Lockefield Terraces
Housing In The Midtown Neighborhood
Indianapolis, Indiana
Paul A. Endris, II
August 12, 1983
To the memory of my Grandmother:

Mrs. Margaret B. Endris
Acknowledgements

Thanks to my parents, Mr. and Mrs. Paul A. Endris, for their spiritual and monetary support. They never stopped believing in me.

Thanks to Ms. Lori Kyle Clyngenpeel for her love, patience, and typing skills through these last trying days of my academic career. She has been my closest friend.

Thanks also to those classmates and professors who helped me not only through this thesis but through the past five grueling years.
Contents

ACKNOWLEDGEMENTS

PREFACE

1. PROJECT INTRODUCTION
   a. About thesis
   b. Site history and analysis
   c. Building types research
   d. Market research
   e. Design issues and concepts

2. PROGRAM
   a. Project brief
   b. Spatial requirements

3. PROCESS

4. FINAL DRAWINGS

5. CONCLUSIONS

LIST OF ILLUSTRATIONS

BIBLIOGRAPHY
Preface

This booklet represents the conclusion of a nine month exploration into an architectural thesis concerned with a need for good housing in an area known as the Mid-town Neighborhood in Indianapolis, Indiana. It also represents the seemingly elusive ending to five years of study in the field of Architecture.

Although I have come to reasonable solutions for many of the issues I have attempted to address, there are still many unsolved problems and unanswered questions. This applies to both the thesis and the education mentioned previously.

However, unlike the thesis, which is complete to some extent, my education will continue as I now embark upon the "real" world.
Project Introduction
About Thesis

As a student entering my first quarter of the traditional three-quarter thesis studio sequence, I was informed that I was to design and document the design of a building of my own choosing. It was to be a project within certain parameters of size (according to a square footage count) and complexity. I found all of this quite overwhelming at first glance. I had never before been allowed such freedom on any given project. I was to adopt and build upon a program of my choice, then go about the task of solving a set of issues I had chosen to deal with in any manner I saw fit. Ultimately, I was to arrive at a final conclusion having solved all issues addressed. However, I soon learned that this much freedom can be as restrictive as it can be unrestraining. What I found was that the set of issues and answers I was attempting to deal with as a constant defied definition. I slowly became comfortable with this situation and began to explore in depth those issues which I chose to deal with at that moment in time. Abandoned was the concept of "completing" a total design.
Choosing A Site

Housing design has always been an interest of mine. It involves issues common to many other building types and yet it can be fun, exciting and quite unique from one condition to another. Housing design also allows the designer a certain freedom not found in other building types. Structural systems are usually simple in nature, allowing for variety and diversity, so important in design of housing.

As I began to think of a site for a housing development, many other issues became apparent to me concerning the state of housing which is most familiar to me, suburbia. Once the "American Dream," suburbia is now beyond the reach of many Americans. Reasons include the ever-rising cost of energy especially involving commuter costs. Escalating costs of new suburban housing have also led individuals to seek less costly housing alternatives. Many Americans have chosen to rent instead of owning their housing. In many cities, new town houses, garden apartments, and hi-rise apartments located in close-in residential areas are in great demand. All of these issues seemed much too important to ignore.

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Single-Family</th>
<th>Multi-Family</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Units</td>
<td>Number</td>
<td>Percent</td>
</tr>
<tr>
<td>1970</td>
<td>268,850</td>
<td>207,400</td>
<td>77.1%</td>
</tr>
<tr>
<td>1978</td>
<td>299,160</td>
<td>205,710</td>
<td>68.8%</td>
</tr>
<tr>
<td></td>
<td>30,310</td>
<td>-1,690</td>
<td>-</td>
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</table>

After much research and ample assistance from the gentlemen at the Department of Metropolitan Design in Indianapolis, a site was chosen just northwest of the Central Business District. The site was within walking distance of the Central Business District and close to Indiana University-Purdue University, Indianapolis campus. The Department itself had chosen this site for housing in their 1980-2000 Regional Center Plan. The area in which the site is located is known as the Midtown Neighborhood.

Historically, the Mid-town Neighborhood has been chiefly made up of single family dwellings with some scattered small commercial activity along Indiana Avenue. IUPUI recently has entered the scene and begun extensive development. The IUPUI Medical Center is a major employer in the area. Directly to the west and immediately adjacent to the site rests Lockefield Gardens, a now-abandoned, 1940's P.W.A project originally designed as middle to lower income housing. The structures are of significant character and have been the source of much controversy lately concerning a possible rehabilitation. At present, the site is virtually flat and void of structures.
Within the past ten years much time and energy have been spent on the development of housing types. Some leaders in this field have been the firm of Sert, Jackson and New York’s Urban Development Corporation through their Roosevelt Island Competition.

Today's state-of-the-art large scale housing consists of three basic building types: point towers, expanded towers and stepped towers. Many of these are combined with small scale elements incorporated for scale relief. The point tower approach employs a central core which is wrapped by typical living units. This approach also casts the smallest shadow. However, this type can become quite inhuman and is probably most effective in a dense urban situation. An extended tower plan elevates much of the elevator/core inefficiency problems of the point tower. However, this approach results in more corridor space and a lack of cross-ventilation. The stepped tower scheme employs a corridor level every third to fourth floor. This skip-stop system is also employed in the point tower. The stair towers are moved to the outer edge of the building as well as the elevators. There are separate stairs.
within which allow for private access to apartments. This scheme also has the advantage of allowing light and air to circulate freely because of the stepped massing. Examples of this approach are Sert, Jackson's Riverview Project in Yonkers, New York; Jose Luis Sert's Peabody Terraces in Cambridge, Massachusetts.
Target markets and densities were set after careful study of a housing survey for IUPUI and CBD employees conducted by the firm of Hammer, Siler, George Associates for the Department of Metropolitan Design.

The target density was estimated at thirty to fifty units/acre. The target markets were then established for each housing type. Walk-up units (based on rental prices and proximity to IUPUI) along North Street were targeted at a market made chiefly of IUPUI students, undergraduate as well as graduate. The tower units would be targeted at a market consisting chiefly of IUPUI faculty and staff members as well as young professionals working in or near the Central Business District. These units would have slightly higher rent prices.

There would be three basic unit sizes offered, with the flexibility to add to or subtract from these figures. Fifty-percent of the units would be one bedroom apartments of 525 square feet. A two-bedroom unit would be offered at a 675 square foot size. This would make up another twenty-five percent of the total number of units. An efficiency apartment of 400 square feet would also be an option, making up the final twenty-five percent of the total.
The thesis proposed herein is two-fold in nature. It consists of a macro proposal as well as a more finite or micro proposal resulting in a piece of tangible architecture. On the macro scale there is a need for a revitalization of the Midtown Area as a whole. This would involve the development and construction of rental apartments, townhouses, and infill single family housing in the area. In order to support this new housing there would have to be extensive commercial and retail activity oriented toward the surrounding neighborhood. This activity would be located on a spine along Indiana Avenue. However, in order for any new housing to be marketable in the area, one important issue must be resolved. This issue is the Lockefield Gardens housing development dilemma. The only conceivable solution to this problem is the rehabilitation of the complex.

On the micro scale there exists a twenty-five acre site bounded by Indiana Avenue, North Street and Blake Street directly adjacent to Lockefield Gardens. This site exists as an important link to the surrounding areas. It is the site for the second proposal of this thesis. Because of the closeness of Lockefield Gardens to the west, IUPUI to the
south and the Indiana Avenue commercial spine to its north, it must contain a variety of housing as well as neighborhood oriented commercial and retail activity. This complex must consist of a self-supporting system which can be applied to the entire site. It must also be sympathetic to its surroundings.

There are five major concepts which must be executed at the site scale. First, a commercial/retail zone must be established on the Indiana Avenue boundary of the site. This zone will establish a busy "main street" atmosphere along Indiana Avenue. It will be a definite hard edge between the street edge and the interior of the site. Second, vehicular traffic will be cut to a minimum on the site in order to establish a pedestrian oriented environment. Only some service and maintenance vehicles will be allowed on the site. Parking for residents and visitors will be accommodated by a single level underground parking facility. Access to this facility will be only along Blake Avenue. Third, the creation of an edge condition along North Street, similar to that along Indiana Avenue but consisting of walk-up type apartments is necessary. These units will be marketed toward IUPUI students,
both undergraduate and graduate. Fourth, a need for a community recreational space will be fulfilled along Blake Street within the interior of the site. This community space would act as a collection space for people from the site itself and Lockefield Gardens. Finally, the use of a stepped tower system which will terrace away from each edge condition. These towers would be of varying height and length in order to provide variety and allow spaces within the site to flow together.

On a more detailed level, the low-rise commercial and walk-up housing units along the edges will be of proper massing in order to provide a suitable pedestrian street scale. The tower units themselves will be of single-loaded corridor type. The "corridor sides" will be mated in order to provide a more public space. In turn, private spaces will then be created on the opposite sides of the towers where private balconies are provided. An arcade system will run along both north and south edges of the site in order to provide shelter for the pedestrian as well a linking element tying differing building types together.
NORTH MERIDIAN CORRIDOR
Meridian St. is being beautified and revitalized as a major office corridor and entry to downtown.

MIDTOWN NEIGHBORHOOD
REVITALIZATION
The revitalization plan for this area calls for development of Lockefield Gardens, new family and senior housing, housing rehabilitation, and neighborhood-oriented commercial development.

WALKER BUILDING RENOVATION
This project includes renovation of the office areas of the building and adoption of the theater for use by the performing arts.

INDIANA UNIVERSITY MEDICAL CENTER/INDIANA UNIVERSITY PURDUE UNIVERSITY AT INDIANAPOLIS PROJECTS
Business/Scope Classroom Building Classroom Building No. 2 Medical Science Building University Hospital Expansion Clinical Research Building Classroom Building No. 3 Central Computer Center Coleman Hall Renovation Parking Garage

CENTRAL CANAL
This project proposes landscaping improvements to the Canal to downtown that will establish it as the focal point for new development.

INDIANA CAPITOL COMPLEX
New construction is anticipated to satisfy some of the growing demand for space.

DOWNTOWN DISTRIBUTOR
Shuttle bus or alternative transit systems will link key downtown areas.

WHITE RIVER PARK
A public/private partnership will develop 250 acres into a park of international significance. Total attendance is projected to be 3.5 million annually.

WESTSIDE HOUSING
Apartments near White River Park and IUPUI will be developed to meet the growing demand for housing.

WEST ST./MISSOURI ST. IMPROVEMENTS
The upgrading of West St. to a four lane divided street will help ease the flow of Inner Loop traffic to and from IUPUI and Indiana Complex, Convention Center/Stadium, and White River Park.

WEST WASHINGTON
New development surrounding by White River Park, the site of downtown, Capital Complex, and the Convention Center will include hotel, entertainment, office, and parking space.

CONVENTION CENTER EXPANSION/MULTIUSE SPORTS FACILITY
This facility will not only add much-needed convention space to the city, but will also help to regularly attract major sporting events.

UNION STATION TRANSPORTATION
AND VISITORS CENTER
The renovation of Union Station will provide a focal point for intercity bus and rail service, as well as Metro, airport limousines, and taxi service. It will also contain displays, restaurants, and specialty shopping.

NEAR SOUTH SIDE INDUSTRIAL AREA
Redevelopment is planned for this area to...
PROGRAMATIC SITE PLAN
1" = 200' - 0"
<table>
<thead>
<tr>
<th><strong>PROJECT</strong></th>
<th>Lockefield Terraces Housing Development</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LOCATION</strong></td>
<td>Indiana Avenue, Midtown Area, Indianapolis, Indiana</td>
</tr>
<tr>
<td><strong>BUILDING SUMMARY</strong></td>
<td>The complex is made up of low-rise commercial elements mixed with hi- and low-rise housing elements. The living units are targeted toward a market consisting of IUPUI faculty, staff and students as well as young professionals working in or near the Central Business District.</td>
</tr>
<tr>
<td><strong>BUILDING AREA</strong></td>
<td>Tower Units 540,000</td>
</tr>
<tr>
<td></td>
<td>Walk-up Units 60,000</td>
</tr>
<tr>
<td></td>
<td>Commercial Retail 50,000</td>
</tr>
<tr>
<td></td>
<td><strong>Parking</strong> 150,000</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong> 1,000,000 sf.</td>
</tr>
<tr>
<td><strong>SITE SUMMARY</strong></td>
<td>The site is bounded by Indiana Avenue, Blake Street, and North Street. It is directly adjacent to Lockefield Gardens and IUPUI campus.</td>
</tr>
<tr>
<td><strong>SITE AREA</strong></td>
<td>twenty-five acres 1,100,000 sf.</td>
</tr>
<tr>
<td><strong>TARGET MARKET</strong></td>
<td>IUPUI faculty, staff and students as well as young CBD professionals.</td>
</tr>
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Spatial Requirements

TOWER HOUSING UNITS

500 of 1 Bedroom units @ 525 sf. 262,500
250 of 2 Bedroom units @ 675 sf. = 268,750
250 of Efficiency unit @ 400 sf. = 100,000
Sub-total = 531,250 sf.

WALK-UP UNITS

60,000 sf.

PARKING FACILITY

1500 parking spaces underground 360,000 sf.

NEIGHBORHOOD ORIENTED RETAIL

50,000 sf.

COMMUNITY RECREATION CENTER

25 yard swimming pool 3375 sf.
bath house 800 sf.
softball diamond 30,000 sf.
basketball court 4200 sf.
tennis courts, 4 @ 2800 sf:
Sub-total 49,575 sf.

COMMUNITY ROOMS

6 @ 1000 sf. 6000 sf.

MANAGEMENT OFFICES

4 @ 200 sf. 800 sf.

MAILROOMS

6 @ 300 sf. 1800 sf.
LAUNDRY

LOUNGE AREAS

MAINTENANCE

RESTAURANTS

PARKS, PATHWAYS, ROOF TERRACES AND PLAYFIELDS

1 washer per 20 units, 1 dryer per 40 units 8000 sf.

6 @ 100 sf. each 600 sf.

Sub-total 8600 sf.

4 @ 200 sf. 800 sf.

5,000 sf.

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TOTAL 1,073,825 sf.
Programatic Site Plan

[Diagram showing different levels and sections of a site plan]
SECTION
1" = 20'-0"

[Diagram with various labeled sections and floor levels]
The following are lists of criteria which should be considered when viewing the final drawings. It is meant as a refresher of concepts and not necessarily as an explanation of the drawings or design.

SITE

- an almost totally pedestrian environment
- tower units provide density
- low-rise elements provide scale
- a self-sufficient system
- entry of light and air to open spaces
- use of a system; attempt at individuality
- rhythm without monotony
- corridors grouped in more urban spaces
- balconies grouped in more open spaces
- low-rise units terminate system
- meandering pathway within site

Traffic patterns become less rigid as one moves toward the interior of the pedestrian traffic system: primary, secondary and tertiary.
TOWERS

4 sizes of tower units
7 floors @ 120 ft. long
10 floors @ 130 ft. long
13 floors @ 240 ft. long
16 floors @ 300 ft. long

materials used are: floor to ceiling glass along corridors, limestone panels, concrete columns, and concrete panels

entries, lobbies, elevators, and entries visible to public. Skip-stop elevator system is employed with stops on every third floor.

corridors are located on these floors which connect to stairwells providing access to apartments above and below

interior stairs occur every fourth bay and serve two units on each floor

the corridors themselves swell and contract so as to provide points of interest along them as well as define entries

the "public" facade is more monolithic in character than the "private" facade which breaks down the form so as to provide a sense of openness and individuality
Conclusion
As stated previously in the project introduction, this thesis is only complete to the extent that certain issues were addressed and a solution was arrived upon for them. There are still many issues left virgin to the designers pencil. However, I depart for the dark unknown of the working world with a feeling of satisfaction. I have labored long on these problems and all of those presented to me along my five year journey through the world of undergraduate work.

There are many unanswered questions left in this thesis worthy of further study. The design completion of the community recreation area is certainly one of these. It is an important element in the adhesion of the project. Further study into the low rise housing and commercial/retail elements could also be considered, as well as continued work on the transition from the tower units to the low rise units.

Strange as it may seem, while I scribe the last sentence of my final undergraduate project, no great profound, philosophical ideals became apparent. Instead, I merely feel a great sense of relief and joy.

ibid, p. 107.


ibid, p. 150.


ibid, p. 222.


