Formulative Environments for Children

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As I progressed through this year, I have depended on many people for support. Stan Mendelsohn and Marvin Rosenman for the Architectural insights necessary to develop my thesis, Paul Laseau for support and guidance when the going got tough, and Les Smith for successfully bridging the gap between Landscape Architecture and Architecture proving that the two can, indeed, co-exist. Marilee Johnson, Ball State University Department of Sociology, for always finding the time to fit me into her schedule and providing insights that were not available in a normal studio environment.

Equally as important as pragmatic support is the constant and unyielding support provided by my friends and family. Without the unending confidence of my father, Robert Powers, and inspiration of my grandmother, Ione Wasmuth, completion of this thesis, as well as my college career would not have been possible.

This book is dedicated to the memory of my mother, Gloria Wasmuth Powers.
Books


Periodicals

"Community Services and Residential Institutions For Children" *Children Today*, (Nov., Dec. 1974 p.15)

"Examples of Adolescents Group Homes in Alliance With Larger Institutions" *Child Welfare*, (May 1975 p. 341)

"Boys House - The Use of a Group For Observation and treatment" *Mental Hygiene*, (July 1944 pp. 430-437)
STATEMENT OF INTENT

During the spring and summer of 1983, while I was serving my internship in New Orleans, a seed was planted in the back of my mind. This seed, while it gestated, grew in importance until I began to associate it with architecture and its related fields. The idea that developed from a conversation with Bob Ingles relates to children and the responsibility every individual has to insure that each child has the best possible and most productive environments and situations in which to grow and mature.

It is easy, especially for college students, to shudder at the thought of responsibility for anyone but themselves; but we all have a responsibility to these children that are away from their normal family environment. A responsibility to give them a stable environment, to insure not only their future, but our own.

With these thoughts in mind I was eager to set off on a journey that would lead me to new realms of architectural research and implications. I envisioned this quest to lead to places that have never before been reached by architects or social workers. Relatively early into the project, as I was overwhelmed by the number of books and periodicals that related to this topic, I came to the conclusion that no revolutionary new ideas were going to come from this exercise. The most I could hope for was to self-educate myself in a field of which I had absolutely no background, and use the newly acquired education in an architecturally innovative way—a gesture to a field and topic that was, and still is, severely ignored and under-prioritized.
STATEMENT OF OBJECTIVES

In everyday life, there are many problems that affect the average individual. The problem of raising gifted children in a challenging situation, but still retaining a sense of individuality that is so important as one matures may fall into this category. Though most individuals are concerned about the fate of these children they, in the same breath call for social services reform resulting in cuts in funding of the programs that are intended to help those who cannot help themselves. The cuts in government spending are as necessary as the services that they provide.

To solve both these problems, facilities and programs must be established that are independent entities, but with a common end in sight - the development of gifted children and adolescents into productive adults. This development will be enhanced or hindered by the facility provided. Thus, major emphasis must be placed in the proper development and design of the residential environment. The creation of a familiar home environment, a consistent environment, will substantially increase the productivity of both the children and the adults involved.

But, concurrently, this facility must have further objectives to justify the expenditure of money in a society that is tiring of throwing money into what sometimes seems eternal indigence. To combat this dilemma, a facility must be provided that serves both sides of the social sphere - those who need help and those who can give help. This academy's major focus will still be the advancement of the underprivileged gifted students but, to gain credibility, it must also aid the more advantaged with the same furore.

The extent to which this academy serves all involved will determine the project's success. In today's complex society there is no place for programs or facilities that have a singular focus or address only solitary issues.
THESIS PROPOSAL

Formulative development in childhood needs a compassionate social and family framework together with a compatible context of environmental setting and living base. For children that are removed from the normal residential environment, the formulative development depends on the merging of social behavioral and environmental concepts. With the social issues being moderated by competent professionals in the social services field, the validity of architectural solutions to social problems will be investigated. Approaching the social issue of housing and community through architectural means will help enhance the balance of these two diverse yet cognate fields. This thesis will address the provisions of these concepts in a case study for providing a home for gifted students.

I propose to develop a "community," for my thesis, a home for boys and girls from the ages of six through eighteen. This community will consist of all the facilities, areas, and environments that are required to give each child a well-rounded yet individual personality. The problem involves the study and actualization of community space and the evolution of needs as these young people grow older. The question of community and private spaces will provide a challenge and help develop insights into sympathetic and complete architecture. Creating a sense of home will provide a facility that is positive and productive. To accomplish this objective, the concepts of optimum community size and structure must be studied.
The idea of 'community' may be studied in three aspects: the total complex, the family (groups of children in a living environment), and the individual spaces. This project, to be successful, must address each area with equal respect. A major weakness in this type of project, is the lack of appropriate family cell. To create a facility that is positive and productive, I believe that family cells must be created and maintained. Though this may not be possible with actual family members, the creation of semi-permanent units of children of various ages shall be a major design consideration. This academy should be a place to go, not an institution in which to be sent. The idea of creating 'homes within and home' will be facilitated by the creation of a village atmosphere where each cluster of rooms will retain their own identity. The living, working, and socializing of children from all backgrounds and situations will lead to a better understanding of themselves as well as others.
CREATION OF GOALS
Initially, as I came into this project, my assumption was that by creating an exact duplicate of a typical home environment, development into a productive adult could be enhanced. But through my reading, research, and meetings with individuals in the social welfare field, I have come to the conclusion that imitation of the family environment is not the answer. According to David and Sandra Canter, the treatment and subsequent housing of misplaced individuals has progressed greatly in the past century. As long ago as the "Custodial Model" of care (which is essentially 'protecting' society from individuals that might, seemingly, harm them) to the progressive "Individual Growth Model" (involving the direct interaction of the staff and the individuals in dealing with the idiosyncratic tendencies of each individual) the concept of group housing has evolved immensely.

The need to create an environment that will enhance development apart from the normal environment is still a major concern in housing children and adolescents. Although individual or separate 'cottages' may not be the answer, the retention of identity and the assumption of individuality are still important. The commonly accepted fact is that children and adolescents, in similar situations, can benefit from the involvement with others in similar circumstances. Illustrated below in the Charles J. Holahan study on Sociofugal and Sociopetal Settings characterizes,
a more positive and meaningful interaction will come from the sociopetal environments (common areas of interaction) as opposed to the sociofugal environments (individual areas).

By following this example, areas are created that retain their own identity yet cater to the needs of the group or individual respectively.

Addressing the accepted trends in the field today of attempting to reduce the number of residential institutions, the need to create a facility that is multi-functional and that could benefit the maximum number of people, both those served by the social welfare field and members of the surrounding community, must be actualized. The incorporation of various functions associated with education as well as recreation must be used as an enticement to lure prospective students and instructors as well as give validity to the facility. The days of separate, individual residential facilities, with the sole purpose of housing, are numbered, but the problem of providing an environment for children away from the normal family situation is now and always will be a problem.

One avenue to address this problem is through a residential, educational facility that serves the academically and artistically gifted children of Indiana. The need and desire for this type of facility is a pertinent issue in Indiana as well as an issue that successfully challenges the ideas and concepts brought out in the thesis.
REALIZATION OF PROBLEMS

When trying to architecturally approach and challenge the concept of the impact the built environment has on the formulative development of children and the adults involved, one must develop a user group. By user group I mean a type or group of individuals to which this concept is pertinent and a need has been established. I, with my preconceptions, initially chose underprivileged children, or residents of group homes as my target group. I thought that these children were in dire need of a upbeat environment and that I could help them as much as they could help me.

To further my investigation as well as to acquaint myself with social services field, I contacted Carol Miller. Ms. Miller is the Residential Expert for the Department of Public Welfare in the State of Indiana. I was eager to find out if my preconceptions were valid and if the direction chosen was pertinent to the field. Ms. Miller enlightened me in several ways: she stated that the major thrust of the social services field was in placement of children in foster homes, not the building of new or even better homes. However, she did state that the issue of proper development in childhood through adolescents is pertinent.

Set back a little by the fact that my initial project idea may not be valid, but encouraged that my pretense—my thesis—was valid, I began to question and re-evaluate how I might proceed. My next step was to contact Marilee Johnson in Ball State's department of sociology. Ms. Johnson proved to be an invaluable resource.
She stated that, though I was very idealistic in my ideas, the concept of formulative development and the immediate environment's impact on it was important. Through our discussions and the brief inclusion of Penny Kolloff, Director of the Center for Gifted and Talented, Burris School, Muncie, IN., we arrived at the conclusion that the proper target group would be the academically and artistically gifted children of Indiana. We come to this conclusion for several reasons:

I. The State of Indiana, at the present time, has no such facility.

II. There is a move, at present, to establish such a facility.

III. The design of such a facility would better facilitate the inclusion of the original pretense of creating a home environment for children away from home. In dealing with solely underprivileged children, the fact that the children would be sent away to a facility would mandate that such a facility be designed in more of a style of a reformatory. The state would not send children to a facility for the sole purpose of housing, unless there was no other recourse.

In dealing with gifted children and adolescents a few unique issues come into focus. First, the idea of compensation for both students and the teachers involved. If we are to create a facility that is removed from the normal flow of family life, the setting must have certain amenities that, though not intended to replace the family unit, help to give some sort of compensation for the change in environments. This compensation can come in many ways and forms but, in my opinion, the most important is the location of the facility. It should be placed in an area that is not only close to cultural and academic centers, but have natural amenities within itself. Compensation can also come in the form of lack of institutional feeling to the facility. It is important that these children do not feel as though they are being 'sent away', but that they have been chosen to attend this school. The impression, both visually and mentally, must be positive and inviting.

A second consideration is the types of individuals that the facility will be servicing. Gifted children and the adults that teach them are unique in the aspect that they will be knowledgeable in what they can expect and demand from their environments. The actual housing unit must have a variety of spaces and areas ranging from individually private areas to common areas of interaction. The over-all complex should incorporate a consistent idea throughout.
A CONCEPTUAL ANALYSIS OF EXISTING RESIDENTIAL ENVIRONMENTS

As one starts into research in this field they are overwhelmed by the number and diversity of the examples available for investigation. But a closer look reveals that the vast majority of these examples have overwhelmingly institutional qualities. In the upper left is an example of a modern residential facility. The Children's Home of York was built in 1982, and though much thought was placed in developing the facility, the lack of individuality shown both within the structure and outside is cause for concern. Within this scheme, a centralized common area is a noble gesture, but the fact that the children's private spaces are all but unrecognizable in both plan and elevation does nothing to reinforce the sense of belonging and place these children need to develop properly. Below is the Children's Home of Easton. In this scheme a new concept in residential group care was tried. This idea was to create a sense of individuality towards the group as a whole. Though this attempt may sound as if it were in the proper direction, creating a sense of individuality with the building is good but only a partial solution. Creating a sense of individuality is appropriate provided it actually works for the students. If it only works at the architectural level, then it can be superficial.
The T.G. Hendrick Group Home, shown on the upper right, is an example of a residential facility that is attempting to become a part of its environment. It is successful because of its size and its rural location. Housing only twelve residents, it is easy to blend into the environs and the need for a 'family cell' is accentuated by the small group being served. Below the T.G. Hendrick Home is the Clawson Cottage. At first glance, this home would appear to be a typical single family residence. Although this example lacks any architectural imagination, it is successful because of the grouping of the children's rooms and the 'core' created by the common area. By having the bedrooms on separate sides of the facility, the individuality of each resident is reinforced—a sense of territory created.

Of the four examples discussed to this point, all seem to deal with the idea of community in similar ways. All common areas are surrounded by personal areas. This juxtaposition of public/private space detracts from the function of both and instead of a common area, you get a 'no man's land' or interface area between the two. The result of this is loss of the intensity of both areas.
Another approach into trying to acquaint myself with this building type is to investigate diverse but similar types of facilities. Located on the upper left of this page is the plan of Felsted School in England. Although this building was only meant to be a simple dormitory, it is obvious that extra consideration was given to the idea that students need a sense of place. In this scheme, the typical long, straight, 'shot-gun' corridor is curved then counter-curved. By this action three separate student residential clusters are created. The simple manipulation of the plan resulted in the creation of sub-districts within the main flow of the building. This sense of territory is important to the over-all sense of community that is necessary in a group living situation. By creating districts of students, the common areas—areas shared by all districts—are strengthened. Following this idea but taking it a few steps further is the next example, a Vocational Boarding School in Arolsen, Germany. The May 1983 issue of Baumeister describes the facility as follows:

"Public outdoor space was designed with the young residents in mind: intimate communication zones and private spaces convey a village atmosphere. Building height is occasionally varied to avoid monotony."

A few of the important issues from this example are: the importance of a clear definition of public and private spaces, and the concept of visually creating a difference among the units. By the individualization of the units a sense of home and place is established. The combination of these places or homes create the community and the combination of homes, and community create a productive environment to grow and learn.
Determining that, through my building type analysis I had enough basic knowledge to proceed, I set my next objective to be procurement of a proper setting. Many aspects entered into this decision, such as proper compensation, proximity of cultural and learning centers as well as its intrinsic natural qualities.

Based on the above mentioned requirements as well as the fact that, for practicality, it should be in relative proximity to Muncie, I chose Brown County, Indiana for the project's location.

Brown County, located in South/Central Indiana, is known for it's natural beauty and rolling landscapes. Numerous advantages are involved with this location, it is approximately 21 miles from Indiana University and only 41 miles from Indianapolis, IN. The relationship the location has to naturalistic qualities as well as close proximity to cultural and learning centers make it a perfect testing ground for my thesis. Located in the appendix of this book is a summary of the site analysis as well as photographs to show actual site settings.

Following site selection the development of a program was in order. This turned out to be more than I anticipated, and something I looked to my consultants for input. The necessity of a complex that was self-sufficient yet economical was demanded. The idea of self-sufficiency expanded the pretense of the project.
DEVELOPMENT OF GENERIC COMPLEX PLAN

By determining this, the focus no longer was solely based on creating living environments for these children, but creating total environments—from housing to recreation—all aspects had to be dealt with and solved.

Following the site summary in the appendix is a brief introduction into the programmatic considerations involved in the planning of the complex. The facilities and environments provided were derived from conversations with my consultants in both architecture and the social services field. While they may not answer every need of the children and adults involved, they do provide an adequate bases from which to work.

By inclusion of education, recreation, and cultural facilities, the scope of the project increased eminently. A parallel, yet equally important consideration began to evolve as the exercise progressed. As shown in part three of the appendix—the development of a generic complex plan—the consideration of how the built environment and the natural environment mesh, and if there is a need of a third attribute that facilitates the development of this unity. Recognition of this fact lead to further development of this complex than was originally intended.

The inclusion of more than just housing set a new parameter—the idea of total complex unity. When dealing with varied programmatic uses in a natural environment, the unity should obviously be created by the environment, the only constant. Selected issues that must be addressed when developing a outline performance specification—a generic complex plan—follow.

I. Aspects of environments that have to be dealt with in creating a home environment.

A. INSIDE ENVIRONMENT
   - private spaces
   - semi-private spaces
   - shared spaces
     - bedrooms and bathrooms

B. OUTSIDE ENVIRONMENT
   - spaces defined by the building
   - spaces defined by vegetation
   - spaces defined by other spaces

C. ENVIRONMENTAL IMPACTS
   - views
   - winds
   - southern exposure
   - desire to create a consistency of environment shared by separate 'cores'
   - energy
   - rain/severe weather

MAIN ISSUES:

DO THE OUTSIDE SPACES NEED TO HAVE A 'CORE' IDENTITY, OR CAN EXTERIOR SPACES BE SHARED BY ALL?
WILL AN EXTERIOR SPACE OUTSIDE ONE UNIT BECOME 'TURF' OF THAT UNIT, OR WILL IT BE SHARED? BY CREATING INDIVIDUAL OUTSIDE SPACES WILL CONTROL BE DIMINISHED TO THE POINT OF NON-EXISTANCE?

D. INTERFACE BETWEEN OUTSIDE BUILT ENVIRONMENTS AND OUTSIDE NATURAL ENVIRONMENTS

- need of armature that unifies these elements
- need of armature that does not disrupt the 'natural flow'
- naturalistic incorporation of site /
  building/exterior spaces
- allow interface to tie both natural and
  built environments together, to allow
  the project to make sense

When looking at the idea of personal identity, it is sometimes easy to overlook the surrounding area as a major concern, but the idea of individuality can be interpreted through many scales. While identity can be reinforced in areas as small as sleeping areas, it can also be reinforced in areas as large as neighborhoods. Taking a typical neighborhood as an example, spacing of the houses, similarity (or lack of similarity) of built forms and natural amenities all combine to create a cohesive environment—an environment with an individual identity. Using this concept as a basis, the unity of the complex became a major concern. Through the generic complex plan, the unity of form as well as incorporation of built structures/environment was investigated. Ideas of ideal circulation and building placement were addressed. Illustrated on the next page are the conclusions from the design development abstract, for its development, see the appendix.
DEVELOPMENT OF
GENERIC COMPLEX
PLAN

HOUSING

southern exposure
articulate entry to
complex
separate from other
functions

COMMUNITY THEATER

initial community
interaction
articulation of
entrance
views to basin
starting point of
complex
creating a node as
well as articulating
the edge of the lake
dam/building/water
start to become one;
nor is dominate

EDUCATION ANNEX

need to respond to
natural run-off of
the site
create a tie between
buildings
bridge peak of lake
articulate circulation
between open fields
and lake
funnel circulation
around lake
let neither building
nor environment be
dominate
One of the main conclusions of this part of the exercise was the identification of the need for a balance between building and landscape. This balance can be achieved in numerous ways, but the conclusions to be reached remain the same, the need for an overall complexity and the desire to have neither the buildings nor landscapes dominate. The ideal situation would evolve into the creation of not solely a built environment nor just a landscape, but a third, new form—a combination of both without one being dominant.
After acceptance of the design development abstract of the total complex, the next move was into the housing unit itself. Since the complex's initial intention was to house children, I started with the most important, and most personal spaces, the individual bedroom. Based on conversations with Ms. Johnson, two students were programmed to share a room and two rooms would share a bath. Involved in the development of the individual space came for the need to incorporate territories—both private and shared.

![Diagram]

Each student requires a 'personal' space, a place they can call their own. These personal spaces should open to a shared space that also serves as circulation from the room and access to the bath.

Illustrated below is a brief evolution of the 'living units'. From the parti above the ideas of territories are incorporated in a programmatic sense and a 'ideal' arrangement is derived.
Summary of Conclusions from Bedroom Study

RECTANGULAR ROOMS

Rectangular rooms do not seem to maximize use of window areas.

They lack a individual feel and are too institutional.

SQUARE ROOMS

The square rooms utilize more window area.

By widening the room, creation of 'areas' emerge thus enhancing the individuality of the residents.

Fairness and uniformity are available as the room can be more fairly divided.

MODIFIED SQUARE PLAN

The creation of individual sleeping spaces via the manipulation of the walls.

Individuality is also reinforced by staggered entries as well as breaking the monotony of the long, straight, 'shotgun' hallways.

Use of floor to ceiling glass to enhance the quality of the space.

Placement of the window above one of the students desks, within a personal space, creates a sense of hierarchy. Although it creates an 'unbalanced feel', the sense of incentive that accompanies it is a positive force. This incentive, something better to work towards, can be utilized not only within the personal areas, but also on a large scale in the placement of the clusters, or groups of rooms. This idea should not be used against the students, or to turn one student against the other, but as a positive incentive for behavioral reinforcement or seniority.
Comments

Ambiguous - who owns it?
No individuality
Study area weak
High traffic area

Larger shared area
Still dorm like in orientation
Closets separate shared and individual areas
Conflict area

One student monopolizing windows what happens when plan are mirrored?
Possible conflict
Starts to define personal area.

Conclusions

*DORM LIKE
*LACK OF INDIVIDUALITY
*TIGHT QUARTERS
*RECTANGULAR FORM MAY NOT BE APPROPRIATE.

*SHAPE MORE CONDUSIVE TO INDIVIDUALITY.
*CLOSETS START TO DEFINE AREAS.
*MAXIMIZES VIEWS OUT.

*DEFINITATION OF SPACES IMPROVING.
*INDIVIDUALITY IMPROVING.
*SEPERATION OF SLEEPING AREAS REINFORCES SENSE OF PERSONAL SPACE.
Conclusions

*WINDOW MADE SMALLER TO MINIMIZE JEALOUSY.

*CLOSET ORIENTATION SHIFTED TO CREATE STUDENT AREAS.

*CIRCULAR CIRCULATION NO DEAD SPACES

*CUTTING THE NOTCH HELPS DEFINE STUDENTS INDIVIDUALITY.

:SEPERATION OF WINDOW PLANES CREATES A RYTHEM WITHOUT DISRUPTING UNITY.

Comments

Incorporation of window here?

Individual territory

Shared territory

Is it possible to open this up?

Floor to ceiling windows respond to need for node.

Different orientation gives more circulation space.

Responding to need for rear access in plan.

Defination of student space better
DEVELOPMENT OF BEDROOM/BATHROOM UNITS

The bedroom/bathroom orientation was developed in much the same manner as the bedrooms. Although the ideas of territories still remain important, the development of this facet of the project is more pragmatic.

Since it was programmed that two bedrooms share a bath, it was necessary that the bath be located between the two units. By locating the bath between the two units, a chance to stagger the entrances to the bedrooms emerged. This staggering enabled each entrance to be removed from the main circulation path, thus creating a truly individual sense of entry. On pages 32-33 is a summery of the evolution of the bedroom/bath or 'living units'.
Summary of Conclusions from Bedroom/Bathroom Study

RECTANGULAR ROOMS

In most cases, the bath is added and not a part of the unit-appears out of place.

Examples I and II are starting to try and incorporate the bath into the scheme. It is more successful in example III, but in that case the 'burden' of the bathroom is not shared by both rooms equally.

SQUARE AND MODIFIED SQUARE ROOMS

From the rectangular rooms it was learned that the bath must be equally distributed to both rooms.

In example IV the idea of 'core' emerged, a total separation of bedroom and bath.

Through manipulation of the bedroom and bathroom units separate and unique entrances were produced. These entrances are important in the fact that they reinforce the sense of place by the creation of entry nodes. The importance of individualized entrances can be recognized, in the typical suburb, by the multitude of different colored front doors of the common 'tract' house.
Comments

Too much exterior articulation

Little opportunity for windows in bath

Door orientation in bath is not conducive to fixture placement

Conclusions

*USE OF RECTANGULAR FORMS MAY NOT BE APPROPRIATE

*DOES NOT MAXIMIZE WINDOW AREA

*ARTICULATION OF EXTERIOR WALL WILL MAKE BUILDING DIFFICULT AND EXPENSIVE.

*THE BATHROOM TAKES MORE SPACE OUT OF ONE ROOM THAN FROM THE OTHER.

Bathroom still seems to be forced

Poor sleeping areas

Conflict areas

Intrusion of bath disrupts unity

*SIMPLIFICATION OF PLAN

*ARTICULATION ON COMMON AREA WEAK.

*INCORPORATION OF BATH IN THE EXTERIOR ELEVATION IS STRONGER

*THERE IS STILL AN UNBALANCED FEEL TO BEDROOMS
Conclusions

Comments

The walls are responding to what is occurring inside.

One-sided attempt to articulate entry

Major conflict area

*SQUARE LESS CONDUCIVE TO INCERTION OF BATH WITHIN PLAN

*TRIED TO DO TOO MUCH–SIMPLIFY!

*ALL ENTRANCES MUST BE ARTICULATED

*EXTERIOR MANIPULATION IS STRONGER–REFLECTS INTERIOR

*BATH LOCATION IS NOW EQUAL TO BOTH ROOMS

*ROOM ENABLE STUDENTS TO INDIVIDUALIZE

*EACH ENTRANCE IS NOW PULLED BACK FROM MAIN CIRCULATION.

Common areas created

Drop this area back even with other to standardize

Bath location more practical to both rooms

Storage closets

Omit dead space
DEVELOPMENT OF CLUSTERS OF BEDROOMS

The next phase is the development of the clusters of rooms. Clusters entail six rooms of two students and three shared baths. The creation of these 'clusters' are, in reality, probably the most important aspect of the development of the facility. As we uncovered in the Building Type Analysis earlier, the creation of private (individual) and public (shared) spaces, if done improperly, detract from both areas. The arrangement of the rooms, if done correctly, can reinforce both sense of individual place while also encouraging interaction between rooms. The object is to produce common spaces that are separate entities, but are in close proximity to the rooms. Below is an example of the parti that illustrates this.
Summary of Conclusions from Cluster Study

Notice that the common areas are located between the entrances of the rooms. This means that the private entry areas do not intrude on the common areas. The common area is placed between the entrances for another reason. The placement reinforces the sense of community by encouraging interaction between rooms other than those sharing a 'living unit'. The placement also enables expression of the entrance in elevation by pulling that section of the wall in. Notice that each shared entrance area is separate node.

The arrangement of the group of rooms—the clusters—is a major force in how the entire facility is developed. By adoption of the 'L' plan, the turning of the corridor evolved. This plan also lead to the development of the idea of a village atmosphere. By implementation of this idea, each cluster took its own identity in plan as well as elevation. The importance of this can, once again, be traced back to the average neighborhood. In sub-divisions, similar to the type built by National Homes in the 1950's, where all the homes are the same, it is obvious that a top priority among the residents was making their homes unique. This sense of individuality that was created is important in the development of the children involved. A sense of place created by the this 'uniqueness' reinforces the child's sense of belonging, and provides a solid base in which to grow and evolve as an individual. On the next page is a brief summary of the development of the 'clusters'.
Conclusions

*Each cluster creates a core of 12 students.

*Linear orientation orients interior towards lake.

*Linear orientation mandates that all clusters interact with a common area.

*Straight 'shotgun' corridor does nothing to reinforce individuality.

*Each entrance is now an individual node.

*Slight shifting of the 'living units' creates more definition of the entrances.

*Shift of approx. 30 degrees to better facilitate access to lake.

*Might pose some construction problems.

*Shifting of room to this extremum is uneconomical, and accomplishes little.
Conclusions

* Nodes now create areas bounded on one side by rooms and the other side by views to the exterior.
* Major shifting of units creates larger entrance nodes.
* Joint where the units meet is impossible.

* Exterior spaces created are dynamic.
* Individualism is well defined.
* Concept of creating shared spaces within the circulation emerging.

* Common area is accentuated by exterior wall manipulation.
* Each two rooms share one common space.
* Common area incorporated the use of window seats to enhance interaction.
* Turning the corner enables the village atmosphere to develop.
* Turning the corner also serves to better use the site.

* Elimination of 'shot-gun' corridors
* Placing one of the units perpendicular to the other two creates a common area by default.
The major focus of Spring Quarter 1985 was the development of a test project. This project was to exemplify the ideas and concepts that were brought out during the previous two quarters. Its intent is not to offer a sole answer to the questions raised, but to address the issues in an architectural fashion. As in any design, the conclusions arrived at are purely subjective, but the issues and concepts on which it is based are valid and real.

As traced through the APPROACH section of the book, the first avenue chosen for development was the student's bedroom. Studies, via drawings and models, developed the 'perfect' arrangement. Each student's individuality is reinforced through the creation of territories—both private and shared. Each student has a zone that belongs only to that student, but is adjacent to the shared circulation areas.

The next phase was development of the groups, or clusters, of rooms. This development played a large role in the development of the over-all form of the building. To facilitate a more conducive 'village' atmosphere, the need to break the monotony of the long, straight, 'shotgun' corridors was demanded. To illustrate the difference in total form quality, a model study was done using both the 'shotgun' concept and the 'village' concept.
'Shotgun' Scheme

'Village' Scheme
Complex unity should be expressed within the structures. This posed a problem in the fact that varied programmed activities had to be incorporated within the same form. These activities consisted of the bedroom units, the groups of rooms (clusters) and the shared common areas within, as well as the total complex common areas such as the dining hall, quiet and loud recreation. The clusters demanded residential overtones and the total complex areas necessitated a need for a different, yet compatible forms. To create the harmony needed, the clusters were given hipped roofs that established nodes at each shared area. The total complex area, to create a hierarchy, was given gabled roofs and the interior volumes were enlarged to help reinforce the difference between the private, shared, and common areas. Exposing of the trusses responds to the the articulation of the exterior wall as well as expressing the shared areas within.
'View from lake'
View through Quiet Recreation
OVER-ALL MASS MODEL

CLOSE-UP OF MASSING FOR DING AREA, QUIET RECREATION, AND LOUD RECREATION
ARTICULATION OF SOUTH FACADE FACING THE LAKE

CLOSE-UP OF ARTICULATION OF DINING AREA, LOUD AND QUIET RECREATION
VIEW OF MAIN ENTRANCE

VIEW OF SOUTH FACADE
AS SEEN FROM THE LAKE
LAKE VIEW COURTYARD
OPENING FROM QUIET
RECREATION

VIEW LOOKING WEST OF
LOUD RECREATION AND
ONE OF THE CLUSTERS
VIEW TO DINING AREA AND STEPS LEADING TO QUIET RECREATION

OVER-ALL COMPLEX VIEW
VIEW TO DINING AREA AND STEPS TO QUIET RECREATION
BRICK FIREPLACE

LIGHT WELL

10 3/4'' X 22'' WOOD LAMINATED BEAM

VIEW TO LAKE AS SEEN FROM MAIN ENTRANCE

REDWOOD RAILING
PROGRAMMING SUMMARY

Programming of the facility expanded from solely a housing project to a full academy with every aspect of a true campus. This programming entailed determining how many residents the complex was going to serve and creating a facility that would accommodate them as well as have the ability to expand.

The majority of the programming was completed for a class taught by Stan Mendelsohn prior to the completion of Autumn quarter 1984.
# GRAPHICS USED IN PROGRAMMING

<table>
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<tr>
<th>Residential</th>
<th>Education</th>
<th>Social</th>
<th>Service</th>
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<td>Service</td>
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<td>Hiking</td>
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<td>Swimming</td>
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<tr>
<td>Bath Area</td>
<td>Sitting</td>
<td>Swimming</td>
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<tr>
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<td>Adult/Student Meetings/Institution Area</td>
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<td>Facility Area</td>
<td>Sitting</td>
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</tr>
<tr>
<td>Projection Booth</td>
<td>Sitting</td>
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<td>Multi-purpose Area</td>
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Note: The table above lists various symbols used in programming to represent different uses and facilities. Each symbol corresponds to a specific purpose, such as residential living, education, social spaces, and service areas.
<table>
<thead>
<tr>
<th>USERS</th>
<th>PROGRAM ELEMENTS</th>
<th>CHARACTERISTICS</th>
<th>ACTIVITIES</th>
<th>CHARACTERISTICS</th>
<th>SETTINGS</th>
<th>SPATIAL REQUIREMENTS</th>
<th>SPECIAL FEATURES</th>
<th>ILLUSTRATIONS</th>
<th>DESIGN</th>
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<td>RESIDENTIAL, COMMUNITY</td>
<td>NEED FOR</td>
<td>SENSE OF</td>
<td>CLEANLINESS</td>
<td>ROOM FOR</td>
<td>LIFE ADJUSTMENT</td>
<td>OPEN COURT</td>
<td>LIGHT, COLOUR, FLOW</td>
<td>DESIGN</td>
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<td>THEORETICAL</td>
<td>VOCATIONAL</td>
<td>LIFE SETTING</td>
<td>FAMILY</td>
<td>SEPARATE BUNKS DORMS GROUP</td>
<td>SEPARATE, ATTACHED</td>
<td>SEPARATE, GROUP</td>
<td>DESIGN</td>
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<tr>
<td>RESIDENTS, MEMBERS OF FAMILIES</td>
<td>RECREATION</td>
<td>ORGANIZED</td>
<td>UNEVALED</td>
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<td>UNEVALED</td>
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<td>SOCIAL</td>
<td>GROUP, ORGANIZED</td>
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## USER PROGRAM

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<th>CHARACTERISTICS OF USERS</th>
<th>CHARACTERISTICS OF ACTIVITIES</th>
<th>CHARACTERISTICS OF SETTING</th>
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<th>SPECIAL FEATURES</th>
<th>APPLICATIONS DESIGN</th>
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<td>HOUSING INTEGRATION INTO STUDENT HOMES</td>
<td>MONITORING OF RESIDENTS</td>
<td>COLLEGE ENROLLMENT</td>
<td>INTEGRATING INTO STUDENT HOMES</td>
<td>AREA TO BE STUDENT-MEMBER, STUDENTS TO BE STUDENTS OF LIFE</td>
<td>STUDY AREA</td>
<td>ATTACHED TO STUDENT HOMES FOR STUDENTS REMAINING IN AREA</td>
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<tr>
<td>ADULTS RESIDENTS OF SURROUNDING COMMUNITY</td>
<td>RECREATION</td>
<td>OUTDOOR ACTIVITIES</td>
<td>FAMILY HOMES</td>
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<td>VACATION</td>
<td>INDIVIDUAL SENSE OF PERSONALITY</td>
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**Notes:**
- The diagram illustrates various aspects of user programs, including housing, recreation, schooling, social recreation, and community affiliation.
- Each category is associated with specific characteristics and spatial requirements.
- Special features are indicated for applications design.
<table>
<thead>
<tr>
<th>BUILDING TYPE</th>
<th>PROGRAM ELEMENTS</th>
<th>CHARACTERISTICS</th>
<th>draught on the image</th>
<th>CHARACTERISTIC SETTING</th>
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<td>QUIET TO LOW</td>
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### BUILDING TYPE PROGRAM

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<tr>
<th>BUILDING TYPE</th>
<th>PROGRAM ELEMENTS</th>
<th>CHARACTERISTICS</th>
<th>CHARACTERISTICS</th>
<th>CHARACTERISTICS</th>
<th>SPECIAL REQUIREMENTS</th>
<th>SPECIAL FEATURES</th>
<th>IMPLICATIONS &amp; DESIGN</th>
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<tbody>
<tr>
<td>RESIDENTIAL</td>
<td>SLEEPING AREA</td>
<td>1 ADULT OR COUPLE</td>
<td>PROXIMITY TO</td>
<td>COUPLE/HUSBAND</td>
<td>PRIVACY OF STUDENT TO</td>
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<td>SIZE / FOOD</td>
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<td>STUDENT</td>
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<td>TIME</td>
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<td>SLEEPING</td>
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<td>GROUP</td>
<td>SITUATION</td>
<td>TIME</td>
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Note: The diagram includes various symbols and icons to represent different elements and characteristics.
# BUILDING TYPE PROGRAM

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<thead>
<tr>
<th>BUILDING TYPE</th>
<th>PROGRAM ELEMENTS</th>
<th>CHARACTERISTICS OF SPACES</th>
<th>CHARACTERISTICS OF ACTIVITIES</th>
<th>CHARACTERISTICS OF SETTING</th>
<th>SPATIAL REQUIREMENTS</th>
<th>SPECIAL FEATURES</th>
<th>IMPLICATIONS FOR DESIGN</th>
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<tbody>
<tr>
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<td>&quot;QUIET INDIVIDUAL TIME ORIENTED&quot;</td>
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**Spatial Requirements:**
- 1-2 AREAS PER LEVEL
- 120-160 SQ FT EACH
- SAME USED BY ALL LEVELS
- 500 SQ FT EACH
- SAME AREA USED ON ALL LEVELS
- 500 SQ FT
- 1,000 SQ FT

**Special Features:**
- OPEN CONCEPT MULTI-AGED CLASS AREA
- MOVEABLE TABLES AND CHAIRS
- LARGE AREA CLEAN/LEAN-UP AREA
- TEMPERATURE CONTROL
- RAISED FLOOR

**Implications for Design:**
- NEEDED FOR SECURITY/ANATOMY
- INTENDED FOR SHARED SPACE
- PRIVACY TO RESTROOM
- PRIVACY TO CENTRAL LOCATIONS
- PRIVACY TO RESTROOM
- PRIVACY TO RESTROOM
- PRIVACY TO RESTROOM
- PRIVACY TO RESTROOM
# Building Type Program

<table>
<thead>
<tr>
<th>Building Type</th>
<th>Program Elements</th>
<th>Characteristics of Spaces/Areas</th>
<th>Characteristics of Activities</th>
<th>Characteristics of Setting</th>
<th>Special Requirements</th>
<th>Special Features</th>
<th>Implications for Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recreation</td>
<td>Multi-purpose field (e.g., football, soccer, general use)</td>
<td>Outside, expansive</td>
<td>Group-oriented, controlled physical activities</td>
<td>Proximity to trail, field, recreation areas</td>
<td>Field (e.g., 5 acres)</td>
<td>Forecourt facilities</td>
<td>Lighting, visibility, access, safety</td>
</tr>
<tr>
<td></td>
<td>Indoor, organized</td>
<td>Flat, dry; observed</td>
<td>Protected, quiet</td>
<td>Proximity to school, field, recreation areas</td>
<td>Field (e.g., 10 acres)</td>
<td>Forecourt facilities</td>
<td>Lighting, visibility, access, safety</td>
</tr>
<tr>
<td></td>
<td>Outdoor, unorganized</td>
<td>Flat</td>
<td>Group-oriented, controlled physical activities</td>
<td>Proximity to trail, field, recreation areas</td>
<td>Field (e.g., 15 acres)</td>
<td>Forecourt facilities</td>
<td>Lighting, visibility, access, safety</td>
</tr>
<tr>
<td></td>
<td>Baseline</td>
<td>Outside, observed</td>
<td>Group-oriented, controlled physical activities</td>
<td>Proximity to school, field, recreation areas</td>
<td>Field (e.g., 20 acres)</td>
<td>Forecourt facilities</td>
<td>Lighting, visibility, access, safety</td>
</tr>
<tr>
<td></td>
<td>Track &amp; Field, Cross Country</td>
<td>Outside, observed</td>
<td>Individual, unorganized, controlled</td>
<td>Proximity to track, field, recreation areas</td>
<td>Field (e.g., 25 acres)</td>
<td>Forecourt facilities</td>
<td>Lighting, visibility, access, safety</td>
</tr>
<tr>
<td></td>
<td>Individual</td>
<td>Inside, unobserved</td>
<td>Individual, unorganized, controlled</td>
<td>Proximity to track, field, recreation areas</td>
<td>Field (e.g., 30 acres)</td>
<td>Forecourt facilities</td>
<td>Lighting, visibility, access, safety</td>
</tr>
<tr>
<td></td>
<td>Utilization of site characteristics (e.g., visibility)</td>
<td>Outside, unobserved</td>
<td>Individual, unorganized, controlled</td>
<td>Proximity to track, field, recreation areas</td>
<td>Field (e.g., 35 acres)</td>
<td>Forecourt facilities</td>
<td>Lighting, visibility, access, safety</td>
</tr>
<tr>
<td></td>
<td>Multi-purpose</td>
<td>Inside, central</td>
<td>Group-oriented, controlled</td>
<td>Proximity to trail, field, recreation areas</td>
<td>Field (e.g., 40 acres)</td>
<td>Forecourt facilities</td>
<td>Lighting, visibility, access, safety</td>
</tr>
<tr>
<td></td>
<td>Park</td>
<td>Private, quiet</td>
<td>Individual, unorganized</td>
<td>Proximity to school, field, recreation areas</td>
<td>Field (e.g., 45 acres)</td>
<td>Forecourt facilities</td>
<td>Lighting, visibility, access, safety</td>
</tr>
<tr>
<td></td>
<td>Indoor, controlled</td>
<td>Central location</td>
<td>Individual, unorganized</td>
<td>Proximity to trail, field, recreation areas</td>
<td>Field (e.g., 50 acres)</td>
<td>Forecourt facilities</td>
<td>Lighting, visibility, access, safety</td>
</tr>
<tr>
<td></td>
<td>Swimming Area</td>
<td>Outside, organized</td>
<td>Group-oriented, controlled</td>
<td>Proximity to trail, field, recreation areas</td>
<td>Field (e.g., 55 acres)</td>
<td>Forecourt facilities</td>
<td>Lighting, visibility, access, safety</td>
</tr>
<tr>
<td></td>
<td>Indoor, unorganized</td>
<td>Central location</td>
<td>Individual, unorganized</td>
<td>Proximity to trail, field, recreation areas</td>
<td>Field (e.g., 60 acres)</td>
<td>Forecourt facilities</td>
<td>Lighting, visibility, access, safety</td>
</tr>
<tr>
<td></td>
<td>Private, quiet</td>
<td>Central location</td>
<td>Individual, unorganized</td>
<td>Proximity to trail, field, recreation areas</td>
<td>Field (e.g., 65 acres)</td>
<td>Forecourt facilities</td>
<td>Lighting, visibility, access, safety</td>
</tr>
<tr>
<td></td>
<td>Central location</td>
<td>Central location</td>
<td>Individual, unorganized</td>
<td>Proximity to trail, field, recreation areas</td>
<td>Field (e.g., 70 acres)</td>
<td>Forecourt facilities</td>
<td>Lighting, visibility, access, safety</td>
</tr>
</tbody>
</table>

Note: The table above is a simplified representation of the complex diagram. Each cell contains specific characteristics and implications related to the design considerations of different building types and program elements.
### Building Type Program

<table>
<thead>
<tr>
<th>Building Type</th>
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<th>Special Features</th>
<th>Implications for Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Area, i.e.</td>
<td>Seating</td>
<td>Large, easy-access, inclined</td>
<td>Quiet, stage directed</td>
<td>Ability to locate/restrict</td>
<td>APPEAL 6X8 - 6X10 720 seats</td>
<td>Lettable, various fire parts</td>
<td>Accessibility between floors, type of performance view to stage</td>
</tr>
<tr>
<td></td>
<td>Lighting</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Privacy to stage, total area exits</td>
<td>3 min. @ 6000 ft.</td>
<td>Automatic, fire rated, smoke control</td>
<td>Accessibility, design, controlled</td>
</tr>
<tr>
<td>Changing Rooms</td>
<td>Private Area</td>
<td>Small, soundproof, independent</td>
<td>Soundproof, private</td>
<td>Privacy to stage, ability to rehearse area (transit)</td>
<td>20 sq. ft., 24 in.</td>
<td>Private, separate entry, soundproof</td>
<td>Accessibility, design, controlled</td>
</tr>
<tr>
<td></td>
<td>Projection Area</td>
<td>Flexible, private, no restriction</td>
<td>Flexible, private</td>
<td>Privacy to stage, ability to rehearse area (transit)</td>
<td>1200 sq. ft</td>
<td>Private, separate entry, soundproof</td>
<td>Accessibility, design, controlled</td>
</tr>
<tr>
<td></td>
<td>Acoustics</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Privacy to stage, ability to rehearse area (transit)</td>
<td>1200 sq. ft</td>
<td>Private, separate entry, soundproof</td>
<td>Accessibility, design, controlled</td>
</tr>
<tr>
<td>Rehearsal/Utility Stage</td>
<td>Flexible, private, no restriction</td>
<td>Flexible, private</td>
<td>Flexible, private</td>
<td>Privacy to stage, ability to rehearse area (transit)</td>
<td>1200 sq. ft</td>
<td>Private, separate entry, soundproof</td>
<td>Accessibility, design, controlled</td>
</tr>
<tr>
<td>Stage Area</td>
<td>Rest Rooms/Lobby</td>
<td>Above average, unobstructed view</td>
<td>Sound, stage directed</td>
<td>Privacy to stage, ability to rehearse area (transit)</td>
<td>1200 sq. ft</td>
<td>Private, separate entry, soundproof</td>
<td>Accessibility, design, controlled</td>
</tr>
<tr>
<td></td>
<td>Lighting</td>
<td>Soft, bright, high traffic</td>
<td>Sound, stage directed</td>
<td>Privacy to stage, ability to rehearse area (transit)</td>
<td>1200 sq. ft</td>
<td>Private, separate entry, soundproof</td>
<td>Accessibility, design, controlled</td>
</tr>
</tbody>
</table>

+ Additional notes: 
- Accessibility: wheelchair access
- Smoke control: fire-rated materials
- Lighting: flexible, adjustable
- Soundproofing: double-glazed windows
- Accessibility: ramps, elevators
- Smoke control: automatic shutters
- Lighting: dimmable, adjustable
- Soundproofing: sound-absorbing panels
- Accessibility: handrails, braille signage
- Smoke control: mechanical ventilation
- Lighting: emergency lights
- Soundproofing: sound-attenuating curtains
- Accessibility: accessible parking
- Smoke control: smoke exhausts
- Lighting: emergency exit lights
- Soundproofing: sound-reducing windows
- Accessibility: wheelchair lifts
- Smoke control: smoke detectors
- Lighting: energy-efficient bulbs
- Soundproofing: sound-insulating walls
- Accessibility: accessible restrooms
- Smoke control: automatic doors
- Lighting: sensor lights
- Soundproofing: sound-dampening structures
- Accessibility: accessible entrances
- Smoke control: gas detectors
- Lighting: motion sensors
- Soundproofing: sound-isolating floors
- Accessibility: accessible exits
- Smoke control: fire alarms
- Lighting: emergency lights
- Soundproofing: sound-dampening membranes
- Accessibility: accessible elevators
- Smoke control: mechanical ventilation systems
- Lighting: programmable lighting systems
- Soundproofing: sound-dampening ceilings
- Accessibility: accessible ramps
- Smoke control: smoke exhaust systems
- Lighting: automated lighting systems
- Soundproofing: sound-dampening panels
- Accessibility: accessible doorways
- Smoke control: smoke detectors
- Lighting: programmable lighting panels
- Soundproofing: sound-dampening panels
### SQUARE FOOTAGE

**RESIDENTS - CHILDREN**
- Sleeping - 200 sq. ft. per 2 students
  - 60 students max.
  - Total: 6000 sq. ft.
- Bath Area - 150 sq. ft. per 2 students
  - 60 students max.
  - Total: 5100 sq. ft.
- Dining/Kitchen Area
  - 60 students max.
  - Total: 2500 sq. ft.
- Common Area - 500 sq. ft. per 8 students
  - 60 students max.
  - Total: 3725 sq. ft.
- Study Area - 100 sq. ft. per student
  - 60 students max.
  - Total: 6000 sq. ft.

**TOTAL** 23325 sq. ft.

**RESIDENTS - ADULTS**
- Sleeping Area - 600 sq. ft. per adult
  - 20 adults max.
  - Total: 12000 sq. ft.
- Bath Area - 100 sq. ft. per adult
  - 20 adults max.
  - Total: 2000 sq. ft.
- Dining/Kitchen Area
  - Incorporated into student area
- Common Area
  - Incorporated into student area
- Faculty/Student Interaction Area
  - 400 sq. ft. per 8 students
  - Total: 3000 sq. ft.

**TOTAL** 17000 sq. ft.

**SOCIAL**
- Seating - 250 seats
  - Total: 2000 sq. ft.
- Dressing Rooms
  - 3 * 680 sq. ft.
  - Total: 2140 sq. ft.
- Projection
  - Total: 200 sq. ft.
- Rehearsal
  - Total: 800 sq. ft.
- Stage
  - Total: 1200 sq. ft.
- Lobby
  - Total: 800 sq. ft.
- Restrooms
  - Total: 500 sq. ft.
- Other
  - Total: 700 sq. ft.

**TOTAL** 8340 sq. ft.
EDUCATION

+Classroom
  7.5 * 800 sq. ft.  6000 sq. ft.
+Science
+Music
  6 * 100 sq. ft.  600 sq. ft.
+Art
+Learning Laboratory
+Faculty Area
+Restrooms
  800 sq. ft.

TOTAL 9900 sq. ft.

RECREATION (Indoor)

+Court
+Service
+Other
  i.e. wrestling
  gymnastics
  etc...
+Locker/Shower Facilities

TOTAL 17000 sq. ft.

RECREATION (Outdoor)

+Soccer/Utility
+Track/Football
+Stands
+Baseball/Softball
+Pool/Lake

TOTAL 16.55 acres
INTRODUCTION TO SITE ANALYSIS SUMMARY

What follows is a brief summary of the site chosen for the test project's location. This is an actual area in Brown County, Indiana. It is located 2.5 miles West of Nashville, IN. off Duncan Road. It was chosen for pragmatic reasons, solely to have a base from which to work.

The actual site is not important, what is important is the realization that the naturalistic qualities provide by this area create the proper incentive an compensation that is required by the thesis. Any site, with some characteristics that make it desirable, will work; natural or urban the only requirement being that it does not create a negative presence or environment for the facility.

One conclusion reached by this excercise was that location of this facility in a depressed environment (natural or urban) would not be productive enough to stimulate the developing children. It would lack the proper incentive and compensation to attract the quality of teachers and administrators that is desirable for this type of project.
VIEW NORTH OF SITE AREA --

OFF MAIN ENTRANCE

VIEW SOUTH (FROM PROJECTED HOUSING) OFF MAIN ENTRANCE
DESIGN DEVELOPMENT PATTERNS

Development of a Generic Complex Plan emerged from trying to pragmatically place the programmed structures on the chosen site. Five alternatives were sketched as possible directions to approach this problem.

PATTERN I. The complex as one structure.

PATTERN II. Each structure separate.

PATTERN III. Separation of housing from the other structures.

PATTERN IV. Utilization of majority of the site in a linear fashion.

PATTERN V. Separation of functions public/private.

Pattern II was chosen to develop because of its feasibility for phase construction and ease of proper orientation and access for each building. Note that each pattern had positive qualities and a little of each was incorporated into the final form.
INTRODUCTION TO DESIGN
DEVELOPMENT ABSTRACT

As discussed in the APPROACH section of this book, development of the total complex became a consideration. This development, though it seems somewhat removed from the original thesis, actually proved to be an integral part of the process of approach. The concept that total environmental unity is necessary for harmony within the infrastructue of the housing and the interstructue of the complex provided insights into a parallel idea of the natural environmental relationships. Through this investigation the need for a third, uniting element emerged to bridge the gap between the landscape and the buildings. This element could come in the form of a natural feature-incorporated in the architecture (i.e. burning), or the architecture incorporated into the landscape (i.e. retaining walls), but the relationship the two have to each other creates the third feature—the unity.

In the following pages you will find a summary of the features each building type has and selected comments by both myself and my advisors. This study was done almost solely in model form and its progress is traced through pictures.
DEVELOPMENT OF FORMS I.

HOUSING
compact
separate entity
beginning to recognize idea of identity
ignoring entrance

COMMUNITY THEATER
generic form
idea of building as a dam
separate entrances confusing
two separate lakes

EDUCATION/RECREATION
one unit
unique structural system evolving
atrium area in education
recreation at peak of lake

COMMENTS
All building are separate, none respond to others or the site.
All entrances are ignore in every case.
Vegetation is sporadic and not a major consideration.
No need to attach education and recreation.
- tends to give project an unbalanced feel
- ignores the southern edge of the lake
No attempt to introduce natural armature.
Articulation of housing roof forms in proper direction.
Attempt to turn corner of lake.
Form of education (with north facing atrium) proper?
DEVELOPMENT OF FORMS II

HOUSING
functions starting to be articulated
exterior spaces being addressed

COMMUNITY THEATER
form starting to emulate interior functions
reversal of plan, flytower now acts as the dam
roof forms now sympathetic to overall scheme

EDUCATION
mild separation of recreation and education
rear of building bermed
- ground appears to flow over building when approached from the rear
- idea of land/building relationship evolving

RECREATION
attempt made to reach past building and incorporate site into form
rear of building bermed
- soil actually being brought over structure

COMMENTS

Idea of land/building inter-relationship evolving.
Creating idea that housing must be most dominate structure and all other buildings emerging from land.

Entrances still not addressed.
Lake armature developing, but still too separate and haphazard.
Idea of unifying element must be addressed.
DEVELOPMENT OF
FORMS  III

HOUSING
No Change

COMMUNITY THEATER
No Change

EDUCATION
No Change

RECREATION
structural system evolving
- incorporation of
  structural system
  into a unifying
  element of the
  project

Now recreation is an integral
part of complex
- major importance in
ranging peak of lake

Beam acts as arcade, focus of
project, ties into housing

ENTRY
first attempt to incorporate
some sense of entrance
separate theater entrance
outside marked entry
questionable
definition of entrance in only
vertical sense may not be
correct
- almost too flimsy to
  matter

ARMATURE ON LAKE
naturalistic interpretation
does not create a strong focus,
but does bring water building
idea into perspective
pavilion may be token, but idea
of focal point on naturalistic
environment could be developed
Recreational Structure

COMMENTS

Structure system of recreation complicated, but idea of duality is good.
Fact that the structure can also define exterior space is a concept that should be developed.
Need for incorporation of education.
Beam that ties housing and recreation must include education.
Naturalistic 'island' compliments natural site.
No real focal point of project. Community theater seems separated.
- could be used more efficiently by defining entry
No real end to project, needs to be terminated in some sense.
DEVELOPMENT OF FORMS

HOUSING
form responding to needs
responding to difference in
exterior spaces and covered
exterior spaces
apertures from inside to outside
developing

COMMUNITY THEATER
more sensitive dealing with
lower lake
cut out of bottom more honest
as to what actually happens
within
water incorporated under
theater—softens large mass

EDUCATION
roof form more conducive to
other forms
beam tied into building
—toss-up between
decoration and
necessity
glazed north atium wall
eliminated

TERMINATION OF PROJECT
amphitheater used as end of
beam as well as project
incorporation into education
beam disappears into water
Covered exterior space in housing too large.
Amphitheater opens project instead of ending it
Entrance is still ambiguous.
Beam is a good idea, but not integrated enough.

-Idea of building/landscape/aptitude that unites the two together evolving.

Question: Can buildings and landscape unite together or must there be a third attribute that acts as a catalyst to promote the unification?
Manipulation of shoreline helps to accentuate the common areas in the housing.
DEVELOPMENT OF FORMS V

HOUSING
introducing courtyards—more articulation of various spaces
linear orientation maximizes southern exposure and relates better to lake
roof manipulation stronger

ENTRY
wall used in berming rises to become entry void cut to provide access as well as views

EDUCATION
moved to this area because of need to respond to natural run-off
split in two with cross walk on second level, open on first earth bermed and covered circulation accentuated building itself turns corner

RECREATION
building and land blend—not an end but a beginning swimming is structure via piers on lake-temporary taming of the lake

THEATER
roof forms more conducive to project water flowing over building, tumbling onto yet another part of the building then to the lake separates entrance lobby (visually) from building helps to make the merger of building/landscape less severe theater is not only a part of the dam, it is the dam, as well as part of the lake—take one away and you must take other all away
Lake armature maybe too dominating. It may not be the right direction and thus maybe we should try the naturalistic approach.
The theater should be moved toward the entrance. By doing this, we can reinforce the entry, while creating a sense of rhythm around the lake.
The idea of water incorporated over/under the theater is strong.
Education serves to round the tip of the lake but at the sacrifice of continuity.
Atrium idea within might be too costly.
Sinking education 1/2 story and berming will create a much less offensive building.
Pay attention to direction of retaining walls.
Be aware that these walls can act as the link between the landscape and the built environment.
Simplification of recreation structure pays off in less obtrusive structure. If we sink the court 1/3 to 3/4 into the ground and berm, the building will appear to grow from the ground.
Scrap front entrance and northwest side, try to make less of a statement.
Swimming idea is strong, but too much. Try to simplify and make less dominate.