CONTENTS

INTRODUCTION
PROBLEM DESCRIPTION
SITE ANALYSIS
GOALS
BUILDING TYPE
SPACE REQUIREMENTS
SCHEMATICS
DESIGN DEVELOPMENT
FINAL DESIGN
INTRODUCTION
INTRODUCTION

It is the intentions of this thesis to 1) plan and design a new node for the commercial C.B.D. of Little Rock, Arkansas; 2) design a multi-functional complex consisting of financial offices, city and county offices, and market with an architectural design emphasis on the market; 3) to design a master plan that will integrate with the network of the Metrocentre Mall and the "urban fabric" of the Central Business District of Little Rock and to create an environment of rich urban quality that will give a balance to the downtown area. The complex will basically consist of: 1) a financial section which will house the Commercial National Bank plus a large amount of office lease space; 2) City-County Administrations offices; and 3) a market that will function as a link between the complex and the Metrocentre Mall.
BACKGROUND AND HISTORY OF PROJECT

In the past fifteen years one cannot help noticing that the C.B.D. of Little Rock has gone through a series of changes. Little Rock, like most cities today, is suffering from the suburban syndrome. The inner city, consisting of residential and commercial areas, is fast becoming extinct due to the growth of suburban malls and neighborhoods. Little Rock is a good example of the evolution that cities are experiencing today.

While virtually all business offices are located in the C.B.D. area and are prospering, the overall growth pattern they are taking is unfortunate. This growth pattern started in the mid-60's with the construction of the Union National Bank on Capital Ave., which runs east-west in the city. Since then, two other banks have built on Capital Ave., both over 26 stories.
In the next three years three more financial institutions plan to be located on Capital Ave. with interconnecting "skywalks" between some of them.

The Commercial center of Little Rock's C.B.D. is located in a ten block stretch along Main Street which runs north-south. This area is predominately commercial with a small amount of financial institutions. The commercial area consists of three large department stores along with numerous small retail shops. The number of restaurants is minimal and there are virtually no markets or grocery stores that sell produce, meats, or dry goods.

The city of Little Rock (Metrocentre Improvement District No. 1) is in the process of completing an urban mall (Metrocentre Mall). The mall itself is located on Main Street and runs from 2nd Street up to 7th Street. The nucleus of the mall is located at the inter-
section of Capital and Main where a Henry Moore sculpture is located. At that point the mall flows a block west and east into Capital. As far as future development is concerned the mall is planned to grow west toward the State Capital. The primary goal of this project is to regenerate the commercial appeal that downtown Little Rock has to offer.
PROBLEM DESCRIPTION
PROBLEM DESCRIPTION

The basic problem of the C.B.D. is that of the different growth directions that the financial and commercial institutions are taking. For Little Rock, which has a population of over 200,000 this would be disastrous, especially for the commercial area and the Metrocentre Mall. A solution to stimulate growth in the commercial district and thus keep it alive and prosperous is to induce new functions that would tie into the commercial fabric and with Capital ave. and the riverfront development.

Another problem of concern is that of the Metrocentre Mall. It has been shown that one cannot solve an urban problem of commercial decay by creating a beautiful spacious mall and expect people to migrate back down to the C.B.D. To help strengthen the C.B.D. and the Metrocentre Mall is the thesis of this book as well as to design a new node for the
A new riverfront development is being proposed for the downtown area. The area under proposal is the south bank between the Main Street Bridge and the Broadway Bridge. Part of this plan is to include a multi-functional office building with deck parking. One block south of the riverfront a Hyatt Regency Hotel with connecting convention center (located on Markham Street) is planned. Connecting to this complex will be a skywalk which will travel south across Markham to a newly proposed office structure with connecting parking deck.

Along with this development program, there are plans to restore the old Capital Hotel (located at the corner of Markham and Louisiana) to its original condition and function.

Note: My intent is not to develop a commercial urban mall. The commercial area
of the C.B.D. of Little Rock has, in my opinion, more than enough floor space to support the need of the downtown area. It is my feeling that the introduction of another facility of this type into the C.B.D. would be disastrous for the commercial spaces already in existence. A new mall itself would cause a vacuum for the rest of the commercial area and thus a continuance of urban decay.
SITE ANALYSIS
SITE ANALYSIS

The site that is to occupy the Metrocentre Plaza is situated in the C.B.D. of Little Rock, Arkansas. The complex will concern itself with two city blocks which has roughly 180,000 sq.ft. of site development. Of that space, 25,000 sq.ft. is occupied by one building, (Commercial National Bank), the rest is parking.

On the northwest block are located two structures, the Continental Bus Terminal and the Capital Hotel. The rest is parking. The block to the south of the one just mentioned is occupied by the Commercial National Bank Building and the Gazette Building. (Note: It is recommended that the C.N.B.'s existing building be taken down in order to create a strong link between the Metrocentre Mall, Metrocentre Palza and the Convention Center.
area. Also to insure the safety of not only the Capital Hotel, but the Gazette Building from being torn down. The rest of the block (2 quadrents) is taken up by parking. The block just east of the bank, which is bordered by 2nd Street, 3rd Street, Main Street and Scott Street is completely paved and is used for auto parking. Note: During the seasonal months, space is provided for an open-air farmers market which is operated Tuesdays, Thursdays, and Saturdays. Two buildings are located on the block north of this parking lot. One houses Western Union and Democrat Printing and the other is an office supply company. The rest of the open parking lot is bordered by the Territorial Restoration which is to the east (across Scott Street) and to the south (across 3rd Street) two vacant commercial buildings are located.
The streets that border the site and run east-west are 2nd Street (4 lanes and one way running west) and 3rd Street (4 lanes and one way running East). The north-south streets that border the site are Louisiana (2 lanes and one way running south), Main Street (4 lanes and two way) and Scott Street (4 lanes and one way running north).

Major Regional Activity Nodes:

1) Metrocentre Mall which consists of four blocks of Main Street (3rd Street to 7th Street) which is closed off to vehicle traffic and is designed for pedestrian shopping.

2) On Capital Ave are located most of the large financial institutions in the state (from Main Street to Broadway).

3) Robinson Auditorium is located three blocks northwest of the site. It carries most of the cities plays, musicals and concerts.
C.B.D. DISTRICT
4) A proposed convention center is to be located just northwest of the site as mentioned earlier.

The topography is practically flat and there is very little vegetation on the site except for a few trees that were planned by the city. Although just to the east of the site at the Territorial Restoration there are a number of large trees of various types.

Basically the whole site is completely covered with asphalt and concrete except where the Commercial Bank is located.
PROGRAMMING GOALS

1) To determine the space requirements for each function

2) To determine the sizing of each of the functions

3) To handle the programming of the functional organizations on two scales:
   1) an overall planning (including massing and infrastructure) for all of the Metrocentre Plaza (financial, city and county, market) to be handled as an urban design problem
   2) To isolate the market aspect of the plaza and program the needs and goals of it as an architectural problem

4) To produce a program that is usable and an asset to the design on both levels of the concept.

CLIENT GOALS

1) To suggest in schematic form a structure that will give the Commercial National Bank a sense of identity and an image of growth to Little Rock and Arkansas.

2) To suggest in schematic form an appropriate office lease structure connecting to the Commercial National Bank

3) To connect this financial unit to the city and county offices and to the market of the Metrocentre Plaza.

CLIENT GOALS (FOCUS ON THE MARKET)

1) To tie the market into the network of the commercial units of the C.B.D.

2) To establish a nucleus for the Metrocentre Plaza and mall

3) To be able to attract not only people of the downtown area but people of the city and state

4) To take on an atmosphere that will be advantageous to future expansion and continuous growth of the C.B.D.

DESIGN GOALS

1) To develop a concept that works to strengthen the "urban fabric" of Little Rock

2) To design a structure that will stimulate growth of future expansion for the downtown area and community

3) To satisfy the needs of the client, public, and private sectors of the community
BUILDING TYPES
QUINCY MARKET

The Quincy Market Building is based on a linear arrangement of stands. Colonnaded por-
ticos on each end defined the public entry to an interior corridor. During fairs a temporary
covered pedestrian bridge connected the second stories of Faneuil Hall and the Quincy Market
Building. The Quincy Market Building with its saucer-shaped dome is the focus of the composi-
tion of market buildings. The flanking warehouses were built on a unified plan to correspond
to the architectural style of the central edifice. Present plans for renovation include:
1) providing shops for the food retailers that exist now, boutiques and other shops in the
north and south market buildings, 2) providing retail space for entertainment functions and
3) closing off the streets between the buildings to traffic and providing area for public gatherings.
INDIANAPOLIS CITY MARKET

The market is a landmark in Indianapolis. The original structure dates from 1886. The market stalls are primarily owner operated and sell products in the following categories: meat, cheese, fish, poultry, produce, dry groceries, bakery goods, household items, prepared foods and craft items. The market was renovated in 1975, and two new wings were built on to the east and west along with two exterior plazas.

The floor plan of the original part is basically a grid system of stalls and pedestrian circulation. The second floor is a balcony space which is only about twenty feet wide with circulation and stall space. The two new wings (east and west) include stalls with stairs going up to the second and third floors. The second floor is also a balcony space that looks out over part of the first floor. The market has a total gross area of 100,617 sq.ft. with 52,666 sq.ft. of the gross being leasable.
HUNGERFORD MARKET

The solution adopted for the Hungerford Market in London was to divide the site into three almost equal parts; the central one being occupied by a large covered hall, while the areas at each end of this formed courtyards with surrounding loggia. The first court had shops on either side with two stories of residential accommodation above. This led into the covered central hall which in plan and section was comparable to the nave and double aisle of a basilica lit and ventilated from the clerestories above. Beyond this hall, a double flight of stairs connected with the final court one level lower which was used for the fish market. Terminating the block on the south front were rectangular tavern houses at either corner with access to the river between them and beneath a linking terrace. This terrace formed part of a second (gallery) level that
provided extra sales and display space in each of the three main elements. Below the concourse level there was basement storage throughout, in most parts, two stories deep. The interplay of spaces and functions together with the clear progression of the plan articulated by the vertical circulation points made it a successful design.

Soon after the market was opened, the designer, Charles Fowler, was asked to provide a covering for the lower south court, where the fish market was held, which would give free ventilation while not darkening or obstructing the side colonnades. Fowler designed an exceptionally advanced and graceful cast-iron structure that was completely free standing and gained maximum advantage of height by having no separate tie members. It was of double butterfly section and main frames that incorporated a clerestory light in their shape.
YORK SQUARE

York Square is a new center of commercial buildings occupying a block of Toronto's Yorkville area. York Square was originally a half block of Victorian detached and semi-detached buildings. By renovating these buildings, the positive character of the area was preserved along with the scale of the individual detached buildings. The selling aspect of the development is the shop, restaurants, activities, and open-roof terraces that surround a tree shaded court. The narrow passageway between the stores leads past the irregular backs of the old buildings and opens up to a brick-paved court that gives York Square its "square". It is a place for pedestrians away from the automobile. The court has become a popular place for performing groups and has been acclaimed Toronto's mini-center for the performing arts. To frame the court, the architects demolished half of a semi-detached house and designed a new two-story brick building at the back of the site as a social center. It houses ground-floor shops and a restaurant, a glass-enclosed lunch terrace, open-roof coffee terraces, and a small fondue-and-chocolate shop. Thes U-plan building has stairs set in its corners diagonally to indicate where access to the roof level is.
COVENT GARDEN MARKET

The ground plan of the Covent Hall Market in London showed three parallel buildings each surrounded by an open colonnade and with space between for the general maneuvering of carts and horses. The blocks comprised principally shops with apartments over, and trade took place under the colonnades and in the spaces between. The three parallel units were linked at the east end by a quadruple colonnade and provided with two story lodges at the outer angles. This colonnade formed the principle elevation to the market and had over it a terrace with fountain and conservatories for the display of garden plants. The rest of the accommodation consisted of 64 shops, two pubs, extensive cellareage, and a glass-roofed hall for the wholesale fruit market. Running the length of the east-west axis of the central block there was an interior shopping arcade where the more exotic fruit and flowers could be displayed together with eating rooms for fruit and ices and the seed and herb shops of the corner lodges, all indicate the designers aim not only to provide a center for wholesale distribution, but also to satisfy the needs of a fashionable and well established retail trade. Plans for reuse of the market call for a mixture of small shops, offices or studios to occupy former shop spaces.
GHIRARDELLI SQUARE

Located on San Francisco's North Waterfront, Ghirardelli Square covers a full city block. Along the south and west boundaries are the older buildings once belonging to the Ghirardelli Chocolate Company. These were constructed from C.1893 to 1915 when the Clock Tower was completed housing offices. The old buildings are a loose interpretation of late French Gothic.

The new project includes reuse of these buildings with development of open space to enhance, even to make possible a commercial development. It takes people out of their cars and places them in the middle of the block surrounded by attractive shops and restaurants. It is a place to come at ones leisure. The north boundary is marked by a new building, the New Box Factory, which replaces an old wooden box factory. Along the east side is what was once an apartment building for the chocolate company's maintenance superintendents, with some recent additions. Entering the center of the block one finds oneself on a large terrace or series of terraces in three main levels stepping up from north to south, as the land slopes, enhancing the view of the bay. Also included in the project is the International Child Art Center. Reuse of the abnormally large "Ghirardelli" sign at the top of the site is unique and enhances the identity of the square.
SPACE REQUIREMENTS
SPACE REQUIREMENTS

Commercial National Bank Building

The new bank facility will house the complete operation of the existing home office including lobby, offices, bank departments and auto-teller banking.

80,000 sq.ft.

OFFICE LEASE SPACE

This building will be attached to the Commercial National Bank lobby. This connection will be designed so it will permit individuals to have easy access between the two buildings. Both buildings will function together as one. The office lease space will have a total area of 200,000 sq.ft. This will include office lease space, circulation, mechanical area, and core, storage, service entrance, and bathrooms.

200,000 sq.ft.

Total office space 280,000 sq.ft.

PARKING STRUCTURE

The parking garage will be below grade which will provide auto spaces for Commercial National Bank and the Metrocentre Plaza. The total number of slips will be 250. The structure will include pedestrian circulation and auto teller. Space required for these functions will be 100,000 sq.ft.

100,000 sq.ft.

CITY COUNTY BUILDING

This building will be occupied by the various departments and organizations of the government at the city and county levels. The structure will be attached to the Metrocentre Plaza and will work as part of the whole. The office space will have a total area of 150,000 sq.ft. This will not only include office space but circulation, bathrooms, mechanical area and core, storage, service entrance, and lounge.

150,000 sq.ft.
THE MARKET

The market of the Metrocentre Plaza will work as a nucleus for the other bodies of the plaza - the Commercial National Bank Building, the City-County Building, and the Metrocentre Mall. The market will not facilitate any retail merchandise. Its main function is to offer the C.B.D. and Little Rock a place to purchase edibles, dry goods for the home and an eating place. This function will occur all year around. During the spring and summer, a space is to be provided for local farmers to sell their own produce off the flat beds of their trucks. The farmers market already exists now and is located on the block of Main and Third Streets on the parking lot.

The market will be a combination of farmers market and public market. The public portion will be an enclosed space and the farmers

PARKING FOR THE MARKET AND CITY-COUNTY BUILDING

The parking garage will be below grade which will provide auto spaces for the market and the City-County Office building. The total number of slips will be 250. The structure will include pedestrian circulation, storage, ventilation space. Space required for these functions will be 100,000 sq.ft.

100,000 sq.ft.
portion will be on the exterior or interior of the building. Farmers produce will be sold from the flat beds of their trucks in parking stalls. It has been said that the most successful markets are those combining the two types of markets - public and private.

The basic retailers classifications are as follows:

The dry grocer - retailing all food supplies except perishable goods

The green grocer or vegetable and fruit dealer - retailing perishable roots, fruits, herbs, berries, and other products of the soil

The butcher or meat dealer - retailing fresh, smoked and cured meats

The fish dealer - retailing fresh, smoked, salted, cured and pickled fish

The dairy products dealer - retailing fresh and processed milk, cream, cheese, butter, and ice cream.

The tea and coffee dealer - retailing tea, coffee, spices and extracts

The delicatessen - retailing freshly cooked foods of all kinds but not served to be eaten on the premise

The restaurant operator - serving freshly cooked foods on the premise

The baker - retailing bakery goods

SPACE AND ACTIVITY REQUIREMENTS

A careful study must be made of the requirements and functions of each line of business in order that the space be sufficient for the transaction of business. Care must be exercised that not too much space is set aside for a business. A basic principle of market operation is the conservation of space and the intensification of retail selling.

At this point, it would be important for the architect to hold a meeting of the operators
of the market; the manager, the equipment
engineers and if possible the prospective
merchants, who are familiar with the operation
of the various businesses for the purpose of
combining ideas for stall locations and sizing.
For example, a fish merchant would certainly
present a serious objection to having his
stall located in a warm section of the market.

**BUTCHER SHOPS**

Space should be provided for two cutting
blocks, electric saws, electric slicing machine,
sink disposal, waste barrels, refrigerated
display cases, scales and cash register.

Three fresh meat stalls —- 900 sq.ft.

**GROCERY**

Space should be provided for the following:
basket dispensers, shelving, cash register,
table and counter, space for packaging. Extra
storage for goods will be located in the basement.

Three dry groceries —- 1,400 sq.ft.

**FISH STALLS**

To handle fish efficiently, space is needed
to provide for refrigerated display counter
cases, sinks, cutting table (marble) disposal,
storage boxes, scales, cash register.

Three fish stalls —- 900 sq.ft.

**BAKERY**

The bakeries will have the choice of having
a complete or incomplete facility. A complete
bakery will be one that manufactures and sells
the bakery goods in the same area so items will
be sold hot and fresh. In the event of this
type of system spaces need to be provided for
ovens, bakery racks, flour mixer, flour storage
bins, bakery tools, cooling racks, bread cutters
sinks, display cases, cash register, and wrapping
stations.

Two bakeries —- —- 1,000 sq.ft.
BUTTER AND EGGS

To deal in trade with these products, adequate space needs to be offered for the following items: refrigerated display cases, cheese cutters, working tables, scales, display area, wrapping table, and cash register.

Two butter and egg stalls -- 600 sq.ft.

CONFECTIONARY

The confectionary will be a catch all for the goods of the market. These stalls will not require as much space as the other stalls in the market. Items required to function are; display case or counter, counter top, ice cream keeper, storage and cash register.

Two confectionaries -- 300 sq.ft.

COFFEE AND TEA

Items that are usually needed to operate this type stand are as follows: display bins, storage bins, grinders, metal boxes for the storage of teas and spices, counter top to serve customers cups of a particular beverage, cash register and wrapping stand.

One coffee and tea stall -- 300 sq.ft.

FRUITS AND VEGETABLES

The equipment usually required for these stalls consists of a series of terraced counters for fruits, flat counters (sloped slightly to the front and water proofed) for vegetables, wrapping area, cash register and water supply.

Three fruit and vegetable stands -- 1,200 sq.ft.

FARMERS VEGETABLE STALL

This activity will be located on the outside of the building. It will be open to farmers and gardeners of the state of Arkansas to sell their produce. A space for forty cars or trucks is to be provided for the farmers in order for them to use the flat beds of their trucks for display.

40 slips for trucks and circulation 15,000 sq.ft.
GREEN HOUSE AND FLOWER

The equipment needed for the operations of this stall are: display area (table, counter, shelves) refrigeration, storage, counter top, cash register.

One flower and plant -- 300 sq.ft.

DELICATESSEN

The basic requirement and equipment for these stalls are; refrigerated display cases, meat slicers, knives and tools, counter space for preparing orders, sink, waste disposal cans, wrapping area, cash register, and barrel kegs.

Three Delicatessen Stalls -- 1,200 sq.ft.

LUNCH COUNTER OR FAST FOODS

The spaces will require lunch counters (stand up) 42" high with a 12" or 14" front overhang, chairs and stools for eating, kitchen tools and equipment, food preparation tables, refrigeration, cleaning equipment, sinks, disposal areas, dishwasher, cash registers and take out order booths.

Six fast food stalls -- 3,100 sq.ft.

SPECIALTY STALLS

There will be designated ten areas in the market where specialty stalls can be set up.

Specialty stands will be stalls which cannot be classified under the aforementioned headings.

Recommended sq.ft. for the ten areas -- 1,400 sq.ft.

ASSIGNED STORAGE AND REFRIGERATION

The area for storage and refrigeration will be derived from a proportion dealing with the Indianapolis City Market square footage.

Indianapolis City Market

Total rental space -- 28,800 sq.ft.

Total storage (plus refrigeration) -- 16,000 sq.ft.
Metrocentre Market.

Proposed total rental space - 12,800 sq.ft.

16,000 sq.ft. = Storage needed
28,800 sq.ft. = 12,800 sq.ft.

Assigned storage needed ---- 7,200 sq.ft.

Total square footage of assigned rental area 12,800 sq.ft.
plus assigned storage area 7,200 sq.ft.
plus assigned truck stall 15,000 sq.ft.
Total assigned area 35,000 sq.ft.

Circulation will also be determined from a proportion of the Indianapolis City Market.

Indianapolis City Market
Total Circulation - 30,000 sq.ft.
Total Rental area - 28,800 sq.ft.

Little Rock Metrocentre Market
Total proposed rental - 12,800 sq.ft.

30,400 sq.ft. = Circulation
28,800 sq.ft. = 12,800 sq.ft.

Circulation 13,500 sq.ft.

Total Gross area ----------- 48,500 sq.ft.

ASSIGNED AREAS

| 2 meat stalls | 1,200 sq.ft. |
| 3 grocery stalls | 1,400 sq.ft. |
| 3 fish stalls | 900 sq.ft. |
| 2 bakery stalls | 1,000 sq.ft. |
| 2 butter and egg stalls | 600 sq.ft. |
| 2 confectionary stalls | 200 sq.ft. |
| 1 coffee and tea stall | 300 sq.ft. |
| 3 fruit and vegetable stalls | 1,200 sq.ft. |
| 3 delicatessen stalls | 1,200 sq.ft. |
| 8 fast food stalls | 3,100 sq.ft. |
| 10 specialty stalls | 1,400 sq.ft. |
| 1 flower and plant stall | 300 sq.ft. |
FINAL DESIGN
EAST ELEVATION

WEST ELEVATION

SOUTH ELEVATION

NORTH ELEVATION
METROCENTRE PLAZA

VIEW FROM OFFICE LEASE TOWER
Anderson Library Center

Thesis Project
Jerry Hicks
February 1979
INTRODUCTION

The concept for a project of this type surfaced when research was done for a course in Architectural Philosophy. That research consisted of studying the early attempts of Cedric Price to develop an educational system based on the technology of the computer and the idea of creating a space where members of a community had available to them the means of gathering and locating information. Although the project described and programmed in this document is not as mobile as Price's "Potteries Thinkbelt" or as computerized as his "O.C.H. Feasibility Study" in London, the basic ideas behind such projects were the driving force in creating this project.

Thus, from the "Potteries Thinkbelt" came the idea of creating a space in which the members of a community could display and discover local information and learning resources that the community has to offer, and within the same space have the capability of displaying and discovering other peoples' art and knowledge.

From Price's "O.C.H. Feasibility Study" comes the concept of using existing technology to aid in the search for information, the collecting of information, and the communication of existing information. Thus, by the use of the computer, the library will become a more valuable resource for the community. Also, through the computer, the library could become a part of a network of information into which area schools could plug into, and in which the library could plug into other information centers outside the area.

Therefore, this document and project not only deals with an architectural product which would house the hardware involved with these concepts stated, but also with a process by which the architectural product will become a more valuable and essential tool for the community. It must also be stated that these concepts
and theories by Price and others were presented and accepted by some as reaching far into the future, and at times appeared to be beyond the scope of reality. My thesis project for a library center is an attempt to bring those concepts into a more practical and realistic project.
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building Description</td>
<td>1</td>
</tr>
<tr>
<td>Site Selection/Analysis</td>
<td>3</td>
</tr>
<tr>
<td>Concept</td>
<td>5</td>
</tr>
<tr>
<td>Site Plan</td>
<td>6</td>
</tr>
<tr>
<td>Floor Plans</td>
<td>7</td>
</tr>
<tr>
<td>Elevations</td>
<td>10</td>
</tr>
<tr>
<td>Sections</td>
<td>11</td>
</tr>
<tr>
<td>Mechanical and Structural Schematics/Details</td>
<td>12</td>
</tr>
<tr>
<td>Model</td>
<td>14</td>
</tr>
<tr>
<td>Appendices</td>
<td></td>
</tr>
<tr>
<td>General Problem Description</td>
<td>19</td>
</tr>
<tr>
<td>Client Description/Financial Responsibility</td>
<td>20</td>
</tr>
<tr>
<td>Building Codes</td>
<td>21</td>
</tr>
<tr>
<td>Computer Operation Description</td>
<td>22</td>
</tr>
<tr>
<td>Video Department Description</td>
<td>25</td>
</tr>
<tr>
<td>Design Development</td>
<td></td>
</tr>
<tr>
<td>Building Type Study</td>
<td>26</td>
</tr>
<tr>
<td>Design Methodology</td>
<td>31</td>
</tr>
</tbody>
</table>
BUILDING DESCRIPTION

The Anderson Library Center, which is the library for Anderson, Indiana, is located on a site of 65,233 square feet, at 8th and Main Streets on the edge of Anderson's Central Business District. This building has the capacity to house 250,000 books, as well as collections of periodicals, films, music scores, recordings, and microtexts. In addition the library will operate on a computer system for the bookkeeping of the library and for the distribution of information to the user.

The library center is a two story building with open floor areas, permitting the interaction of different subject areas. Provisions for future floors have been built into the structure in order to provide for future growth. One level below grade provides parking for staff members and special parking areas for the handicapped, a total parking area for 85 cars.

The library center is to act as a starting point for Anderson's downtown mall and a connection between the downtown mall and the governmental buildings located around the site. A pedestrian corridor, within the library, brings the mall into and through the library, and would be accessible all 24 hours. A drop-off area leads to a secondary entrance and picks up on the underlying grid of alleyways in the downtown area.

The building was designed for high-tech construction, emphasizing physically the machine use of the computer which operates the library. It consist of an exposed structural system of steel frame construction with joists, and clad in an enameled metal panel system. To facilitate flexibility, the building was designed on a 5 foot module, arrived from the unit form of library bookshelves and furniture. The structural bay measures 30 feet by 30 feet, a multiple of the base 5 foot module, and is expressed on the exterior by 5 foot by 4 foot metal panels. All window mullions and permanent space divisions within the center, also, uses multiples of the base module of 5 feet.

The general operation of the library incorporates the use of the computer into the everyday functions of the library, and offers the following services which are not normally associated with a public library:

A Computer Assisted Card Catalog: The information found presently on library catalog cards can be easily stored within the computer along with abstracts, short descriptions of the book, table of contents, and in some cases the complete document. By the use of terminals, which hook into the computer, a person searching for certain information can easily scan a great amount of information that might be available in less time than what is now now required. Also, terminal locations
can give the library greater flexibility in that they are mobile, and can be accessible on a 24 hour schedule, and provide visual or printed display of the material. The use of the system would allow remote hook-ups by telecommunications to area schools, business, and governmental agencies.

Video Department: With the continuing use of video taping capabilities in home use and business for entertainment and storage of information, this library would provide a center for control and storage of important tapes through its video department, allowing them to be available for public use. The department has the capabilities to produce and process its own tapes, and by working in conjunction with the computer, video tape display would be possible throughout the library at individual terminals, and could be sent to remote areas by cable lines.

Project Outreach Program: The building would enable the library to incorporate into its main building a special program for the handicapped section of the community. This program, named Project Outreach, is designed to allow the handicapped to participate in the main functions of the library. The Project Outreach section of the library contains equipment such as large print books, talking machines, and other items needed by the handicapped.
SITE SELECTION DESCRIPTION

The site chosen for this thesis project is located in Anderson, Indiana. Anderson is a community of 74,400 people and the seat of Madison County. It is basically a diversified manufacturing city including automotive equipment, files, ceramics, and paperboard projects. Within the city is also located Anderson College (an undergraduate school which is church affiliated) and three area high schools.

The reasons for choosing Anderson as the location of the project are as follows:

a. Anderson was the location in which I did my internship. For a period of 6 months, I worked as graphic designer and draftsman for the City Planning Department. Through this experience, I received a full understanding of zoning procedures of Anderson, and the directions and goals which Anderson is being planned. Also, I gained knowledge of the area and a feeling of the city.

b. As mentioned before, Anderson Public Library is in the process of planning a new library. This also will be helpful in the design of the project because of the availability of "real world" input into the project.

c. The third reason for selecting Anderson is because of the closeness of the city to Muncie and Ball State University. This is important because it will offer more opportunity to visit the site for added input.

The site itself consists of an entire city block containing 65,232 square feet of land owned by the city. The site is located across from the City Building in which all city government takes place along with the main offices for the city's utilities. Also surrounding the site is the County Building which houses the county and federal courts, and the offices of government for Madison County. Retail shops and banking are other activities which surround the site. These activities and buildings are the main activities of the area in which the site is located.

Presently the site is used as overfill parking for the government buildings and downtown shoppers. Half of the site is paved parking with the remainder being gravel.

Two buildings are located on the site: one houses the Boy Scout Association offices and the other is the terminal for Trailways Bus Company. In both cases, the buildings lease the land from the city.
SITE ANALYSIS

Location: Anderson, Indiana
Latitude: 40°10' north
Climate: Temperate

Site Description:

Location: urban, within Anderson Business District
Area and Shape: 1.4 acres (65,233 Sq. Ft., 216' x 302')
Topography: basically flat, southeast corner sloped
Access: from city streets, 8th and 9th streets
Primary View Direction: none
Neighboring Structures: three to six story office and retail buildings
Type of Soils: brown clay, rocks, stones
Primary Vegetation: few deciduous trees - maples, 30' in height
Appropriate Materials: concrete, masonry, glass

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CONCEPT

The goal behind the concepts which the building was developed deals with the general idea of creating a space which would become a more integral part of Anderson's community. Since a library's main function is to make available information for the betterment and education of the people it serves. The following concepts were developed around that idea, and makes the library an integral tool for the community.

I. Creating A Pedestrian Walkway: The purpose behind this concept was to make the library a more accessible building. By running the walkway diagonally across the site, the connection between the downtown mall, which was carried along the County building, and the main governmental building of the city, the City Building, open the library to a great number of people who normally walked between these two elements of the city.

II. Extending The Building To The Site Edge: By bring the building out to the edge of the site, it not only reinforced the established pattern of the downtown buildings, but also made the library more visible by people passing by.

III. Secondary Grid Pattern: Like most cities the size of Anderson, there exists a secondary street grid of alleyways which are used for servicing. The dropoff area for the library takes place at the termination of a alleyway and acknowledges

IV. Zoning of Activities: The concept of zoning the library into six basic zones allows the operation of the library to run more efficient. It provides for noise separation between the areas, and allows for a more direct usage. Although the functions are physically separated, interaction can take place through the computer terminals.
The problem consists of designing a building which would contain the conventional areas normally found in a library for the city of Anderson, Indiana. In addition, other areas, such as spaces for the computer assisted operation and special services, are also included. At the present time, the Anderson Public Library is in the planning stages for a new library, and is currently in the process of acquiring a site in the central business district of Anderson. They have outgrown their present building and because of site limitations is unable to expand.

Also at the present time, there is very limited amount of parking on the site, only spaces for a few members of the staff, and it is felt that a site closer to the main activity of the city would bring about an increase in usage of the library.

The lack of space has caused another problem for the present library. The library features a program which provides service to senior citizens and the blind, deaf, and the mentally and physically disabled residents of the community. Since the present location is overcrowded, the space required for the operation of this program, "Project Outreach", is located away from the library. This program includes services such as a specially equipped bookmobile, talking book services, reading aids, large print books, visual-tek machines, and a system of communication with and between the deaf community. "Teletype-For-The-Deaf". It is felt that the "project Outreach" program should be part of the library for operational and psychological reasons and not be in a separate building located away from the main services of the library.

Another important factor in this program description is that of the use of the computer in the library services. As stated, this system will not only allow the library to serve the community more efficiently in providing information, but will also be able to gather information from other remote sources, such as other cities and other information sources. Following this line of thought, a video department will also be provide.
CLIENT DESCRIPTION

The client for this project is the City of Anderson, Anderson and Stony Creek Township Public Library, commonly known as the Anderson Public Library. This organization was founded in 1903 for the purpose of providing information and educational services for the city of Anderson and the townships of Anderson and Stony Creek in which the city is located. The Library has one branch location which serves the residents of Lapel, Indiana, a small community located a few miles from Anderson.

Library Information:

- Population Served: 74,435
- Staff: 30 (8 professionals, 22 clerical)
- Books: titles - 246,276, volumes - 237,397
- Newspapers/Periodicals:
  - subscriptions - 600
  - volumes bound - 7,082
  - microfilmed - 7,365
- Audiovisual Services: films, recording, film strips, slides
- Special Collections: local history and genealogy (The Indiana Room), music (The Wendall Hall Collection)
- Bookmobiles: 2

FINANCIAL RESPONSIBILITY

It is estimated that this project will be approximately 60,000 square feet (gross). Based on a square footage building cost of $60.00 per square foot, the cost would be in the area of 4 million dollars approximately.

Funds for such a project as this could come from a number of sources. Since the use of the computer and video in library operation is fairly new, grants could be available as this could be a demonstration project for this type of operation.

Sources of funding:

a. Anderson, Anderson and Stony Creek Township Library Building Fund
b. Bond issued by the city of Anderson for the construction of the library
c. Public Facilities Loan Program (Federal Funding)
d. Public Works Program (Federal Funding)
e. State Funding
f. National Library Association Funding
This type of building would fall under the following building type according to the Uniform Building Code, 1976.

Type: Group A, Division 3, Type 1

Pertinent Codes:
Walls and opening protection of occupancies based on location on property:
  a. Fire resistance of exterior walls:
     2 hours less than 5 feet
     1 hour elsewhere
  b. Opening in exterior walls:
     not permitted less than 5 feet
     protected less than 10 feet
  c. Occupancies with occupant load of 50 or more, which are located over usable space, shall be separated from such space by not less than one hour fire-resistive construction.
  d. Occupancies located in basement or above first floor shall be of not less than one hour fire-resistive construction.

Exit Facilities:
  a. In all occupancies, floors above the first story having a occupant load of more than 10 shall have not less than two exits.
  b. Maximum distance of travel from any point to exit point-200' in a building equipped with an automatic fire extinguishing system.
  c. Stairways:
     width: not less than 44"
     rise/run ratio: 7½"rise/10"run
     distance between landings: not more than 12 feet
  d. Exit passageway: same fire resistance as walls, floors, and ceilings of building(min. 1 hour)

Barrier free exits and movement required.

Location on property:
Occupancies shall front directly upon or have access to a public street not less than 20' in width. The access to the public street shall be a minimum of 20' wide right-of-way unobstructed and maintained only as access to public street. The main entrance to the building shall be located on the public street or on the access way.
COMPUTER OPERATION

Basically there are four operations by which a library functions:

a. Locating the information needed
b. Retrieval of the information from storage
c. Communication of the information to the user
d. Returning the information to storage

In a typical library operation these four functions are performed by the individual who is searching for the information he needs. He performs these four functions in the following manner:

a. Locating the information needed by means of a card catalog or by the use of indexes.

b. After finding where in the library the information is located, the next step is the retrieval of that information. This means that the person must search the library in hopes that the information is available at the time.

c. After retrieving the information, the user must then find whether the information source is what is needed. This usually is accomplished by reading the source, skimming the source, or by checking the table of contents.

d. Once used, the information is then return to the library and then to the storage area within the library.

This procedure is time consuming to both the user and the library, and at times frustrating when the information is not available and hours were spent in search for the information. The computer is capable of handling these four functions with a great saving in both time and expense for both the library and the person involved. The essential parts of how a computer would handle these four functions follows.

Two Main Functions:

a. Bibliographic search by which the user identifies the documents relevant to his needs - the catalog

b. Display of these documents to the users - the display

Procedure:

a. The logging in and identifying the user at a terminal. The terminal can be located at the library itself and/or be located at remote terminals controlled by telecommunications. Also, local information can be augmented by links to external storage areas (other libraries or centers of information). Thus, by logging the user starts his interaction with the system by indicating his subject matter or subject of interest.

b. The computer responds with a statement of the number of entries on the subject.

c. The user shifts to narrower specifications - calls for titles, authors, and citations of documents
which matches his subject matter.

d. Continues to narrow subject matter by asking for one or more abstracts.

e. If at a read-out terminal or combined terminal, the user can transfer easily from catalog search to full text display — first page of document in question will appear on the screen or at a telewriter, his access to full text display could be delayed delivery of a photographic copy on microfilm, microfiche, or on paper.

Computer Procedure vs Normal Library Procedure

Steps a and b above are normally done at the card catalog by looking at each card.

Step c above takes the place of the card catalog entry and contains more information that regular library card entry such as author, title, citation date, abstract of document, table of contents, and if the document is checked out.

Steps d and e above normally is done by the person by going to where the document is stored and finding the information.

Impact of the Computer

\begin{itemize}
  \item Housekeeping chores
  \item Order records and reports
  \item Fiscal control
  \item Circulation systems and control
\end{itemize}

Library card catalog
\begin{itemize}
  \item Accessibility to users beyond the library
  \item Permitting interchange of catalog information between libraries
  \item Mobility within library itself for checking holdings, changing location records, etc.
\end{itemize}

Design Information

Computer space:
\begin{itemize}
  \item Should be 2,000 sq. ft.
  \item Should include about 1,000 sq. ft. for central processing
  \item Soundproof
  \item Double floor to carry wires
  \item Separate air conditioning systems to keep temperature and humidity constant
  \item Filtration system to remove dust
\end{itemize}

Network of cables with connections to:
\begin{itemize}
  \item Catalog
  \item Card catalog
  \item Acquisitions
  \item Circulation
  \item Other departments
\end{itemize}

Other spaces needed:
\begin{itemize}
  \item Two offices:
    \begin{itemize}
      \item Computer director, operators, programmers at 150 sq. ft. per person
      \item Key punch at 75 sq. ft. per person
    \end{itemize}
\end{itemize}
The use of electronic communication in today's society is ever increasing. The home video tape machine is now available, and its acceptance is increasing while its price is decreasing. The ability of these machines to not only tape television shows for later replay but to play or show prerecorded tape is opening a new market in communication. There is no reason why this form of technology should not become a function of a library in providing information. A video department is included in this project in order to make the following functions possible.

a. Providing tapes which would be available to the public for instructional, educational, and information purposes. Example: tapes explaining tax return instruction

b. Providing tapes of entertainment value. Example: tapes of current films and tv shows

c. Providing cultural experiences. Example: plays, dramas, or current news events

The video department should also be able to produce tapes which would document local activities or local culture events. This function would allow the following:

a. Providing tapes for exchange to other communities through a network of tape exchange. Such a network would allow the passing of local culture and
Critical Issues:
   a. Reading areas opening to the street to tempt passers-bys inside.
   b. Furniture arranged in lounge groups rather than rows of tables
   c. Stacks open to public
   d. Separation of spaces: first floor-public spaces(users), second floor-devoted to staff use

Space Relationships:
   a. zoning by public vs staff
   b. first floor public, second floor staff

Circulation:
   ● users/readers
   ● stairways

Structure:
   a. enclosure-reinforced concrete; interior-brick/glass
   b. no grid module

Site Layout:
   a. faces main street for public viewing
   b. faces north
Brighton Branch Library - 1971
Architects Collaborative Inc.-Architects

Critical Issues:
   a. Separation of spaces into three areas - Adult, Children, Community Services
   b. Levels open to main lobby and control point
   c. Outside areas: a. Entrance court, b. Children's outdoor space, c. Adds pleasantness and openness to spaces
   d. Daylighting into all spaces
   e. Strong influence from surrounding buildings

Space Relationships:
   a. Zoning by function
   b. Center control point (lobby)
   c. Spaces off lobby

Circulation:
   a. Ramp connects all levels, open to all levels, good for handicapped people
   b. □ users/readers

Structure:
   a. Exposed concrete pane system with cavity block walls
   b. 12'x18' grid system
   c. Exposed concrete block system on interior
Greenburgh Public Library - 1971
Max O. Urbahn Associates-Architects

Critical Issues:
  a. Space separation - Children vs Young Adult/Adult
  b. 20 year growth potential
  c. Viewing into from streets

Space Relationships:
  a. zoning by function
     1st floor - children, staff, meeting rooms
     2nd floor - adult/young adult

Circulation:
  a. two entrances
     1. parking area to 2nd level (adult section) by bridge
     2. ground level to 1st level
  b. ○ users/readers
     ☐ stairways

Site Input:
  a. hillside allows the connection to parking and the opening of both floor levels to the outside
Lansing Public Library - 1976
Y. C. Wong-Architect

Critical Issues:
a. Surrounding environment input to designing a space which could turn inward for privacy
b. Three different sections of activity
c. Separate the noisier functions

Space Relationships:
a. Zoned by noise vs quiet areas
b. Children area and meeting room (noise) separated from offices and reading rooms by different levels

Circulation:
- user/readers
- stairways

Structure:
a. 30'x40' bay, steel frame with prestressed, precast concrete floor slab

Site Layout:
a. Main entrance facing main street
b. Sloping site allows lower floor to open to exterior
CONCLUSIONS

ZONED BY FUNCTION/ACTIVITY
- Reading Area
- Stacks

PUBLIC AREAS ON STREET LEVEL
- General Reading
- Reference
- Periodicals
- Children

FOCAL/CONTROL POINT
- Circulation Desk
- Security
- Viewing Rooms
- Restrooms

SITTING
- Reading Areas viewed from street to invite people in
- North exposure

NOISY vs QUIT
- Children's Area
- Adult Reading

STREET LEVEL ENTRANCE
- Reading Areas
- Parking, near or on site
ACTIVITIES/FUNCTIONS

ENTRY/Lobby

BOOK CIRCULATION
- DESK/INFORMATION/CONTROL
- OFFICE/STAFF
- CATALOG/COMPUTER TERMINAL
- BOOK BROWSING/EXHIBITION AREA
- RESERVOIRS

READER AREAS (17,000)
- PERIODICALS
- OFFICE/STAFF
- PERIODICAL INDEX
- PERIODICALS/NOWSPAPERS (CURRENT)
- USERS
- ADULT/TEEN/ADULT AREA
- OFFICE/STAFF
- BOOKS
- USERS
- CHILDREN'S AREA
- OFFICE/STAFF
- BOOKS
- USERS
- CARE CATALOG
- STORY TELLING AREA
- SPECIAL COLLECTIONS
- LENDING ROOM
- MUSIC COLLECTION
- REFERENCE AREA
- OFFICE/STAFF
- BOOKS
- REFERENCE INDEXES
- USERS

ADMINISTRATIVE AREA (2,000)
- DIRECTOR
- LIBRARIAN
- BRAKER OFFICE
- STAFF COVENIENCE
- STORAGE

TECHNICAL SERVICES (4,600)
- RECEIVING
- PREPARING BOOKS/MAKING MEASURING
- STORAGE
- CATALOGING
- MICROFILM
- STORAGE
- FILM
- READING
- INDEX
- COMPUTER
- COMPUTER ROOM
- OFFICE/STAFF
- STORAGE

OUTREACH PROGRAM (3,500)
- OFFICE/STAFF
- CLASSROOM
- WORK AREA
- BOOKS
- USERS
- EQUIPMENT STORAGE
- BOOKMOBILE HOOK-UP

STACKS (2,000)
- BOOKS
- BOUND PERIODICALS
- USERS

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INTRODUCTION TO LIBRARY

READING AREAS

- INFORMAL READING ATMOSPHERE
- LISTENING BOOTH/CHAIRS, HOOK TO A.V. DEPT. W/DIAL-LU RECORDING
- OFFICE
- PERIODICAL
- SPECIAL COLLECTIONS
- REFERENCE OFFICE

MEETING/CONFERENCE AREA

OUTREACH PROGRAM

- SMALL MEETING
- LARGE MEETING
- MEDIA CENTER
- VIEW OUT
- OUTSIDE AREA
- STOR. R.R. LOUNGE
- (COULD BE STAFF LOUNGE)

- OFFICE
- EQUIPMENT
- STORAGE
- CLASSROOM
- USER SPACE
- BOOKMOBILE HOOK-UP
- BOOKMOBILE ENTRY

- INTRODUCTION TO LIBRARY
- HAVE OWN ENTRY FOR NON-LIBRARY USE
- ENTRY