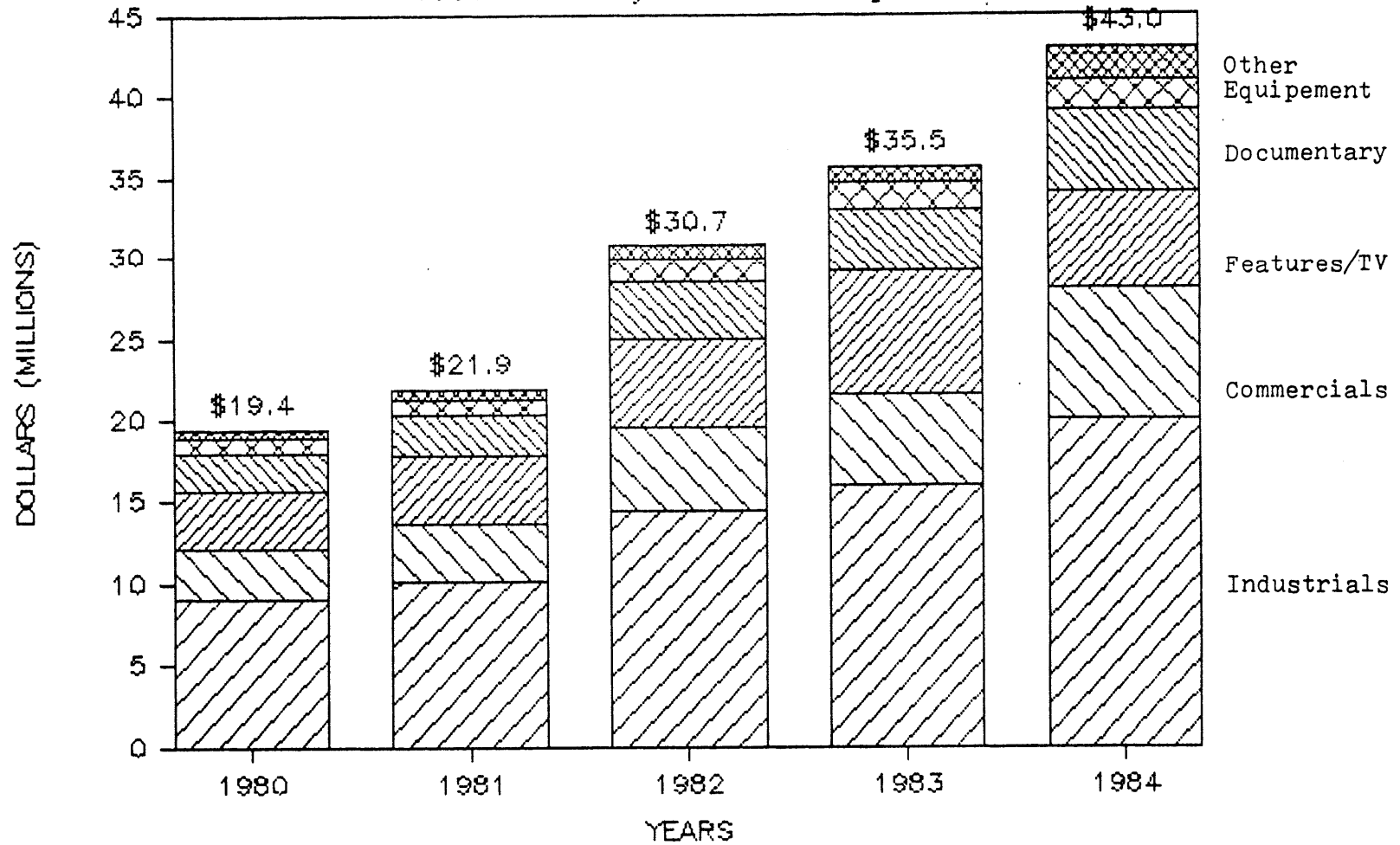


FIGURE 6

SOUNDSTAGE COMPARABLES

Name of Soundstage	Dimensions (ft)	Area (sf)	Height to Light Grid (ft)
=====			
<b>BOSTON</b>			
Filmarts	110 X 90	10,000	17
WGBH (Stage A)	100 X 60	6,000	18
Channel 5	90 X 60	5,600	26
Television Prod. Services	50 X 50	2,500	14
WGBH (Stage B)	50 X 50	2,400	15
Videocom	40 X 60	2,400	12
Boston Gaffers	35 X 50	1,750	12
Boston Post Productions	35 X 35	1,225	13
Cinema Graphics	28 X 34	952	16
Heliotrope Studios	27 X 16	432	13
<b>NEW YORK</b>			
Kaufman Astoria (Main Stage)	217 X 120	26,000	40
Kaufman Astoria (Stage G)	134 X 90	12,000	31
Kaufman Astoria (Stage H)	134 X 90	12,000	31
Camera Mart	94 X 75	7,050	33
Silver Cup (Stage A)	84 X 76	6,384	16
Silver Cup (Stage B)	65 X 42	2,730	36
Silver Cup (Stage C)	62 X 37	2,294	12

FIGURE 7

OFFICE BUILDING COMPARABLES

Building	#fl	Rent (sf)	avail (sf)	vac (%)	rent (\$/sf)
Harvardview	5	50,000	12,000	24%	20 gross
214 Lincoln St.	4	96,000	96,000	100%	15 gross
25 Travis Street	4	30,000	30,000	100%	18 gross
108 Lincoln St.	6	23,000	1,600	7%	15 net
150 Lincoln St.	6	30,000	0	0%	12
186 Lincoln St.	9	70,000	6,000	9%	10.5 net
210 Lincoln St.	9	63,000	3,300	5%	15 net
40 Soldiers Field Pl	1	15,000	0	0	15 gross
1320 Soldiers Field Rd	1	18,000	18,000	100%	N/A
1380 Soldiers Field Rd	2	45,000	12,000	27%	18 net
1550 Soldiers Field Rd	1	29,000	25,000	86%	14 gross
1616 Soldiers Field Rd	3	32,000	2,200	7%	16 gross
1660 Soldiers Field Rd	2	50,000	6,700	13%	14 net
Total Number of Buildings	13				
Total Square Footage		322,000 sf			
Total Vacant Space		212,800 sf			
Overall Vacancy Level				66%	

(Source: New England Real Estate Directory)



FIGURE 8  
MIXED-USE FINANCIAL ANALYSIS

MIXED-USE PROFORMA

GENERAL INFORMATION

FINANCING

LAND SQ.FT	37,109 sf	PERM:	
BLDG SQ. FT(GROSS)	35,000	AMOUT	\$4,300,000
BLDG NET RENTABLE	29,750	RATE	10.5%
FAR	1	TERM	30 yr
PARKING STALLS	35	AMORT.	15 yr
HARD CONST. COST	\$100 /ft	FDS	\$475,272

OFF SITE PARKING ALLOW	\$100,000
HARD CONST COST	\$3,500,000
SOFT COST @ 20%	20% \$700,000

TOTAL DEV COSTS	\$4,300,000
RENT RATE (\$/FT)	22

RE TAX (\$/FT)	2
LAND CONTRIBUTION	\$500,000

=====

	1987
GROSS REVENUE	654,500
-VACANCY @ 5%	32,725
-RE TAX	59,500
NOI BEFORE DEBT SERVICE	562,275
DEBT SERVICE	475,272
CASH FLOW AFTER DEBT SERV	87,003
TOTAL CASH FLOW BEFORE TAX	87,003
RETURN ON CAPITAL	11.7%
NET INCOME/(TOTAL DEV COST+LAND)	

MIXED-USE PROFORMA

SENSITIVITY ANALYSIS

VARY RENT AND OBSERVE EFFECT ON BTCF, DCR, ROR

	DEV COST +D23	BTCF +D43	DCR +D43/D45	ROR +D51
R	18 \$4,300,000	\$449,225	0.95	9.4%
E	20 \$4,300,000	\$505,750	1.06	10.5%
N	22 \$4,300,000	\$562,275	1.18	11.7%
T	24 \$4,300,000	\$618,800	1.30	12.9%
	26 \$4,300,000	\$675,325	1.42	14.1%
	28 \$4,300,000	\$731,850	1.54	15.2%
	30 \$4,300,000	\$788,375	1.66	16.4%

VARY RENT AND TOTAL DEV COST; OBSERVE EFFECT ON ROR

	+D51	DEV COSTS \$2,000,000	\$3,000,000	\$4,000,000	\$5,000,000
R	10	9%	6%	5%	4%
E	12	11%	8%	6%	5%
N	15	15%	10%	8%	7%
T	18	18%	13%	10%	8%
	20	20%	14%	11%	9%
	22	22%	16%	12%	10%
	24	25%	18%	14%	11%

VARY RENT AND TOTAL DEV COST; OBSERVE EFFECT ON DCR

	+D43/D45	DEVELOPMENT COST \$2,000,000	\$3,000,000	\$4,000,000	\$5,000,000	\$5,500,000
	10	1.01	0.67	0.50	0.40	0.37
	12	1.27	0.84	0.63	0.51	0.46
R	14	1.52	1.01	0.76	0.61	0.55
E	16	1.78	1.18	0.89	0.71	0.65
N	18	2.03	1.35	1.02	0.81	0.74
T	20	2.29	1.53	1.14	0.92	0.83
	22	2.54	1.70	1.27	1.02	0.92
	24	2.80	1.87	1.40	1.12	1.02

**FIGURE 9**  
**LIGHT MANUFACTURING FINANCIAL ANALYSIS**

LIGHT MANUFACTURING PROFORMA

GENERAL INFORMATION		FINANCING	
-----			
LAND SQ.FT	37,109 sf	PERM:	
BLDG SQ. FT(GROSS)	35,000	AMOUT	\$2,200,000
BLDG NET RENTABLE	29,750	RATE	10.5%
FAR	1	TERM	30
PARKING STALLS	35	AMORT.	15
HARD CONST. COST	\$50 /ft		
		FDS	\$243,163
OFF SITE PARKING ALLOW	\$100,000		
HARD CONST COST	\$1,750,000		
SOFT COST @ 20%	20% \$350,000		
TOTAL DEV COSTS	\$2,200,000		
RENT RATE (\$/FT)	13		
RE TAX(\$/FT)	2		
LAND CONTRIBUTION	\$500,000		
=====			
	1		
	1987		
GROSS REVENUE	386,750		
-VACANCY @ 5%	19,338		
-RE TAX	59,500		
NOI BEFORE DEBT SERVICE	307,913		
DEBT SERVICE	243,163		
CASH FLOW AFTER DEBT SERV	64,750		
TOTAL CASH FLOW BEFORE TAX	64,750		
RETURN ON CAPITAL	11.4%		
NOI/(TOTAL DEV. COST+LAND)			

LIGHT MANUFACTURING PROFORMA

SENSITIVITY ANALYSIS

VARY RENT AND OBSERVE EFFECT ON BTCF, DCR, ROR

		DEV COST +D20	BTCF +D42	DCR +D36/D38	ROR +D45
	10	\$2,200,000	(\$20,038)	0.92	8.3%
R	11	\$2,200,000	\$8,225	1.03	9.3%
E	12	\$2,200,000	\$36,487	1.15	10.4%
N	13	\$2,200,000	\$64,750	1.27	11.4%
T	14	\$2,200,000	\$93,012	1.38	12.5%
	15	\$2,200,000	\$121,275	1.50	13.5%
	18	\$2,200,000	\$206,062	1.85	16.6%

VARY RENT AND DEV COST, OBSERVE EFFECT ON ROR

		DEV COST				
	+D45	\$2,000,000	\$2,500,000	\$3,000,000	\$3,500,000	\$4,000,000
R	10	8.9%	7.4%	6.4%	5.6%	5.0%
E	11	10.1%	8.4%	7.2%	6.3%	5.6%
N	12	11.2%	9.3%	8.0%	7.0%	6.2%
T	13	12.3%	10.3%	8.8%	7.7%	6.8%
	14	13.4%	11.2%	9.6%	8.4%	7.5%
	15	14.6%	12.1%	10.4%	9.1%	8.1%
	16	15.7%	13.1%	11.2%	9.8%	8.7%

VARY RENT AND DEV COST, OBSERVE EFFECT ON DCR

		DEV COST				
	DCR +D36/D38	\$2,000,000	\$2,500,000	\$3,000,000	\$3,500,000	\$4,000,000
	10	1.01	0.81	0.67	0.58	0.50
R	11	1.14	0.91	0.76	0.65	0.57
E	12	1.27	1.01	0.84	0.72	0.63
N	13	1.39	1.11	0.93	0.80	0.70
T	14	1.52	1.22	1.01	0.87	0.76
	15	1.65	1.32	1.10	0.94	0.82
	16	1.78	1.42	1.18	1.02	0.89

**FIGURE 10**  
**OFFICE BUILDING FINANCIAL ANALYSIS**

OFFICE BUILDING PROFORMA

GENERAL INFORMATION		FINANCING	
-----			
LAND SQ.FT	29,000 sf	PERM:	
BLDG SQ. FT(GROSS)	29,000	AMOUT	\$3,580,000
BLDG NET RENTABLE	24,650	RATE	10.5%
FAR	1.0	TERM	30
PARKING STALLS	100	AMORT.	15
HARD CONST. COST	\$100 /ft		
OFF SITE PARKING ALLOW.	\$100,000	FDS	\$395,692
HARD CONST COST	\$2,900,000		
SOFT COST @ 20%	20% \$580,000		
TOTAL DEV COSTS	\$3,580,000		
RENT RATE (\$/FT)	25		
RE TAX AND OP EXP.(\$/FT)	5		
LAND CONTRIBUTION	\$500,000		
=====			

	1987
GROSS REVENUE	616,250
-VACANCY @ 5%	30,813
-RE TAX AND OP EX	123,250
NOI BEFORE DEBT SERVICE	462,188
DEBT SERVICE	395,692
CASH FLOW AFTER DEBT SERV	66,496
TOTAL CASH FLOW BEFORE TAX	66,496
RETURN ON CAPITAL	11.3%
NOI/(TOTAL DEV. COST+LAND)	



OFFICE BUILDING PROFORMA

SENSITIVITY ANALYSIS

---

VARY RENT RATE; OBSERVE EFFECT ON BTCF, DCR, ROR

		DEV COST +D18	BTCF +D40	DCR +D34/D36	ROR +D43
	20	\$3,580,000	(\$50,592)	0.87	8.5%
R	22	\$3,580,000	(\$3,757)	0.99	9.6%
E	24	\$3,580,000	\$43,078	1.11	10.8%
N	26	\$3,580,000	\$89,913	1.23	11.9%
T	28	\$3,580,000	\$136,748	1.35	13.1%
	30	\$3,580,000	\$183,583	1.46	14.2%

---

VARY RENT AND DEV COST; OBSERVE EFFECT ON ROR

		DEV COST			
+D43		\$2,500,000	\$3,000,000	\$3,500,000	\$4,000,000
R	20	11.5%	9.9%	8.6%	7.7%
E	22	13.1%	11.2%	9.8%	8.7%
N	24	14.6%	12.5%	11.0%	9.8%
T	26	16.2%	13.9%	12.1%	10.8%
	28	17.7%	15.2%	13.3%	11.8%
	30	19.3%	16.6%	14.5%	12.9%

---

VARY RENT AND DEV COST; OBSERVE EFFECT ON DCR

		DEV COST			
+D34/D36		\$2,500,000	\$3,000,000	\$3,500,000	\$4,000,000
R	20	1.25	1.04	0.89	0.78
E	22	1.42	1.18	1.01	0.89
N	24	1.59	1.32	1.13	0.99
T	26	1.76	1.46	1.26	1.10
	28	1.93	1.61	1.38	1.20
	30	2.10	1.75	1.50	1.31

FIGURE 11  
DEVELOPMENT ALTERNATIVES

	Mixed-use	Manufacturing	Office
Gross Area(sf)	35,000	35,000	29,000
Project Cost	\$4,300,000	\$2,200,000	\$3,580,000
Rent Level(\$/sf)	22	13	25
Rate of Return	11.7%	11.4%	11.3%
Debt Coverage Ratio	1.18	1.27	1.17