WARSAW COMMUNITY DEVELOPMENT PARK

WARSAW, INDIANA

AN ARCHITECTURAL THESIS

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Warsaw Community Development Park

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This is a study of a process that focuses on providing community development for the city of Warsaw, Indiana, without the city or taxpayers incurring the large costs of such development. The control of commercial development will provide the community with needed services and facilities while shifting the cost to the private developer.
CREDITS

I became aware of the problems posed by this thesis after several discussions with the Mayor of Warsaw, Jeff Plank. I would like to thank him and the other members of Warsaw's municipal government, who assisted me in gathering the information used in this project.

My thesis advisors Tony Costello and Robert Koester also provided much assistance in developing the scope and direction of this project. I would like to thank them for their patience and understanding.

I would also like to thank my fellow classmates for their invaluable help and support.
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PREFACE: Personal goals

I had several personal goals which were a major influence on the direction my thesis has taken.

Programming is a very important aspect of the design process and can take many forms. It is my intention to explore some of the different forms that they can take.

A second goal that I have set for myself, is to improve my abilities to graphically express my ideas. Architecture involves the communicating of ideas from one person to another, usually in graphic form. Without this ability the designer is severely hampered. I would like to improve my graphic abilities in the abstract realm of diagrams, as well as, in rendered perspectives.

This case study is a combination of these two goals. It is a set of Design Guidelines that expresses ideas both verbally and graphically, to provide a clear direction or beginning for the designer.
INTRODUCTION

The quality of life in a community is determined not only by its ability to provide work and sustenance for its population, but also to provide for the recreational, entertainment, and educational needs of its people. Many small communities are unable to provide these necessities that make cities liveable. Typically these public programs have been funded with financial help from the federal and state government. However, in today’s age of "balanced budgets" and reduced government control, many cities are finding it difficult to fund important public programs such as historical museums, civic theatres, community centers, neighborhood revitalization programs, and adult education programs.

The solution I am proposing envisions municipal governments looking to the private sector to partially provide these necessary civic services. There are many private and commercial enterprises that provide services or require facilities similar to those required by some public service programs. A sports complex, for example, uses recreational fields for tournaments and games that youth, church and/or adult leagues require for practice. A conference center has meeting rooms and banquet halls that can be used by social groups, neighborhood planning committees, and others. A conference center could also host many educational and cultural programs that would be beneficial to the community.

The city can attract these commercial/community oriented businesses by providing proper tax incentives, zoning and code variances, and by making minor civic improvements, such as, widening streets, and installing curbs. Another important benefit of this commercial/community development is the increased economic activity that is generated for the city. As Jane Jacobs observed in her book, *The Economy of Cities*, an increasing cycle of economic
and physical growth in a city can be sparked by the introduction of a new industry or the discovery of a new natural resource. As commercial activity in a community increases, service industries (restaurants, grocery stores, convenience stores, drug stores, etc.) which serve the new industry, will be attracted to the area, creating an expanding core of economic and physical growth.

The creation of a commercial/community development, while creating an increased economic base and providing needed public services, can also have a very serious negative impact on a community. Uncontrolled commercial development can overwhelm and destroy the character of existing neighborhoods. It can cause traffic congestion and draw commercial establishments and trade from other commercial districts, creating economic depression. It can become a distracting clutter of signage, lighting, parking lots, advertisements, and poorly designed buildings.

It is the goal of this thesis to develop guidelines that control the development of a commercial/community development park. These guidelines will control two aspects of the development: the building types to be allowed and the elements of those buildings which will affect their character, visual impact, and function within the community.
PROJECT

This thesis project evolved from a problem which my home town, Warsaw, Indiana, is experiencing. The city of Warsaw is expecting to aquire the Kosciusko County Fairgrounds. This is a 50 acre site located within the city limits with several hundred feet of frontage on a Winona Lake.

A gift of this nature has many possibilities for a growing community. A community center, a comprehensive community park (softball, soccer, swimming, etc.), a nature park or arboretum, or a cultural center would all be beneficial to the community. However, because of the recent cutbacks in federal funding programs, development of this sort will probably never come about. The present budget of the city can only afford a small park with possibilities for several lighted ball diamonds, a beach, and recreational play areas. Anything more would require raising taxes, and no one wants to raise taxes.

My proposal is to create a Community Development Park which is a commercial development park with emphasis on community interests. The Community Development Park will consist of profitable commercial businesses of types which will provide the community with needed services. For example, a conference center could capitalize on the lakefront and its natural scenic qualities while furnishing the community with needed meeting spaces.

This project will involve two phases. The first phase will be to determine the nature and scope of the individual projects that will make up the development. Programming a development of this nature will be a key issue in controlling the impact of the development on the community. Building types must be selected that will be economically feasible, as well as, provide needed public services to the community.

To accomplish this, a comprehensive
community analysis will need to be performed to determine the community's needs. Also, a general market analysis will need to be performed to determine what commercial interests might be feasible. By comparing the results of these two studies, it will be possible to develop a list of building types which will be commercially feasible, as well as, beneficial to the community.

The second phase of this project will be to determine what elements of the development will have a negative impact on the community and how they can be controlled. This can be accomplished by working through the design process. By attempting to design the Community Development Park in a manner which meets the needs of the community, yet does not compromise the creativity of the developer and/or designer. It will be possible then to go back and develop the guidelines (see Design Guidelines, p. 32) that establish control over the elements necessary to insure a positive impact on the community.

There are several basic assumptions made in the design process. These assumptions should be viewed as suggestions to the community development board in charge of this project.

The first assumption is that there will be (a) competent architect(s) designing each portion of the development. These guidelines are meant to provide suggestions and to encourage certain conceptual notions, but are not to be taken as literal design solutions. Furthermore, there are issues which are not covered by these guidelines. It was assumed that the developer and/or architect's design would consider these issues in a manner compatible with the areas covered under the guidelines.

Secondly, it was assumed that the developers would perform their own market analysis and feasibility studies to determine the full scope of each project. The analyses and studies done for the purposes of this thesis were only superficial. Furthermore the city should perform a complete community profile to determine its exact needs.
PROCESS

The process that I have chosen to explore in developing the guidelines is to use "imagery sketches". Imagery sketches are drawings which are intended to express an idea or to illustrate a particular concept. Often words can be misinterpreted or taken out of context. A picture, on the other hand, can clearly explain the idea involved by providing an image of the concept that the designer is trying to express.

In the course of developing this thesis, I have discovered that there are several difficulties involved in this process. The first problem, and a very major one in my case, is the drawing ability of the designer. Designers build up images in their mind of the spaces they are creating. Then they attempt to express these ideas graphically in terms that clients and builders can understand. This is traditionally done using rough sketches, plans, elevations, and/or mathematically developed renderings. The ideas of the designer are only as good as his ability to express them where dialogue with the client or community is required.

The process of using imagery sketches brings the concept of graphically expressing ideas to the programming stage of the design process. The guidelines that I am proposing to develop are in effect a program for the commercial/community development. These guidelines will consist of three separate parts: verbal instructions which will explain the concepts involved as comprehensively as possible; nonspecific diagrams which will illustrate the concept in general terms but are not specifically site related; and imagery sketches that convey the image that I, as the designer, have developed in my mind.

This brings us to the second major difficulty. I, as the designer, can not possibly anticipate all of the approaches or innovative design techniques possible for this project.
Therefore, the imagery sketches presented do not represent the solution to the design problem, only a possible design solution. They are intended to clarify any questions the designer may have as to the intentions of the verbal and diagrammatic instructions being presented.

There is a third problem that is related to the one previously discussed. Graphic images have a stronger impression on the mind than written statements. As a person reads a written statement, his mind develops an image of the idea being expressed. This image is colored and changed by the personality and previous experiences of the reader. A graphic image, however, is stored whole and is subject to change only by the conscious will of the observer and/or his ability to remember the image. In some cases it can be very difficult to remove an image from your mind or to consciously change that image. By providing images that express my desires as a designer, I could be creating a situation where the solutions to the design problems presented in these guidelines will all be variations of my imagery sketches, thus limiting the creative results possible in a project of this nature.

Unfortunately, the best way to explore the problem of possibly limiting the creative responses to the project by using imagery sketches is to present this project to a number of designers (possibly in the form of a competition) and examine the results. This process would be far too costly and time consuming to be included as part of this thesis project. Therefore, I am proceeding on the assumption that the designers involved will be able to use my imagery sketches as they are intended... to clarify and to be a beginning to the design process, not as an end product of that process.
PHASE I: Site Programming

Ian McHarg, in his book, Design With Nature, discusses a site analysis system he calls physiographic mapping. McHarg states:

"... Any place is the sum of historical physical and biological process, that these are dynamic, that they constitute social values, that each area has an intrinsic suitability for certain land uses and finally that certain areas lend themselves to multiple coexisting land uses." 1

Briefly stated this system involves mapping an area (site, city, region, etc.) and recording information about its historical, physical and biological make up. Then by ranking this information and color-coding it, overlays can be done which begin to indicate the appropriateness of certain land uses to specific areas of a site.

A study of this nature would be an invaluable tool for phase one on this thesis project (see Programming P. 8) and would also reveal much that would be beneficial in phase two, (see Design Guidelines p. 32). However, because of lack of resources, it wasn't feasible to do a complete physiographic mapping. Indeed, it may be beneficial to the city to invest in a physiographic mapping of the site and immediate context of the city and surrounding area before beginning work on a project of this nature.

There are several elements of the site analysis, however, that are approximations of information that would
be collected in a physiographic analysis. For example, the information shown on the Contextual Impressions (pp. 18, 19) and the Space Definition/Edges (pp. 20, 21) maps was derived from the experiences gained by the designer after sixteen years of residency in the community and possibly contain the biases that that association entails.

The actual process used for programming the Community Development Park was similar to Ian McHarg's physiographic mapping process in that it was approached from two directions to determine a best solution. Information was gathered about possible land uses with emphasis on commercial uses on the one hand, and community uses on the other. This information partially consisted of standard site analysis information such as site location with respect to orientation, zoning, traffic patterns, ground cover, and topography (pp.10-18). Also included were the aforementioned maps showing contextual impressions and space/edge definition (pp.18-21). That information is contained on the following pages along with a brief synopsis of the information derived from each map.
SPACE DEFINITION / EDGES

The Space Definition/Edges map displays the visual and physical boundaries defined by ground cover, contours, bodies of water etc. It provides an impression of the sizes and shapes of the spaces available on the site.

Most of the site consists of large open spaces with few major barriers or edges. One of the more dynamic areas appears to be the wooded area on the east side of the site with many small, separate, but interconnected spaces.
CONTEXTUAL IMPRESSIONS

The contextual impressions map is a study of the contextual influences on the site. It is a study of the degree of influence the site's surroundings have upon the various areas of the site.

A significant finding of this Contextual Impressions study is that the top of the plateau is not affected by its surroundings. The steepness of the slopes around the plateau effectively creates a boundary, reducing the impact of the surroundings upon the plateau itself.

Note: This map is necessarily subject to the biases of this particular designer.
GROUND COVER

The site is mostly grass covered with several groupings of large trees and shrubbery. Since most of the site is not tree covered, a special effort should be made to use the existing trees as efficiently as possible. A special effort should also be made to preserve and/or increase the tree cover along the lake shore to compliment the tree cover along the shore of the rest of the lake.
TOPOGRAPHY

Most of the site is flat with gently rolling hills. Approximately in the center of the site, however, is a sharply rising hill that creates a plateau. This plateau is twenty-six feet above the level of the lake and twelve feet above the level of Smith Street. The plateau offers many possibilities by providing views in all directions. It is also highly visible to the public from Smith Street and Bronson Street as far north as Winona Avenue, as well as, from the lake and most of the lake shore.
THOROUGHFARE PLAN

The city of Warsaw's master plan created in 1979 by Cole and associates of South Bend, Indiana, shows the indicated streets as currently being important transportation arteries or as being areas where future emphasis should be placed. As the map shows, with a few improvements on Bronson Street, the site will have direct access to the minor artery of Winona Avenue and, further north, the major artery of Center Street. Center Street will then provide direct access to both the downtown and U.S. 30.
ZONING MAP

The zoning map shows that the site is located at a point where several different types of zoning come together or are adjacent to one another. This diversity will reinforce a variety of uses for the site.

Historically, the commercial areas of Warsaw started with the Central Business District and have grown north and south along Highway 30 (Center Street). The latest commercial growth is occurring along new Highway 30, east of Warsaw. It is possible that this growth could drain business from the Central Business District causing economic hardship in the downtown area.

The commercial districts adjacent to the site are some of the older ones in the city and are suffering from a variety of problems including: "run-down" buildings; lack of comprehensive zoning ordinances to control land usage, signage, parking, etc.; and lack of sidewalks and curbs. The commercial emphasis of the site and the economic growth this project will produce will have a positive impact on this area economically. It is also hoped that this economic growth will begin a period of inwardly focused growth and development for the community rather than the possibly detrimental outward expansion currently occurring.
Phase I continued

More valuable information was obtained from interviews with various public officials and prominent members of the community, as well as directors and employees of various commercial enterprises in Warsaw, Muncie, Wabash, and Fort Wayne. A synopsis of each interview appears in Appendix A of this document.

Two lists were developed from the information gained in the site analysis and from the interviews. One list represented possible commercial projects which were feasible for the development.

List One

Meeting space
Municipal Swimming pool

Ball Diamonds (hard and soft)
Low and elderly housing
Social services center
Community theatre
Nature park
Soccer fields
Commercial square footage

The second list contained possible community uses for the development.

List Two

Convention Center
Sports complex
High rent housing development
Marina
Golf course
Quality restaurant
Commercial square footage
From these two lists, a third list was developed that consisted of buildings that were commercially feasible, as well as, beneficial to the community.

LIST THREE

Conference center
Sports complex
Housing
Commercial square footage

The building types indicated by the third list then become the individual projects that make up the Warsaw Community Development Park.

One item of special interest that appears in all three lists is commercial square footage. One of the goals of the Community Development Park is to increase the economic base of the community. At the onset of the project it was assumed that commercial square footage would be one of the future benefits of the development and would not occur within the development itself. As the project progressed, however, the development of a commercial zone, adjacent to the existing commercial zoning of the city, became more and more influential on the planning of the development. It eventually became a major issue in the project and occupies a key point in the final solution.

The following pages contain the programming information of each of the individual projects that make up the Warsaw Community Development Park. Much of the information in this section was derived from Time savers Standards for Building Types, and similar books.
CONFERENCE CENTER

A. RATIONALE:

The key project in the development will be the Conference Center. It is the most versatile project on the site and has the ability to house functions that will be of interest and/or use to all segments of the community.

Warsaw has many large corporations which have their national headquarters in Warsaw. The city bills itself as the 'Orthopedic Capital of the World' because of the many companies that are involved in the orthopedic industry. Many of these companies have indicated that they often have their sales meetings and seminars elsewhere because there are no facilities available in Warsaw.

Warsaw is well located within the region to draw business for a conference center. The city is located on U.S. 30 equidistant from two large cities, Fort Wayne and South Bend, and is only three hours from both Chicago and Indianapolis. This central location makes it perfect for large regional conferences and conventions.

The conference center's location on Winona Lake, a 562 acre lake, will also add to its appeal. With access to Winona lake, the conference center will have a resort-like appeal, attracting customers from the large cities as well as the many smaller communities surrounding Warsaw.

B. ISSUES:

a) Location - It must be easy to find. Patrons have traveled long distances to reach this destination. Arrival sequence (drive, parking, entry, and etc.) will be an important aspect of the conference center.

b) Visibility - Because of its versatility and its ability to appeal to all segments of the population, the conference center will be the key project of the development. It must be visible from the main entry to the site, as well as, from the lake. It must invite use by all members of the community.
c) Impact - Direct access to the lake is an important asset of the conference center. The impact that the center has on the lake will be controlled, however, to prevent the possibly negative impact that commercial development of a residential lake could have on the lake community.

d) Visual Impact - The visual impact of the conference center on both the lake and the surrounding community must be welcoming and must provide a positive impression to the viewer. From the lake, it must be harmonious with its surroundings so that it does not stand out as being different from the residential quality displayed by the rest of the lakefront. From the North (Smith Street) it must stand out as the main attraction of the site and must be highly visible to the surrounding community.

C. SPACE REQUIREMENTS:

a) Community theatre - 16,150 sq.ft. This space should provide seating for 500-700 people with stage facilities for a variety of events including opera, theatre, concerts, and community speakers. Some of the functions to be included are dressing rooms, storage (props and costumes), back drop production area, rest rooms (public and private), fly space, and delivery area.

b) Banquet hall - 6,000 sq.ft. Seating for 500 in a dining room atmosphere. A raised area or stage with equipment should be provided for speakers or small performances.

c) Kitchen - 3,000 sq.ft. Facilities to serve a full sit down meal to as many as 500 guests at one time. This space will also be used to prepare snacks or small meals for other meeting rooms in the facility.

d) Board Rooms (2) - 440 sq.ft. ea. Two boardrooms with seating for 20 people each. Fully equipped for audio, visual, and telecommunications.

e) Class rooms (4) - 850 sq.ft. ea. Four class rooms with seating for 50 people each. Fully equipped for audio and visual presentations.

f) Cocktail lounge - 900 sq.ft. Seating (table and bar) for 50 people.
Facilities for small band and/or audio equipment and dance floor.

g) Lobby - 1,500 sq.ft.
To serve as main entry to facility. Display space for upcoming events and facilities for a welcoming area shall be provided.

h) Office - 1,000 sq.ft.

Offices for:

Executive director 200 sq.ft.
Executive assistant 120 sq.ft.
Sales director 200 sq.ft.
Secretary 120 sq.ft.
Public relations director 140 sq.ft.
Food and Beverage director 150 sq.ft.
Secretary 120 sq.ft.

i) Mechanical space - 3,939.6 sq.ft.
10% of area to be serviced.

j) Circulation - 6,566 sq.ft.
20% of area to be serviced.

k) Parking
Adjacent parking for 550 cars with access to parking for an additional 250 cars.

Total enclosed area - 43,335 sq.ft.
Total parking - 750 spaces
COMMERCIAL DEVELOPMENT

A. RATIONALE:

As previously stated, the use of the site for actual commercial square footage was not originally intended. However, several factors combined to make a commercial development within the site an important aspect of the Community Development Park.

One of the intentions of this project was to spark economic growth in the community. Therefore, there was an attempt made to choose projects that would generate a need for other services that could be provided by the community. For example, a conference center would generate a need for entertainment and lodging for its guests, as well as a need for food service suppliers, cleaning services, building maintenance, etc. By providing some of these services as part of the development, it is possible to maintain control of the impact this development would have on the community and preventing over-development of the surrounding area.

Some of the proposals detailed in the Guidelines Development (see p. 32) portion of this book involve the commercial rezoning of some of the areas surrounding the site. This commercial rezoning will facilitate the commercial growth inspired by the Community Development Park. By allowing some of this commercial development to occur on the site, it can be controlled and used as a buffer to separate other functions of the site from the commercial growth outside of the development, thus helping to maintain the scenic qualities that the site has to offer.

B. ISSUES:

a) Visibility - Commercial businesses require public visibility or space for advertising that is directly visible to the public.

b) Image - High standards of quality in the design and in the construction of the projects are to be maintained throughout the development park. This is of even greater importance in the commercial zones because of its adjacency to the main entrance to the site.
C. SPACE REQUIREMENTS:

a) The commercial zone will be a mixed use facility containing a variety of uses including offices, small shops, and food stores. For this study I have assumed 50% of the space to be used for offices and the other 50% to be a variety of small commercial businesses. An actual market study will show the most appropriate combination of businesses.

Total enclosed area -

Commercial: 67,200 sq.ft.
Office: 67,200 sq.ft.

Total parking - 500 spaces or more.
SPORTS COMPLEX

A. RATIONALE:

The community of Warsaw is very sports oriented, having produced several state champion basketball teams. Also, there are a number of church, youth, and adult baseball and softball leagues, as well as, a growing number of soccer leagues. The city itself would like to increase the number of lighted softball, baseball, and soccer fields that it has to offer the community. The parks department is currently looking for property within or close to the city limits on which to build a large, lighted softball complex. There has even been some mention of using the fairgrounds for this purpose.

Once again, location is another important factor in choosing this particular element to be included in the project. Warsaw's central location in Northern Indiana would make it a potential host for many regional and local tournaments, if the facilities were available. The fairgrounds site itself is also centrally located within the city, providing easy access to most of the community.

B. ISSUES:

a) Connection Between the Lake and the City - This facility will provide a connection between the lake and the city with a series of recreational activity areas. These recreational facilities will be privately owned and operated, as well as, publicly (municipally) owned to insure a variety of uses that will appeal to all segments of the community.

b) Separation - Most popular recreational activities involve noise and activity. Large amounts of noise and activity could have a negative impact on other elements of the site, as well as, the surrounding residential areas.

C. SPACE REQUIREMENTS:

1. Softball Complex (privately owned):

a) 4 Softball diamonds - 1.5 acres ea. Official tournament (mens) softball diamonds.
b) Indoor dining - 3,000 sq.ft.
150 seat dining and bar area with view
of ball diamonds.

c) Outdoor dining - As much as
possible. As much seating with views of
the ball diamonds as possible, without
blocking views from indoor dining areas.

d) 2 locker rooms - 720 sq.ft.
ea. Changing areas, showers, and
bathroom facilities for two teams
simultaneously.

e) Public rest rooms - 250
sq.ft. ea. For restaurant and public
use for both men and women.

f) Administrative offices - 540
sq.ft. Offices for:

Athletic coordinator 150 sq.ft.
Facility coordinator 120 sq.ft.
2 secretaries 120 sq.ft.

h) Storage - 500 sq.ft.
Storage of athletic equipment, tractors,
and maintenance equipment.

2) Mechanical space - 299 sq.ft.
5% of area to be serviced.

b) A 50 meter competition
swimming pool (6-8 lanes) - 5,200 sq.ft.
Includes the following facilities: 2
locker rooms, mechanical space, and
office space.

NOTE: Lockers and rest room
facilities can be used for organized
soccer leagues using the playing
facilities.

Total acreage - Ball diamonds: 6 acres
Playing fields - As much
as possible

Total enclosed area -
Softball complex: 6279 sq.ft.
Swimming complex: 5200 sq.ft.

Total parking - 250 spaces or more.
A. RATIONALE:

There is a definite need in Warsaw for rental housing. A study done by Robert P. Norton for the Kosciusko Leadership Academy shows that the Warsaw area has a greatest need for low income and elderly rentable housing units. Unfortunately, the location of the site on a major lake and the increased land values that that entails would tend to indicate high or middle income units. However, introducing high or middle income units into the market should free up some of the low income units that are being used by upper and middle income renters because of a lack of other available housing.

The current residential use of Winona Lake and the existing residential zoning of areas around the fairgrounds would indicate that residential use of the site would be compatible, as well as, accepted by the surrounding residential community.

B. ISSUES:

a) Location - The residential use of this site conflicts with the other uses of the site. The placement of residential units on the site should be separated or secluded from possible interference from other site influences.

b) Density - A frequent problem in choice residential areas is overcrowding. Access to the lake makes this property subject to overdevelopment, and care should be taken to avoid this.

C. SPACE REQUIREMENTS:

a) The residential development shall consist of approximately 50 (max.) units. Approximately 30% of the units (max.) are to be one level flats, the other 70% will be townhouses no higher than two levels. All units are to meet HUD standards for single family residential units.

Total enclosed area -

Flats: 14 units @ 1225 sq.ft. each.

Townhouses: 32 units @ 1400 sq.ft. each.

Parking - 1.5 Spaces per unit = 69 spaces.
PROGRAM SYNOPSIS

CONFERENCE CENTER

Enclosed area - 43,335 sq.ft.
Parking - 750 cars.

COMMERCIAL DEVELOPMENT

Enclosed area - Commercial: 67,200 sq.ft.
Office: 67,200 sq.ft.
Parking - 500 spaces (as much more as possible).

SPORTS COMPLEX

Enclosed area - Softball Complex: 6,279 sq.ft.
Swimming complex: 5,200 sq.ft.
Parking - 250 spaces (as much more as possible).

RESIDENTIAL DEVELOPMENT

Enclosed area - Flats: 14 units @ 1,225 sq.ft. each.
Townhouses: 32 units @ 1,400 sq.ft. each.

Parking - 1.5 spaces per unit = 69 spaces.
PHASE II: Design Guidelines

Phase two of this thesis project is the development of Design Guidelines. These guidelines control the development of the Community Development Park to insure a positive impact on the community. These guidelines are to show the developers and/or designers of each project the scope and quality expected in their designs and in the rest of the development. The guidelines are also to show the city, what is to be expected of the developers.

The guidelines portion of this book has been divided into five parts. Each part deals with one of the four individual projects that make up the development. A fifth, and very important one, details the circulation system that will be used to tie the various parts of the project together.

Each individual project has specific needs that must be considered in its design. Therefore, each section deals with different issues and deals with them in differing degrees of specificity. For example, circulation may be discussed in the abstract terms of ground plane, surround, and overhead, while the concrete issues of location and directional qualities of the audio and lighting equipment are specifically controlled in the sports complex.

As was previously mentioned the design guidelines were developed by working through the design process keeping in mind the dual, community/commercial function of the site. Through the process of designing the development, I was able to gain a more intimate knowledge of the elements important to each project and those elements that would affect the image and/or impact that the project would have on the surrounding community.

Following this portion of the book is the design solution created for this study, along with the Imagery Drawings used to create it. These drawings are not intended to be a final solution to this design project. They are intended
to further express the ideas behind the guidelines. It may have been better to locate the drawings near the particular guidelines they are to illustrate. Each drawing, however, contains the basis for a number of guidelines making it difficult to connect any one drawing with a specific guideline or group of guidelines. I have placed them after the guidelines in the hopes of avoiding any influence they may have on the final solutions presented by the various designers.
CIRCULATION PATTERNS

Circulation systems within and adjacent to the site will be major image generators.

One of the goals of this development is to bring increased economic activity to the city, in particular, the area of the city in which the site is located (see zoning map pp. 10-11). The improvement of the streets, which connect the site to the major thoroughfares of the city, will encourage this growth. Also, the use of detailing, landscaping and/or entourage similar to that used within the site itself, will begin to set a mood or rhythm, which, when continued within the site, will draw the user in.

This same detailing, landscaping, and/or entourage will be used along adjacent roads to identify the edges or borders of the site. These similarities begin to tie the various elements of the site together, giving the site a singular image.

A centralized circulation system will add to the perception of the site as a singular entity. This centralized circulation system will provide a clear and easy way to understand movement systems within the site and also provide a continuity that connects the various elements. The detailing, landscaping, and/or entourage system, which is creating the borders of the development, now becomes an important element within the site. It separates or connects, emphasizes or hides, or creates a mood, etc.

GUIDELINES:

- Bronson Street will be widened and improved to meet the standards discussed on the following pages. (fig. 1.2)

- The northern boundary of the site along Smith Street will be developed in a manner similar to the central boulevard. (fig. 1.2)

- A centralized circulation system consisting of a single major artery (fig. 1.4) from which minor arteries (fig. 1.3) provide access to the various elements of the site. (fig. 1.1)

- The main entrance to the development (and the central boulevard) will occur at the intersection of Smith Street and Bronson Street.
fig. 1.1

Centralized Circulation

fig. 1.2

Extended Boulevard

Main Entry

Major Artery
PEDESTRIAN AND VEHICULAR SPATIAL RELATIONSHIPS

Since an exact market analysis and/or feasibility study were not done for this project, it is possible that the scope of the various projects proposed in this development may vary from that shown in this study. Therefore, precise calculations for traffic load are not possible and it will be expected of the developer to provide these with all design proposals. The standards shown for major and minor arteries (figs. 1.3, 1.4) on the following pages are acceptable standards for two and four lane roads.

Vehicular and pedestrian traffic systems are fundamentally different in scale, yet very similar in their requirements for comfort and safety.

When discussing human scale and comfort there are three zones which are commonly considered: the ground plane, surround, and overhead. These three zones will be of major importance in providing comfort to both pedestrian and vehicular traffic.

Ground Plane:

Motor vehicles require very structured lanes which define direction of travel, turn lanes, dangerous intersections, and possible danger zones.

The ground plane of the pedestrian zones, on the other hand, is very versatile; the only requirement is that it be relatively smooth and unobstructed.

The ground plane at intersections, however, will play an important part in preventing accidents. A change in paving patterns and/or materials signifies to both the pedestrian and the vehicle operator that the zone they are approaching serves a multiple function and caution is necessary.

GUIDELINES:

-Major pedestrian/vehicular intersections will be identified by a change of pavement (different from both sidewalk and road) including the entire intersection and
100 square feet of pavement on all pedestrian walkways. (fig. 1.5)

Minor pedestrian/vehicular intersections will be identified by a change of pavement (identical to that used at major pedestrian/vehicular intersections) which will include all pedestrian paths within the vehicular circulation system and 100 square feet of the pedestrian walkways. (fig. 1.6)

Surround:

The surround defines the borders or edges of the road, provides an edge that has definition, yet allows views of important destinations or interesting views. It also creates rhythm that establishes a direction and can frame a goal.

A planting strip between opposing directions of traffic is another important element of the surround. A planting strip separating opposing traffic flows helps to eliminate confusion and lower the degree of difficulty in negotiating the traffic system. The higher the expected traffic flow, the denser this separating planting strip will need to be. A planting strip will also lessen the perceived expanse of asphalt by breaking it up or by separating it into two separate areas.

Trees will perform the same function in the surround for pedestrians as they do for vehicles. They also however, provide separation and security from the inhumane, car oriented roads.
The scale of roads are necessarily oriented towards the automobile and are accompanied by the noise and pollution which are associated with it. The trees will act as a barrier or screen between vehicular and pedestrian traffic.

Once again, the surround will be an important part of avoiding hazards at intersections.

Visibility is of primary importance at intersections. Therefore, no part of the surround (except legally required signage) should be tall enough to interfere with visibility in any direction. Separation between pedestrian and vehicular traffic is still important and can be achieved by the use of bollards, planters and/or other low landscaping items.

GUIDELINES:

- These trees will be placed so that the canopies cover at least 50% of all pedestrian walkways. Maximum distance, trunk to trunk shall not exceed twice the expected canopy size.

- A planting strip of the size and nature indicated will be placed between opposing directions of traffic on all major vehicular circulation arteries. The height and canopy size.

- A planting strip of the size and nature indicated will be placed between opposing directions of traffic on all major vehicular circulation arteries. The height and density will increase with the amount of traffic expected.

(figs. 1.3, 1.4)
- Bollards of a nature that is aesthetically compatible with sidewalks, roadways, and paved walkways, will be used at all pedestrian/vehicular walkways. These bollards will be placed so as to provide adequate security for expected traffic flows. (fig. 1.5, 1.6)
Overhead:

The overhead plane is important to creating a comfortable sense of scale along streets and sidewalks.

The canopy of the trees at the edges of roadways and sidewalks creates a feeling of enclosure for both pedestrians and those using the roads. It also becomes part of the directional rhythm being created and further frames the final destination.

At intersections, the overhead consists of lighting. Care should be taken to avoid tall and ungainly light posts or single overpowering light sources. Also, the crisscrossing of guide wires for traffic lighting can clutter the space which has been created by the paving, signals, bollards, etc.

GUIDELINES:

- The trees within the planting strips between pedestrian and vehicular circulation systems will have canopies which cover at least 50% of all pedestrian walkways. At least 30% of these tree canopies should also extend over the roadways. (fig. 1.4)

- There will be lighting placed at every point where pedestrian circulation systems meet vehicular circulation systems. The combined illumination provided by these lights, will provide enough
light to adequately light the entire intersection. (figs. 1.5, 1.6)

- All wiring shall be underground.

fig. 1.5

Major Pedestrian Crossing

fig. 1.6

Minor Pedestrian Crossing