TILLERY HILL RESORT

JAMES E. SCHROEDER

MAY 11, 1979

COLLEGE OF ARCHITECTURE AND PLANNING
BALL STATE UNIVERSITY

PROFESSOR ROBERT KOESTER
PROFESSOR ROBERT FISHER
PROFESSOR OMAR FARUQUE
TABLE OF CONTENTS

Forward 1
Acknowledgements 2
Abstract 3
Introduction 4
Conclusion 9
Appendix A. (Program) 11
Appendix B. (Site Analysis) 12
Appendix C. (Building Type Study) 13
LIST OF FIGURES

Concept Number One 5
Concept Number Two 6
Concept Number Three 7
Preliminary Drawings 8
Final Drawings And Model 10

TILLERY HILL RESORT

LIST OF FIGURES
FORWARD

Recreation is an important part of our society and the need for recreational facilities is increasing. People are seeking an escape from work and city life and recreation fulfills this need. This year more Americans than ever before will be enjoying sports like boating, biking, skiing and playing tennis.

Many popular recreational activities revolve around the element of water. This alone may satisfy many people, but a variety of recreational facilities integrated with this create the so-called "tourist attraction."

Mobility plays an important part in our recreational patterns; we go where it's happening. The distance between our home and our destination only makes it seem more worthwhile to arrive there. Because of this, lodging facilities will entice a greater number of people to spend more time at the facility. This may involve anything from a weekend getaway to business conventions.

In this particular case the recreational area is Patoka Reservoir which is located on the Patoka River, in the south
central portion of Indiana, about 55 miles northeast of Louisville. The Army Corp of Engineer's master plan indicates a site for a proposed hotel, however at this time it remains a proposal. This thesis project addresses a resort complex located on the proposed site.
ACKNOWLEDGEMENTS

Professor Robert Koester
Professor Robert Fisher
Professor Omar Faruque
Professor A. E. Palmer
Thomas Montgomery

Studio Critic/Systems Consultant
Studio Critic/Structural Consultant
Guest Critic
Programing Consultant
Conservationist, Paoli, Indiana
ABSTRACT

This thesis book is a documentation of work completed on my thesis project which occurred from September, 1978, through May, 1979, at the College of Architecture and Planning, Ball State University. The project entails a complete recreational and lodging facility on Patoka Reservoir in Southern Indiana.

The Program included a Lodge consisting of 80 rooms, Dining, Bar/Lounge, Convention Facilities, Lobby/Lounge and Front Desk. Recreational facilities include indoor Tennis, Swimming, and Racquetball, along with Lockers, Snack Shop, Pro Shop and Outdoor Recreation Facilities.

The total cost estimate including the building and site work is slightly over six million dollars.
INTRODUCTION

At this point a brief description of the thesis program seems appropriate. The thesis program consists of three quarters, each approximately three months in length. The first half of the first quarter consists of writing the program, conducting a thorough site analysis and preparing a building type study. This provides the basis for the first jury. The remainder of the quarter is spent developing three concepts, which are presented at the end of the quarter. The second quarter involves development of the concept which shows greatest potential. At this point systems and structure are additional issues to deal with. A mid-quarter jury is held to determine the degree of development. At the end of the quarter final ink drawings and model are required. The third quarter is spent in drawing an axonometric, perspective, and developing a detailed study of a particular portion of the project. The remainder of the quarter is spent in preparing this book.

The following pertains to a detailed look at the project progress and development.
At the conclusion of the site analysis the best location was not apparent. The site offered three areas which would provide a suitable location; a large open area located at the highest point on the site, a sloping wooded location, and a sloped wooded area. For this reason I decided that each of the concepts would be located at separate locations.

To guide the direction of the concepts, a list of critical issues was developed. These included: inward and outward views, use of passive solar, separation of public/private spaces, and the need for natural lighting.

Concept number one was based primarily on views; outward—utilizing single loaded corridors and inward—into a three level atrium. This concept was located on the highest point with the pool opening out to the lake.

It was suggested that I study building form and maybe try a multi-level structure. This led to concept number two which consisted of an eight story cylindrical building with atrium through the center. It was located at the top of the hill with recreational facilities on lower levels opening out to the lake side of the building.

In my program I had determined a space relationship. Basically, this separated the facilities into two groups; the guest rooms with support and the recreational facilities. Concept number three carried the separation to an extreme
by having two separate buildings connected by a second level tunnel. This concept was located on the side of the hill and for this reason used terraced rooms with single loaded corridors.
At the conclusion of this presentation I wasn't completely satisfied with any of the concepts, but I did prefer parts of each. The result was a combination of concept two and three, which was presented at mid-term of the second quarter.
CONCLUSIONS

In reflecting back through the design process, I feel that my site analysis should have led me to one location on the site. I found myself not only designing three concepts, but at three locations and this caused problems later on when ideas from each concept were used.

At the jury in which the concepts were presented, particular parts of each concept were favored. These included the terraced rooms and the lower atrium space in concept number two. It was suggested that the hotel and recreational facilities be more integrated than concept three. Inward views should be expanded to create a sense of excitement and occurrences.

At the beginning of winter quarter I was having difficulties integrating the lower level atrium space and the terraced rooms. Forms were conflicting and I was trying to retain old forms rather than evolving new ones.

At mid-quarter jury there still seemed to be a major connection problem between the two parts. In discussions with Professor Fisher major changes occurred in moving the
entry and convention facilities to the opposite end of the building. This tended to create a mall effect and provide for shops to occur between. Another major change occurred a short time later when a major circulation problem arose. This necessitated flipping the entire building over. At this point the project began to take shape and considerable progress was made. A continuing problem was integration of a sloped roof and a flat roof.

Comments from the jury were mainly concerned with the front facade of the building and the roof form along this facade. Minor problems still existed in the atrium/recreation space.

During the third quarter I decided that my special study would involve the front facade which I was still dissatisfied with. Instead of dropping the roof down it was continued up on the same angle as the roof over the rooms. This created a loft shopping space and a more interesting and inviting facade.

My overall feelings for the project are very good. I felt that from the middle to the end of the second quarter I made tremendous improvements in the design. There were times when the project became very frustrating, but I feel that this will occur in any long term project. I think that
some problems would have been avoided if I was more receptive
to change. Another weakness in my process was a lack of work
with models and coordination of making decisions in plan
relating to elevation and site plan. However, I feel very
happy about the success of the project and more capable of
working on large projects in the future. The following
pages show the final drawings and model.
FACILITIES PROGRAM
for
PATOKA RESORT
on
PATOKA RESERVOIR
PATOKA RESORT

on

PATOKA RESERVOIR

ORANGE COUNTY, INDIANA

Jim Schroeder
Thesis Project
Prof. R. Koester
Add. Critics
Prof. R. Fisher
Prof. O. Faruque
Summary
Thesis Proposal
Introduction
Scope of Program
Site Location and Analysis
Goals
Users
Management
Reservation Flow Diagram
Space Requirements
Space Relationships
Building Criteria
Exterior Criteria
Building Codes
Cost Estimate
Building Type Study
References
Appendix I (Soil Data)
Appendix II (Climatic Data)
Appendix III (Building Type Data)
The need for recreational facilities is increasing. People are seeking a happy balance between work and recreation and as time goes on we seem to be spending equal time on both. This creates a need for additional recreational facilities to be constructed throughout the United States.

Patoka Resort is an attempt at designing a facility which will function according to these needs. It will stress people's involvement in recreational activities through sports and games, indoors and outdoors on land and water during warm and cold weather. The facilities will include a hotel, restaurant, convention center, complete indoor/outdoor recreational facilities including tennis, racquetball, swimming and golf along with their support facilities.

- Total interior square footage for the resort: 59,678
- Total interior square footage for the recreational facility: 53,767
- Total interior square footage: 113,445
- Total exterior recreational square footage: 6,086
- Parking for 250 cars: 75,000
I have always had an interest in the design of hotel and recreational facilities. This combination provided the opportunity to design a resort complex. Being familiar with Patoka Reservoir, which is being constructed in southern Ind., I felt that this provided an appropriate site. The area chosen for the resort is at the edge of the water rising to a height of 150 feet. The hillside is wooded with open areas at the top.

The site is a major factor in this project. I feel that the building should become a part of the landscape and work in harmony rather than contrast. This should not be carried to the point that the building blends completely into the surroundings, it should have a definite character, but not an overbearing one.

Exterior views of the lake or wooded areas are extremely important. A casual relaxed atmosphere is essential for the one day visitor or the vacationist.
Recreation is an important part of our society. This year more americans than ever before will be enjoying sports like boating, biking, skiing and playing tennis. Several years ago few planners would have foreseen this current need for recreational facilities. For example the demand for indoor tennis and racquetball clubs has greatly increased during recent years. Reasons for this rapid increase in leisure time recreation are many. Our society has undergone rapid technological advances during the past few years. We have been freed of much of the old chores of daily life. Work hours are shorter and per capita income has increased.

"Statistics gathered by the U.S. Travel Data Center in Washington indicate that 39.5 million american families will be vacationing by car this year, 1.4 more than last year."

"James Imwold, Marketing Operations Manager for the JM National Advertising Company says, our research team has found that the impact of rising gasoline prices will be minimal. Less than one in ten auto vacation households anticipate shortening the duration of their vacation if prices increase in 78."

Mobility plays an important part in our recreational patterns; we go where it's happening. The distance between our home and our destination only makes it seem more worthwhile to arrive there. We have the mobility, but where do we decide to go? What areas have the recreational amenities, both natural and manmade? Choosing an area to locate a recreational facility requires careful study of that area.
Patoka Reservoir which is presently under construction, is located on the Patoka River, in the southcentral portion of Indiana, about 55 miles northeast of Louisville. The dam has been completed and the resulting pool will cover 11,300 acres. It will provide flood control and recreational facilities beginning in 1980. A master land use plan will guide the development and use of project land and water areas. It provides for all types of water recreation: boating, both powered and sail, skiing, swimming or just plain sunbathing. This thesis project addresses a proposed resort complex. It will include an 18 hole golf course, indoor tennis courts, swimming pool and racquetball along with outdoor tennis. Other numerous outdoor recreational facilities would also be provided. Dining, bar/lounge and convention facilities will tie the recreation and guest room area together.
The initial development of the recreation sites is a joint project of the State of Indiana and the U.S. Army Corps of Engineers and will be operated by the Indiana Department of Natural Resources. Water impoundment is scheduled to begin in December, 1977.
Soil Information

The site is located in an area that consists of the Gilpin series. This series consists of moderately deep, well drained soils on uplands. They formed in material weathered from siltstone, shale and sandstone. Typically these soils have a dark grayish brown shaly silt loam surface layer 8 inches thick. The subsoil from 8 to 21 inches is yellowish brown shaly silt loam. The substratum from 21 to 30 inches is brown very shaly loam, bedrock is at a depth of 30 inches, but it is ripable. Slopes range from 0 to 70 percent.

The water table is relatively high at six feet or greater. Potential frost action is moderate and shrink–swell potential is low. The soil exhibits a low corrosivity to steel and a high corrosivity to concrete.