The Northwest Complex: planning a residential living-learning center at the University of Massachusetts.

G. Barton Ogden
University of Massachusetts Amherst

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THE NORTHWEST COMPLEX: PLANNING A RESIDENTIAL LIVING-LEARNING CENTER AT THE UNIVERSITY OF MASSACHUSETTS

A Paper Submitted

in Partial Fulfillment of the Requirements of

Practium in Guidance

SCHOOL OF EDUCATION
UNIVERSITY OF MASSACHUSETTS

G. BARTON OGDEN
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The present Master Plan for the University of Massachusetts calls for a Residential Hall complex of buildings suitable to house and feed approximately 5000 students to be located in the Northwest section of campus. The purpose of this paper is to give form and substance to this plan and to use educational reasons supported by research evidence to justify the planning of such a center.

This report will be in the form of a series of recommendations, each followed by the reasons and evidence that have led to the recommendation.

Historical prelude:

The University of Massachusetts' policy for building Residence Halls "dormitories" during the 1950's was to build as fast as possible in order to house as many students as possible. Little, if any, consideration was given to the design as it affected the students as students, to say nothing of the dorm's effect upon them as people! The result was plain-faced, unappealing, "egg-crate" style houses, more reminiscent of Federal prisons than the attractive, comfortable homes to which the students were accustomed. And then the University said "These are your homes away from home; enjoy them." The result among students was general discontent and too frequent cases of "inappropriate" behavior, although perhaps appropriate under the circumstances. The surroundings
and facilities lacked power to attract faculty members to visit let alone entice them to live in the buildings. It has been only in the mid-1960's that plans for attractive and satisfying surroundings have been brought to fruition. Although it is still too early to see substantial changes, there are indications that some desirable effects have been achieved.

With this as a preface this paper will explore improvements in planning another Residence Hall system.

Recommendation: that the Residence Halls be of the high-rise type.

The most compelling advantage of this type of building is that it allows a high concentration of students in a small land area, thus freeing ground space for other purposes. Even though located in a semi-rural area, land costs in Amherst are relatively high. In addition, the site area at the University of Massachusetts is fairly small in relation to the number of students to be housed. Space within present campus boundaries is limited and, for the most part, allocated for some specific purpose. To supplement the regular physical education and intramural sports programs, land must be available for informal sports recreation areas to be constructed adjacent to the Center. Because many of the academic and administrative functions and services will be available only at the center of the campus, it is impractical to locate Residence Halls beyond
easy walking distance. (14, p. 9)*

Recommendation: that this living area be of the Residential College type and that supporting facilities be constructed with this concept in mind.

The Residential College will be a community of scholars, both teachers and students. It will be, in the words of Kate Heyner Mueller, "...a place where those who come to learn are welcomed into the fellowship of those who are there to teach, a place where the formality of the classroom is forgotten and where the learner can speak freely with the master". (7, p. 173)

Perhaps this recommendation is somewhat premature in view of the fact that the Orchard Hill Residential College has been in operation a scant year and adequate time has not elapsed to allow a proper evaluation of this experiment. However, tentative results have been sufficiently favorable to support a decision to extend this concept into some of the Residence Halls in the Southwest campus area. Furthermore, interest in this area is reflected in a recent announcement in Higher Education in New England that the "University of Massachusetts will develop programs in student culture seeking ways to identify factors which influence student values and objectives and finding ways to make student's college experience more ef-

*Throughout this paper, this number refers to the position of the reference in the bibliography.
fective and enduring." (5, p. 1) It would seem that the primary reason for seeking to identify influences on student values would be an institutional desire to control these influences and therefore to change student attitudes in a certain direction. It would further seem safe to assume that greater tolerance for other people, a greater sense of social concern, and more creativeness as well as greater technical competence in a particular field, are legitimate goals that the University holds for students. Some conflict in goals is apparent because a large percentage of the students who come to the University of Massachusetts hold strong vocational training orientations. They are concerned mainly about themselves and what the end product, the degree, means to them in terms of economic and social advancement. Added to this source of potential resistance to these institutional goals are the findings of Philip Jacob. In 1957, under his directorship, sponsored by the Edward W. Hazen Foundation, Professor Philip Jacob published the results of a study entitled "Changing Values in College". The summary conclusion was that "this study has not discerned significant changes in student values which can be attributed directly either to the character of the curriculum or the basic courses in social sciences which students take as part of their general education." (6, p. 5) The data upon which this evidence is based was gathered using
rigorous empirical methods and therefore should be afforded a
significant measure of validity. If the curriculum fails
to produce significant change, what does? Colleges and
universities along with the University of Massachusetts,
are beginning to study their own cultures and subcultures in
an effort to answer this question. C. Robert Pace, Professor
of Higher Education at UCLA, in an intensive study of nine
colleges and universities, found that the direction of
emphasis differed significantly from college to college. For
direction of emphasis he used four dimensions: 1. intellectual,
humanistic, esthetic, 2. friendly, group welfare, 3. in¬
dependent, scientific, 4. practical, status-oriented. He
also measured the relative press of each of 3 subcultures
(administrative, academic, student) toward each of these
categories of emphasis. Here, too, he found variations
among colleges. Let us use college #1 as an example of the
type of analysis employed. "College #1 is dominately charac¬
terized by its high intellectual-humanistic-esthetic emphasis
and this is owing more to pressures from administrative sources
than to student or academic sources. Both administrative and
academic sources, however, appear to be pushing (more than
students) toward a scientific-independent emphasis and also
toward trying to develop a greater sense of group welfare in
the college community." (6, p. 77) The implications of this
study have definite relevance to the establishment of a living-
learning center at the University of Massachusetts. The analysis of college #5 in the above report indicates that the direction of emphasis is toward the intellectual, humanistic, and esthetic, and equally the independent, scientific; the burden for this direction lies on the academic side of the institution. According to this study, the faculty can influence the direction of emphasis. The next question is how is this achieved? Further conclusions from Jacob's study give some clues. He found that some institutions were significantly more potent in affecting student values than were the others. He found that in these colleges, everyone there was "conscious of the mission to which the institution stands dedicated", (6, p. 9) and that the students feel strongly impelled to live up to that mission even though it may bring them into conflict with long and dearly-held attitudes and values. He found this phenomenon to occur most frequently in smaller private colleges and occasionally within a school or division of a larger institution. Alumni, staff, and students alike shared a "community of values" (6, p. 10); and these persist long after graduation. Combining to form this espirit-de-corps were the "individual and personal magnetism of a sensitive teacher with strong value-commitments of his own" and/or "value-laden personal experiences of students imaginatively integrated with their intellectual development". (6, p. 11)
However, to attract and retain the college professor whose primary commitment is local and to the students and not primarily to the wider world of professionalism is difficult indeed. Professionalism implies a strong research orientation. This writer rejects the thought that this orientation should be entirely subliminated to the teaching function because the two complement each other. But research to the detriment of teaching leaves the student on the short end. As has been implied in the Jacob study and elsewhere, there is relatively little that is known about how attitudes and values do change. Certainly there is no lack of opportunity for the services of the researcher in the Residential College concept.

The increased numbers of students and the trend toward professionalism and expertise and consequent loss of contact with the students are making it more difficult for the professor to fulfill his role as an intellectual as an interpreter of the meanings of current social experience. At the same time, because of the methods and tools at his disposal that enable him to deal with large numbers of people, increasingly, the social scientist is, in a meaningful fashion, filling this role. Within this Residential Center, with its particular orientation, this writer would envision a sharing of responsibility by the intellectual and the social scientist for the functions of teaching, research, and interpretation of the latter.
In response to the results of research, what this writer is proposing is the gradual establishment of a Residential Center that will, because of the orientation and shared values of the faculty, and hopefully students and administration connected with it, come to be a community where living and learning are no longer separated as they now tend to be on many large and growing University campuses. With an attitude of experimentation and change, coupled with a physical arrangement of facilities designed to bring students and faculty into deeper and more natural dialogue, the concept of the Residential College appears to be an effective vehicle for educating people to be willing and able to change in response to changes in the future.

Recommendation: that this Center be available primarily for undergraduate students in their junior and senior years in residence.

As students move through the university experience, and as they grow toward increasing maturity away from adolescence, their educational, social, and personal needs undergo change. It would seem logical to provide differing living environments in response to these changing needs. Upper division students are more concerned with sharpening their competence in their subject area, expanding perspective and focusing upon an occupation, and learning how to behave in the acceptable ways
that will enable them to be effective in their occupation. Bowdoin College, in recognition of these considerations, has established a Senior Center. All Senior students live in this center, as do some faculty members. The program consists of interdisciplinary seminars, regular course work, and visiting lecturers and alumni. This program encourages Seniors to consider and deal with the opportunities and problems they share in their final undergraduate year. Although the situation at the University of Massachusetts is not identical, with students having a stronger vocational bias, the problems faced by upper division students, regardless of the college, are quite similar.

Traditionally, the Junior Class assumes leadership in campus activities, whether these be academically based or not. For Seniors, their last year is too often a lame duck kind of experience. In the Residential Center concept, the senior will find a continuing stimulation for thinking prior to his entry into the larger society. An additional role for the Senior during his last year will be training and initiating the Junior into the programs and perspectives of the College in preparation for a fruitful year.

Recommendation: that it be possible for students of a particular discipline to live together in a particular house.

At the University of Massachusetts the Northwest area is
directly adjacent to the Schools of Engineering, Physical Sciences, and Agriculture. Students in these areas must do much of their work with highly specialized equipment in laboratories. These students would thus tend to view this complex as a convenient bedroom. This thinking certainly is not to be condemned on an "a priori" basis. Students in these areas, because of the nature of the subject, must spend a good deal of the time studying. To them, time spent walking to a distant laboratory is time that could better be spent at studies. However, this writer does not anticipate that these students, to their detriment, will become wholly isolated from the kinds of activities associated with the living-learning center. Interdisciplinary work, social activities, plus the community of scholars concept of shared values will counterbalance trends toward academic isolation.

Recommendation: that the Center be co-educational in nature, but each building house only member of one sex.

A study of Robert M. Crane, Associate Dean of Men at the University of Illinois, speaks on this question. Of the 56 institutions surveyed, 32% indicated that co-educational housing arrangements were presently in use; 59.2% stated that they were planning to consider co-educational housing in the near future. In one of his concluding paragraphs, Mr. Crane notes that "...generally the co-educational residence plan can
be more natural in relation to the larger community life, can en-\live improvement in student behavior, and can increase the potential for wider experiences in various residence hall academic, cultural, social, and recreational programs." (2, p. 6)

The form this co-educational arrangement takes is two halls built so as to share a common lounge and dining facilities. At the University of Massachusetts over the past few years enrollment pressures have caused men and women to change residence halls so that they now live in halls adjacent to those of the opposite sex. Many of the changes mentioned by Mr. Crane have been very much in evidence at the University of Massachusetts. However, these results were accomplished without having men and women live in the same building. At the University of Massachusetts men and women share dining rooms and are beginning to feel equally at home in each others respective main lounge areas.

In Mr. Crane's report and conclusions there was no evidence presented that indicated that the results were directly due to the fact that students of both sexes were occupying the same residence hall. The feeling of this writer is that it is the integrated interaction that achieved these results, the evidence being the results achieved at the University of Massachusetts. Furthermore, it is the thought of this writer that men and women respectively, need to have complete privacy within their own homes.
A report presented to the North Atlantic Regional Conference of the National Association of College and University Halls by the University of Delaware Association of Women students found in a survey of 150 colleges and universities, among those with co-educational living facilities, that "all but one found either little difference or improvement in the students' academics and study habits." (13, p. 6) Certainly this type of evidence is close to the "hunch" variety and lacks both rigor and any tests of significant differences. Until further evidence is presented, this writer concludes that students will do as well by living in one gender residences.

Recommendation: that student living quarters be constructed so as to ensure privacy yet promote group interaction.

Students of today are different in many respects from those of an earlier era. In the words of Donald W. Gardner of Williams College he is "more able, and better prepared when he arrives, and has broader interests in off-campus issues and activities...but more important perhaps, is his greater interest in and time devoted to his academic work." (16, p. 5) Casual observation seems to indicate that the University of Massachusetts student is somewhat less interested in off-campus issues and less highly motivated to go on to further study than his Williams counterpart, although he is quite
interested in academic work although perhaps for somewhat different reasons. However, the goals that the faculty and administration of the University of Massachusetts hold for their students appear to parallel quite closely those that the students, faculty, and administration of Williams hold for themselves. That the University finds itself in a goal-conflict situation with its students is not inconsistent with its goal as an agent for social leadership.

In response to these changing conditions, Williams College has initiated changes in its campus environment. The administration wished to create a situation where, in the words of the Angevine Committee "education would take place everywhere and at all times..." and where the was "...constant and unhampered exchange of ideas between faculty and students...." (16, p. 8) To this end arrangements were made to change the fraternity system into a series of residential units. In each unit or house each student would have his own room and would share a living room with 3 to 5 others. Also provided would be a kitchenette, study room, seminar room or music room, guest suites and in some cases a dwelling place for a faculty family. To promote these objectives and to organize for cultural, social, and athletic activities in each house, it was decided that the optimum size group was between 60-90 men.

If the University of Massachusetts attempted to house 20,000
students in this fashion, the campus would extend in three miles in each direction, requiring at least a 45 minute walk to journey from one side to the other. However, with some thought and care, a high rise Residence can offer a similar living situation. The theme is de-centralization. Pierce Hall at the University of Chicago, a large urban University, is an excellent example. (10, pp. 116-120) Central in the architectural design are the four two-story houses that occupy the top eight of the ten story building. The focus of activities is a two-story lounge - the living room of each house. Because of its nearness to all student rooms, it serves to foster identification with the house as a group. Apparently physical propinquity is a significant factor in natural interaction. At a certain college there were smoking rooms constructed in the middle of a long corridor. Observation indicated that those who lived near this room were drawn into the intellectual and social lives of those who also lived nearby, but did not know those who lived at the corridor ends. The experience that this writer has had while living in Residence Halls parallels that mentioned above. The people at the other end of the corridor were virtual strangers. In Pierce Hall the lounge is used for relaxation, parties and entertaining, informal seminars and all-out bull sessions. Additional facilities within the house and building are nearly identical to those found at Williams even though they were probably
conceived independently and within quite different settings.

That faculty and student personnel staff should work closely with the Center is accepted as necessary for its success. Toward this end it is proposed that a dwelling appropriate for a faculty family be built on the top floor of each of the residence halls. If this arrangement is impracticable, the dwelling should be located in the general vicinity of the Center. In addition, on a lower floor of each Residence Hall, the same type of dwelling should be built to house the Residence Hall Co-ordinator (Head of Residence). In both cases, all care should be used in planning so as to make the dwelling suitable for residency. This means that it should be free from noise and distraction as much as possible and that it have a private entrance away from the centers of student traffic.

Recommendation: that the Residence Halls be circular in design, with each two floors constructed as to allow natural and easy movement between floors so as to form a house of approximately 70 students.

In Appendix #1 appears a floor plan of such an arrangement showing in some detail the facilities that will be included. As a nucleus of house activities the large lounge will be a place primarily for relaxation, entertainment, and conversation. With this in mind, this area is located in the center core of
the building to prevent noise from traveling to student living (and study) areas. In this main lounge will be a kitchenette, telephones, removable tables and chairs. The elevator opens directly opposite the lounge and not directly onto the room corridor thus further reducing noise to student quarters. The findings of a report of the Committee for New College in 1960 under the chairmanship of Stuart Stoke indicated that the majority of students studied in their rooms. (12) These findings underscore the need for quiet and privacy in student rooms.

It will be noted that the second floor plan includes many single rooms. This is done for many reasons. In gathering this information in support of a theory of personality, Abraham Maslow investigated the lives of many distinguished people in an attempt to discover what characteristics set them apart from others. In addition to others, he found that these "self-actualizing" people had a need for privacy. (4, p. 237) This need seems highly appropriate and important for college students and even more important when they are living in a center such as the one proposed. At this living-learning center many of the student's most basic values and attitudes are subject to strong and continual challenge. He needs a place that is completely his own, a place free from distractions, a place where he can contemplate and gather his thoughts together. For reasons of mental health he needs a place to
restore soul, psyche, and academic average - a place where he is in complete control and nothing is subject to compromise.

That there is a desire for single rooms has been witnessed by this writer while recently living in a Residence Hall at the University of Massachusetts. In this house there were about a dozen single rooms. These rooms were sought after to the extent that each room had a waiting list and each student on the list jealously guarded his place on that list. This did not imply that these students wanted to live in isolation from other students, because the majority of those who wanted singles were of the gregarious type.

A recent study of decision factors in planning residence halls sponsored by the University Facilities Research Center indicates that "planning must be flexible to permit adjustments to the needs of the group and the individuals that constitute it." (14, p. 31) In a recent study of administrative organization and staffing of residence halls, Robert M. Crane stresses that in planning for future residence halls "flexibility and change are primary concern." (2, p. 2) With these recommendations in mind, the student rooms in each building were so designed as to allow relatively easy change from single occupancy to double (by adding a door between single rooms) or to four man suites (by adding four doors and using a floor lounge between two singles). In addition, the four man suites may be converted into five singles simply by the addition of a
wall with a door in it. As the plan indicates, there are more single rooms on the second floor thus allowing some flexibility of room assignments within each house.

There is little evidence to show what size of immediate living group is most effective in terms of group identification and social and academic programming. The fraternity is probably the best known type of living group which is organized on college campuses to promote congenial living. Depending upon the size of the campus and other local conditions, membership in these groups rarely numbers more than 100 or less than 25. In the present case, an educated hunch led to the selection of 70 as being close to an ideal size.

As indicated on the plan, there is a stairway connecting the upper and lower elevator corridors in each house. Access to another house is by means of elevator only as the other stairways are for emergency fire use only. This was done to foster identification with the house by allowing easy and exclusive movement between the two floors. Dr. Robert Sommer of the University of Alberta uses the term territory to describe the effects of the physical environment upon group identification. "Territory is the space that the individuals of a group assume as their own, in which outsiders are considered guests or interlopers. Its boundaries are set by recognizable but often unpredictable physical element of plan
or space relation." (14, p. 33) It is the plan of this writer to have the between-floors stairway function to promote a feeling of "territory".

The UFRC study has constructed a table showing the sociological effects resulting from the placement of special facilities and whether the placement contributes, detracts, or is irrelevant to that effect. The dimensions are:
1. Identification with own group, 2. Group activity and participation, 3. Effectiveness of student government, 4. Academic atmosphere and study conditions, 5. Administration and supervision. In the order most desirable for a Residential College, the writer would rank the above effects 2, 4, 1, 3, 5. For the most effective promotion of goals #2 and #3, group activity and participation and identification with the group, the chart indicates the following facilities should all be placed within the individual houses. Study hall, reference library, browsing library, typing rooms, game room, television, vending machines, kitchenette, laundry, and clothes pressing should be available to the entire house. The results of the Stoke Report indicate that a study hall in the residence is unnecessary. The establishment of a reference library for seventy students would be unjustifiable in terms of cost. However, a library for an entire house of 350-450 would seem to be both justifiable and desirable. Game room, vending
machines, laundry, and clothes pressing equipment are in
direct opposition to each other as far as location is
concerned in relation to goals #3 and #4. Even though
the above could be located in the sound insulating central
core of the building, the noise and confusion of the game
room, vending machines, laundry, would be disturbing to an
undesirable extent. A combination typing, ironing, hair-
drying room would be desirable. The kitchenette would be
located in the main lounge to be used to prepare snacks and
to provide a facility for use when the house is entertaining.
The chart indicates that a browsing library, if located in
the house, contributes both to academic atmosphere and
group identification. Also located in each house should
be an office for the student leaders of each house. The
prestige of having available space serves as some incentive
to program planning; also this work involves using the type-
writer and storing papers and other items.

In this writer's experience, communications systems in
Residence Halls are quite inadequate in many respects. There
are not enough ingoing telephones and the traditional squawk
box intercom is noisy and bothersome to all residents. In
order to alleviate some of these conditions there should be
provision in each room for a personal telephone should the
occupant(s) be willing and able to pay for its use. In
addition, to replace the objectionable squawk box would be a
buzzer system wired to each room and controlled both from the main lounge of each house and also from the central control desk on the ground floor. This system ensures a good measure of flexibility. It would seem reasonable to anticipate that many of the students in the four man suites would subscribe to personal telephone service, thus alleviating congestion at the main reception area, especially in women’s houses.

Some high rise buildings have employed elevators on a skip-stop basis. This arrangement has been found to provide faster service with less confusion on each floor. With the two-story house plan, each of the two elevators would stop on one of the two floors but not on both.

The concentration of students in a high-rise building permit justification of many facilities not justifiable in smaller buildings. To be provided on the lower floors will be recreational rooms (co-educational) dry-cleaning and clothes pressing equipment, laundries, reference library and reading room. Also located on the lower floors will be the more mundane, yet necessary facilities such as sports equipment storage, trunk and luggage storage, mail center, linen storage, and vending machines. Of acute proportions in a high rise building is the parking problem. Automobiles occupy too much valuable space that is better put to other uses. Although the original cost may be high, in the long run housing cars on various levels underground appears to be the most desirable solution.
Also located on a lower floor will be a suite for visiting lecturers, distinguished alumni, and other guests of the college. This facility will greatly increase the power of the center to attract persons of note to participate in its program.

Recommendation: that located within or adjacent to the Residence Halls there be an educational and dining building to be the center for Residential College activities. Throughout, this facility will be designed to promote the natural interaction between students, faculty, and other staff members.

1. Dining Hall

Although for valid reasons of efficiency, food preparation will be accomplished in a central area, the dining areas will in some fashion be partitioned or divided so as to allow approximately 100 people to gather in each area. Hopefully, this arrangement will reduce noise to a point such that one need not shout to make himself heard by his neighbor. In an effort to move away from the concept of feeding and to move toward more pleasant, leisurely conversation-evoking dining, space planning should allow somewhat fewer than two students per seat per meal. As pointed out by Johathan King of EFL Inc., "The quality of light, table size and arrangements, and the acoustics of the dining areas, as well as the size of the space and the likelihood of encountering a familiar group of fellow students, can change feeding to dining." (15, p. 134)
2. "Classrooms"

The traditional classroom situation is outmoded. Replacing it are methods based on team teaching with its emphasis upon large group lecture, small group discussion, and independent study. In addition, language laboratories, the use of television, teaching machines and other forms of programmed instruction and the use of audio-visual aids, will gradually replace the old concept of teacher and 10-50 students. With these newer methods, "classrooms" will consist of rooms specially constructed for their specific purpose. With emphasis on group discussion, seminar rooms should be built for a maximum of 20 student capacity. Able to seat 600-800 persons, an auditorium-theater should be available to provide a platform for guest speakers and mass lectures. This facility would also be available for theater productions, films, concerts, and other events.

3. Informal gathering places.

In Appendix II is the floor plan for the proposed educational-activities building. Its configuration suggest a natural locating for three lounges on each floor, one at the end of each corridor. These lounges will serve at least two purposes. First, they will provide a place away from the residence hall for a quick review before class and also a place to study if a student has a free hour. Hints on How to Study, a booklet published by Phi Eta Sigma, a freshman honorary
scholastic society, suggests that students "use the between-class hours for study. Most students are more efficient in the morning and afternoon hours than in the after dinner hours." (9, p. 3) In addition, these lounges provide a convenient place for students and professors to continue discussion after the class "hour" has ended.

For a similar purpose, in the building should be at least two coffee and conversation shops. The main claim to fame of Fine Hall, the mathematics building at Princeton, is the mathematics commons room where tea is served each afternoon for graduate students and faculty. Each day, under relaxed conditions, these people come to share and compare ideas. "Surely similar facilities in which faculty and students could meet in academic but not formal classroom situations could serve student culture to advantage." (15, p. 135)

Two notes pertaining to the provision of all the above facilities should be emphasized and underscored at this point. First, is a statement by Robert M. Crane. "Colleges and Universities are not in a profit-making business, are not organized for the convenience of a system; but rather, such institutions operate as a service to human beings who live, work, and learn within their communities." (2, p. 3) Second, from the UFRC report comes the statement that "if the high rise residence hall fails to provide the intangible values essential to a satisfactory environment, a rebellious
attitude tends to develop which leads to vandalism and disorderly group behavior. "As evidenced in low-cost public housing, such reactions are magnified in high rise units." (1, p.32) This writer gives his whole-hearted support to the first statement. The second is a warning to architects and administrators to listen to the evidence and to be unwilling to compromise on costs for the short run. If the statement is true, the benefits simply in terms of reduced wear and tear costs, will certainly indicate that quality in building and forethought in planning will, over the relatively long life of the building, pay high dividends.
BIBLIOGRAPHY


APPENDIX #1

FLOOR PLAN: RESIDENTIAL HOUSE
FIRST FLOOR PLAN
SECOND FLOOR PLAN

- SINGLE ROOM
- FOUR MAN SUITE
- ELEVATORS
- LOUNGE
- TOILET AREA
- STAIRWAY
- TV LOUNGE
- COMBINATION ROOM(S)
- LOUNGE

TOILET AREA
APPENDIX #2

MASTER PLAN : RESIDENTIAL CENTER