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FACULTY OF ENVIRONMENTAL DESIGN

OF

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BY

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ON

SENIOR STAFF AND POST-GRADUATE STUDENTS

CLUB, A.B.U. ZARIA

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A B S T R A C T

TOPIC

NEW SENIOR STAFF CLUB, A. B. U. ZARIA

SITE:

The site is located at the Southern part of the academic area by the Kubanni lake on the Western part of the University Water treatment plant.

SIZE:

5 Hectares

DESIGN:

The New Senior Staff Club consists of:

1. An exclusive Clubhouse
2. An inclusive part mainly for social activities that allow non-members to participate.,
3. Indoor and outdoor sports
4. Water recreation
5. Children's playground and other ancilliary facilities.

DESIGN FOCUS:

Sports, Recreation and Leisure

OBJECTIVE:

To provide recreation through change and diversion to our over-worked members of staff and to improve their social contacts in so doing.

MEMBERSHIP:

All staff of the University of graduate status and post-graduate students.

FINANCE:

To be initially financed by the University and maintained through profits.

DEDICATION

This thesis is dedicated to Faruk
Sanusi
Bello
and Kabir.

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INTRODUCTION

One of the greatest problems of the present day society, and one that increases day by day is that of the use of leisure time. An institution the size of Ahmadu Bello University which is made up of communities of scholars, workers and students needs community buildings which will cater for the needs of the members. Very few community buildings are scattered over the Main Campus which are quite inadequate considering the present population and the rate at which it increases.

The senior staff and post-graduate students club will provide a "forum" where lecturers from different disciplines and other non-academic staff meet in a friendly and relaxing atmosphere. It will be a place for widening contacts. As relaxation and recreation are decidedly indispensable for the health and well being of all humans, this will provide the required recreation as well as an escape from the paper work which most of the members are involved in.

The club will ultimately function as a place for cross-fertilization of ideas between allied and even diverse disciplines through intellectual communication,

as is the case in any place where intellectuals are made to meet in a relaxing and conducive enough atmosphere to stimulate talks.

A community of scholars need facilitation of staff acquaintances which will not only be beneficial to the staff alone, but also to their students. It would increase inter-departmental or inter-faulty relationships both officially and unofficially.

The club will also serve as a forum for discussions between staff and their younger colleagues, the post-graduate students. This is because most post-graduate students are part-time workers holding senior posts in the University set-up. Such discussions will be quite helpful to these students and will most probably help in their orientation towards becoming full-time members of staff, and therefore a life in the academic community.

Other functions of the club will be serving of meals, coffee and other forms of refreshment. It will be a place for lecturers to go during a pause between classes to have some kind of snack or another.

DEMAND

The demand for the club has been necessitated by the present larger number of members of staff as well as that of post-graduate students. These numbers when projected to the future considering the various development projects being undertaken and those to be undertaken by the University, show a considerable increase in population which would not be in the least catered for by the existing staff club.

The existing senior staff club was designed for a maximum membership of three hundred (300). And it is also open to both senior members of staff and post-graduate students. It's location does not permit expansion, being bordered on all sides by other functionaries.

The lounge for the existing club is too small as its maximum comfortable seating capacity is only to accommodate twenty (20) people. In fact there is a general inadequacy of almost all the facilities and even lack of some others. This generates dissatisfaction among the members and also eligible non-members.

Samaru being only a village and the other recreation facilities in town being only sub-standard and there being no other place to retreat for recreation on the campus makes it necessary for the University to make plans for the leisure of its staff. And therefore this my proposal.

MEMBERSHIP

Membership is automatic for all senior members of staff of the University, and to make sure of that the University can be deducting small sums from their salaries every month (say ₦5.00). As for the post-graduate students those who have taken up jobs with the University should be treated the same way as other senior staff, but full-time students will be allowed on application and the payment of annual subscription fees.

USER GROUPS

The club is to be used by all members, their families, friends and guests. It is also open to University guests, special guests, examiners and official visitors.

Entertainment facilities are also provided which can be used by both members and non-members.

LEISURE AND RECREATION1.1 General

This thesis is concerned with the provision of recreational facilities and catering for the leisure of staff of the Ahmadu Bello University. It, therefore, becomes necessary to examine and review the evident and hidden relationships which exist between leisure and the different activities of daily life, and, above all clarify its real significance, its content, its multifarious aspects and the predominant and increasing role which it's called upon to play in the society.

With the introduction of the five-day working week in the country there came an increase in leisure time for all working groups. Some people are forced to travel out to far off places to find recreation and considering how dangerous it is to always travel on these our roads every week-end, some avenues of recreation will have to be found and exploited in the vicinity.

The change brought about by industry and automation in the developed countries does not only stop there. It has serious effects upon developing countries like ours.

The increase in leisure time provided by these has posed for the present-day serious economic and social problems which have not been resolved. In addition, the phase of living has speeded up with the industrial and machine age. Man's work in many cases has become a monotonous routine. There is little opportunity in expressing individuality. Native impulses are thwarted. The nervous tension is all prevailing. We are approaching an era in which the push button type of work is not uncommon, and so a person has few challenges to his ingenuity, few chances to satisfy his basic psychological needs and desires. People are being forced to look elsewhere than their work to satisfy these fundamental drives and impulses. Leisure time can be used to enrich life, to offset the routine of everyday living, to compensate for the onesidedness of our work. It is in this sense that recreation can make its greatest contribution to our society.

1.2 ASPECTS OF LEISURE

There are three fundamental aspects of leisure, namely:

- 1) leisure-time
- 2) leisure-activity
- 3) leisure-state

1. The concept of leisure-time may be interpreted as time free from wage and salary earning. In a narrower sense, however, it may also be referred to as the manner in which each individual occupies his free time - that is the time left for recreating after the time occupied by domestic and nursing duties, journey to work etc. Leisure-time must primarily be regarded as a means of resting and recovering and should be closely related to several functions of importance to the individual.

2. Leisure-activity - activities free and independent of those recognised as necessary and compulsory.

3. Leisure-state is the most abstract of the fundamental aspects of leisure and calls for a new intellectual and social attitude, a new manner of thinking, of living ... in short a new culture.

1.3 FUNCTIONS OF LEISURE

The principal functions of leisure are:

1. relaxation
2. diversion
- and 3. development

1. Relaxation:- to free man from fatigue; the leisure of repose, of silence, of doing things with no definite objective, no necessary aim.

2. Diversion: free from boredom, the leisure of escapism, fresh surroundings, of change and of seeking in which the imagination can have free rein.

3. Development: to free man from mechanical thinking and conformity in his daily actions; the leisure of physical and intellectual education, and of expansion of the personality.

These functions of leisure are interdependent, and coexist in varying degrees in every situation and every being.

The problem of leisure cannot be isolated from the concept of the environment in which men live. Leisure manifests itself permanently, overlaps into other activities and in certain conditions dominates them.

Recreation involves activity whether it is physical, mental or emotional, but has no single form. The range of activities people enjoy is limitless, many being determined by motivation.

The recreational time-process as described by Clawson is interesting and modifies a habitual way of looking at outdoor recreation. According to Clawson, the recreational incidence consists of five phases:-

1. planning
2. travel to the site of recreation
3. on site
4. travel back
5. recollection



1.4 SIGNIFICANCE OF LEISURE AND RECREATION

Involvement in recreation aids body development, movements and co-ordination through physical activities such as tennis and other ball games. It contributes to safety and survival by participating in activities like swimming, and also forsters and extends an appreciation of the outdoors.

Recreation promotes mental stability and provides a change in setting and pace from the highly competitive world of work. It constitutes a form of relaxation that aids emotional stability.

Participation in recreation is found to be linked to personality. It is believed to produce more happiness and satisfaction, balanced human growth, creativeness, improved mental capability and learning, freedom, better physical conditions, improved social relationship and better attitude to life.

Prophylactic action of health preservation leads to reduced medical costs, decreased absence from work and enhanced physical well being, physical as well as mental.

Certain results have shown that physically active patients with thrombosis stand some two to three times

better chance of survival than do non-active patients. There are strong reasons to believe that physical activity promotes heart function and capacity for work.

For some groups there has been tangible proof also of the mental benefits of leisure activities especially in their therapeutic and rehabilitative merits in psychiatric treatment.

It is possible that the facility of "social" leisure activities (recreation bringing or requiring contact with fellow participants) as is the case in the club in question, is an effective means of breaking the isolation experienced by so many today.

Recreation offers a number of activities which in turn offer change, and in change there is relaxation. It is an outlet for eager muscle and eager impulses. It helps us to relax from the constant tension of attending work. Thus refreshed we find the mental stability so needed in these days of a highly complex and complicated society.

1.5 CLASSIFICATION OF LEISURE

Leisure can be classified as

1. True leisure
- and 2. Enforced leisure

True leisure is the involvement by a person in any kind of activity willingly during his leisure time. The kind of activity indulged in does not matter so long as its enjoyed.

Enforced leisure is the type that happens quite accidentally, say a person is sick and he therefore finds himself away from wage or salary earning.

The theme of leisure is that the time be used for recreation and betterment of mental and physical fitness. It does not have to be expensive. Recreation can be either the spectator type or the participation type. Drama, musical events, t.v., records, radio and reading are spectator forms of entertainment. There is satisfaction in being able to appreciate a high level of performance.

1.6 SPORTS

Sports activity is a physiological improvement of the individual, and intellectual activity and also creates a mental balance. Such activity should be considered as an essential cultural instrument for the benefit of the individual as well as for the community itself.

A physical activity in the form of structured games or play taken for the purpose of recreation or amusement in leisure time and containing an element of competition or challenge against self, opponent or the elements.

1.7 SPORTS FOR A COMMUNITY

While providing sports for a community the needs of the people must be found out through observation, a study of their cultural backgrounds and the general conditions prevailing in the community. This is because sometimes what people want and even demand for is not exactly what they need. Needs are affected by such factors as weather, time of day, mood or inclination and mobility. Given the opportunity the needs of a community can be made apparent and can then be fostered.

In design, variety is very important as it provides opportunity for choice of activities and the provisions will most definitely affect the demand of the people if not change them entirely. It is therefore equally important that any such community building should be very flexible.

From the various studies carried out in my research it becomes quite clear as to the various activities required. Another important thing about sport is that participation or the choice of sport is entirely by free will.

Needs for community sports differ for different age groups, sexes, people in different conditions of health etc. What is desired by the recreational user is a pleasant environment to play and carry out his choice of activity.

Young adults are most often after adventure, noise, play at all levels and other social needs, while the older users like low-active past-times, comfort, and leisure. But majority will need a park, a recreational ground with pool and a hall and good social and catering facilities for long hours.

1.8 SPORTS, INDIVIDUALS AND OTHER PROFESSIONS

Scientific surveys involving studies of successful professionals and of outstanding students preparing for the professions have shown that there is a very decided relationship between vocational and recreational interests. These studies indicate that people in different professions follow certain patterns in their choice of recreational activities.

These studies show that the choices of some professionals are guided by the contact they make in their spare time; while others run after individual sports that keep them away from people.

Physicians^{are} at the top of the list in the individual sports like fishing and hunting. This is because they want as much as possible to get away to a place where they would not be interrupted. They also go into hobbies that involve collections of some rare or very interesting objects which can be put away quite easily when there is an emergency call. Specialists who have regular hours are more likely to join clubs and fraternal organisations or play golf.

The architect who is most of the time after privileged clientele that can use his talent usually joins the most exclusive as well as expensive clubs in the community.

Real estate agents and insurance salesmen try to see to it that they join as many clubs as they possibly can. The more the better. They are very interested in sports like golf that provide social contact.

Civil engineers and foresters are more enthusiastic about fishing, hunting and other outdoor recreations, while those engineers that work in cities (mechanical, chemical and electrical engineers) are more interested in sports like tennis and golf.

Teachers and clergymen are apt to select inexpensive recreations. They are especially interested in hiking, gardening, reading, writing and travelling.

Bankers and lawyers frequently belong to civic clubs and fraternal organisations. The bankers occupy a place of prominence in the community and are expected to participate in its social and civic life. Lawyers in the main play golf and tennis in a leisurely manner because their competitive life is usually expressed through their legal experiences.

CHAPTER TWO

EXAMPLES OF LEISURE CENTRES AND EXCLUSIVE CLUBS2.1 KANO CLUB

Facilities provided:

- parking lot
- open air cinema
- one squash court
- bar
- lounge
- reception and control point
- dining room
- golf course

Membership open to high class citizens and business men.

2.2 KADUNA CLUB

Facilities provided:

- children's playground
- 2 bars
- lounge
- open air cinema
- library
- dining room.

games played:

- billiards
- darts
- swimming
- Bingo
- Tambola
- lawn tennis

and - polo

Social activities:

- Dances
- Discos
- Film shows

Membership is open to top civil servants and businessmen.

2.3 UNIVERSITY CENTRE, CAMBRIDGE

Membership - All senior staff and their families and post graduate students.

Facilities

The building provides ranges of common rooms on two levels, a self-service dining hall, a higher priced dining room and a private one. These can be connected or divided in various ways.

Other are: ground floor bar, snack bar, music room, a billiards room and a roof terrace.

2.4 BRIDGNORTH SPORTS CENTRE

The main circulation and social spaces were spatially well conceived in their relationship to the main activity areas: in the entrance hall a glazed screen allows views into the swimming pool and between the sports hall and the squash courts a glazed bridge offers views into either area.

Facilities provided

Ground floor

- a) 4 squash courts
- b) swimming pool
- c) concert hall
- d) changing rooms
- e) dressing room
- f) studio
- g) library
- h) kitchen
- i) boiler room

First floor

- a) coffee room
- b) bar
- c) lavatories

CHAPTER THREE

AHMADU BELLO UNIVERSITY ZARIA1. LOCATION

Zaria is situated at $10^{\circ} 10'$ North and a longitude of $7^{\circ} 38'$ East. The University Main Campus is located in Samaru about 15 km from Zaria Old City. The Institute of Agricultural Research and the New Teaching Hospital are situated in adjacent areas along Zaria - Sokoto highway.

2. TOPOGRAPHY

The Main Campus lies on an elevated plain at an altitude of 670 m above mean sea level. The plain slopes down gently towards Kubanni River and is cut by many valleys and streams.

3. SOIL

The soil is part of "Zaria Soil Group" which is known to have covering material of up to 4 m in depth. The soil material consists of deposited silty sand overlying sedimentary decomposed rock. Most of the soils

allow good moisture retention due to their high proportion of clay content. The alluvial soils occur in low lying area adjacent to Kubanni River and are used for the cultivation of sugar cane and vegetables.

4. HISTORY

The University was named after its first Chancellor Sir Ahmadu Bello (1910 - 1966) the Sarkin Madauna of Sokoto and was established by the A.B.U. Law of Northern Nigerian legislature of October 1962.

It started with 400 students and this number was expected to reach 1,200 undergraduates by 1968, and the whole students population would reach 4,000 to 5,000.

By the year 1968, there were already 1,600 undergraduates and by 1972 the number of students registered in the University was eleven times as large as in 1962.

Today the students population stands more than 13,000 and more than 8,000 students are within the Main Campus alone.

5. STUDENT / STAFF RATIO

The total number of University senior staff including technical and administrative members are over 2,500. The staff - student ratio is almost 1:4.

The number of intermediate and junior staff is over 8,000. These include secretarial workers, technicians, specialised persons needed to run hospitals, or agricultural research, drivers, mechanics, cooks and other unskilled workers.

Table 1: Summary of student population for all Faculties and S.B.S.

Session	Total Student Enrolment
1962/63	425
63/64	558
64/65	719
65/66	956
66/67	914
67/68	1,366
68/69	1,745
69/70	2,351
70/71	2,820
71/72	3,840
72/73	5,052
73/74	6,050
74/75	6,739
75/76	7,651
76/77	7,321
77/78	7,327
78/79	7,672

Historical growth of staff in A.B.U.

Year	Senior Staff	I. & J.	Total
1962/63	142	*	142
63/64	186	*	186
64/65	271	*	271
65/66	294	*	294
66/67	280	1,372	1,652
67/68	329	*	329
68/69	341	2,587	2,928
69/70	501	740	1,241
70/71	789	900	1,689
71/72	896	1,740	2,636
72/73	1,389	2,353	3,742
73/74	1,503	2,861	4,364
74/75	1,760	2,950	4,710
75/76	1,900	3,804	5,704
76/77	2,127	4,826	6,953
77/78	1,525	5,930	7,455
78/79	2,329	9,670	11,999

* No records.

Growth of Senior Staff

Year	No. of Staff	% increase from previous year
1962/63	142	-
1963/64	186	30.98
1964/65	271	45.69
1965/66	294	8.48
1966/67	280	- 4.76

Year	No. of Staff	% of increase from previous year
1967/68	329	17.5
1968/69	341	3.64
1969/70	501	46.92
1970/71	789	57.48
1971/72	896	13.56
1972/73	1,389	55.02
1973/74	1,503	8.20
1974/75	1,760	17.09
1975/76	1,900	7.95
1976/77	2,127	11.95
1977/78	1,525	-28.30
1978/79	2,329	52.72

1979/80 figures are in staff:students ratios.

Post-graduate Students

Faculty	1978/79	1979/80
Administration	71	74
Institute of Admin.	-	-
Institute of Agric.	60	52
F. A. S. S.	147	151
Institute of Education	87	98
Engineering	28	35
Environmental Design	177	204
Law	8	11
Human Medicine		
Pharmaceutical Sciences	71	68
Sciences	78	76
Vet. Medicine	62	67

These numbers include Masters Courses, post-graduate Diplomas and Ph.D's.

3. LEISURE ACTIVITIES IN A.B.U.A. SENIOR STAFF CLUB

Membership is open to senior staff and post-graduate students. The club is planned to provide the following facilities:

1. A lounge for 20 people flowing into a terrace overlooking the swimming pool.
2. Adjoining the lounge is the bar.
3. Dining room that serves resident guests and also others on request only.
4. Swimming pool.
5. Table Tennis and Lawn Tennis.
6. Guest rooms on the second level, overlooking the swimming pool area.

B. SAMARU CLUB

Membership is open to all staff of the University.

Facilities provided are:

1. Bar and lounge
2. Tennis courts
3. Golf course
4. Children's playground

C. SPORTS

There is a gymnasium near the assembly hall which serves for various activities like table tennis, badminton, judo and karate on different days of the week. There is a swimming pool, tennis courts, and pitches for other sports like hockey, cricket, football, handball, basketball and volleyball. The A.B.U. sports complex is also nearing completion.

MASTER PLAN

The Master Plan proposals for the A.B.U. adopted the following structure principles.

The Main Campus complex consists of three distinctive parts:

- a) Central area
- b) Institute of Agricultural Research
- c) New Teaching Hospital

All of them are connected by a system of dual carriage ways to create one functional University complex spatially divided by large open green areas spreading along existing valleys and ravines.

All areas not suitable for construction which are spread along the Kubanni River and its tributaries

should be recultivated and converted into large open evergreen park area and that should become the compositional backbone of the Main Campus complex.

--The spatial arrangement of built-up areas should identify different land uses which should be penetrated by spacious green belts planted with selected evergreen trees and shrubs.

--For the sake of the Main Campus future expansion the areas located in the basin of the Kubanni River Reservoir, up streams the line Kubanni Dam should be reserved for the University use only. This will make possible to protect the Kubanni Reservoir from pollution.

- The beauty of Kufena environment, the natural landmark, and the place of ancient worships should be protected by the University as part of its recreational system and place for the University Research Field Station.

SENIOR STAFF CLUB PROPOSAL

There are urgent needs for community buildings within the developed area of the Main Campus. Since there is no community centre and few community buildings are scattered over the Campus Area the Master Plan

proposals includes among other things a New Senior Staff Club with full equipment for in-door and out-door activities, swimming pools, cinema, cafeterias, bars etc., to be located on the lake side of the Main Campus.

The Future of Main Campus A.B.U.

By Stan Kawka
1979.

CHAPTER FOUR

WEATHER AND CLIMATE4.1 GENERAL

The climate of a given region, which plays a great part in not only the composition of the soil but also affects the character of plants and animals and the energy of men, has come to be regarded as a description of the prevailing conditions and is determined of several elements and their combinations and interactions.

4.2 BASIC ELEMENTS OF CLIMATE

The principal climatic elements when human comfort and building design are being considered are:

- a) solar radiations
- b) temperature
- c) humidity,
- d) wind
- e) precipitation
- and f) special characteristics such as lightning earthquakes, dust-storms and so on.

A certain climatic data for the given location must be collected and analysed. The modifying effects of microclimatic conditions must be considered.

4.3 HUMAN COMFORT

Although human comfort cannot be measured in terms of physiological factors only, one of the primary requirements is the maintenance of thermal balance between the human body and its environment. The conditions under which such balance is achieved and the state of the body when it reaches equilibrium with the surroundings depend on the combined effect of many factors such as the activity, acclimatisation and clothing of the subject are individual characteristics while others such as the air temperature, radiation, humidity and air movement are environmental factors. These factors may aid or impede the four different physical ways of heat exchange between the body and the surrounding (i.e. conduction, convection, radiation and evaporation)

4.4 WEATHER AND CLIMATE IN ZARIA

Zaria is located on a plateau at about 670 m above sea level in the central northern part of Nigeria, situated at $10^{\circ} 10' N$ and $7^{\circ} 38' E$, and possess a tropical climate.

The continentality of the climate in Zaria is pronounced during the dry season especially in December and January. The mean daily maximum temperature shows a major peak in April and minor in October. Daily maximum temperature rises from January attaining its highest value in April. It then drops rapidly in August. It rises again to its secondary peak in October.

The mean minimum temperature rises from its lowest value in December to January, to its highest in July to August.

Zaria lies within a region which has a tropical savannah climate with distinct wet and dry seasons. The wet season occurring in the high humid period. The dry season is mostly rainless.

Total annual rainfall in Zaria is not high. The value is about 1000 mm. The low and seasonal character of rainfall makes its mark on the vegetation of the area with various shades of green in the wet season that turns brown, pale or yellow in the dry season.

The part of Nigeria where Zaria lies is invaded by two distinct air-masses; one from the north, dry and continental in origin, the Saharan air mass; and the

other from over the Atlantic in the south - moist cool and equatorial, maritime in nature, the weather depends largely on the air mass which covers the area and its depth.

On the basis of the relative importance of the dry continental north - Easterly or Easterly air and the humid South-Westerly air, and the consequent weather the year in Zaria can be divided into the following seasons:-

- 1) Harmattan or dry season - November to February
- 2) Hot season - March to April
- 3) Season of thunder-storms and squalls - May to June
- 4) Wet season - July to October

1. Dry Season (Harmattan Period)

This brings to an end the sticky heat of September to October. The sky is mostly clear in November which permits longer hours of sunshine. Day temperatures though fairly high are not so oppressive as those of September and October because of the low relative humidity. With the progress of the dry season, the air becomes drier. The relative humidity falls to 15-20% in

December and 10-15% in January. The dry North-Easterly wind in West Africa known as harmattan causes a surface turbulence producing a suspension of fine dust particles in the air which attains its maximum intensity during December to January. The thickness of this haze and dust layer of harmattan rarely exceeds a height of 1,500 m. Sometimes the air becomes so dry and dense that visibility becomes very poor. This appears like a dense fog and gives the day a dull and gloomy look. Very little direct sunlight can reach the ground on such days and subsequently the daily maximum temperature becomes lower. Dense harmattan dust rarely lasts continuously for more than four or five days even in the peak of the harmattan season.

The principal characteristics of harmattan are:-

- a) The general direction of wind ranging between North and East with varying speed.
- b) A very low moisture.
- c) A large diurnal temperature range.
- d) The absence of convective type of the cloud.

During December and January, night and mornings are cool but afternoon temperatures are high. In the cool season the mean temperature falls below 65°F. Zaria experiences the most extreme temperature conditions in late December and early January.

2. Hot Season

The hot season is quite modest with a mean maximum temperature range of 85-90°F. April is the hottest month in Zaria.

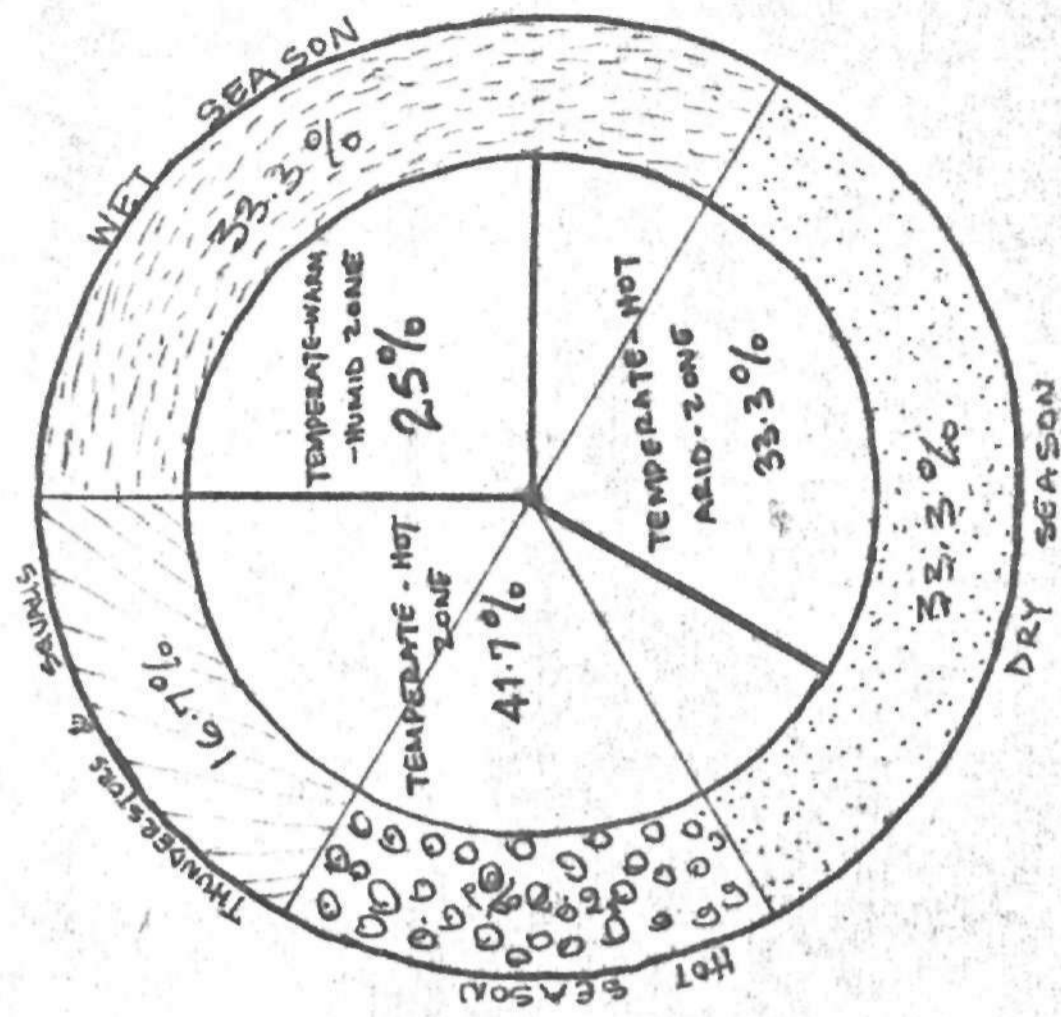
3. Season of thunderstorms and squalls

The daily maximum temperature drops during the period. The relative humidity rises to about 65-70%.

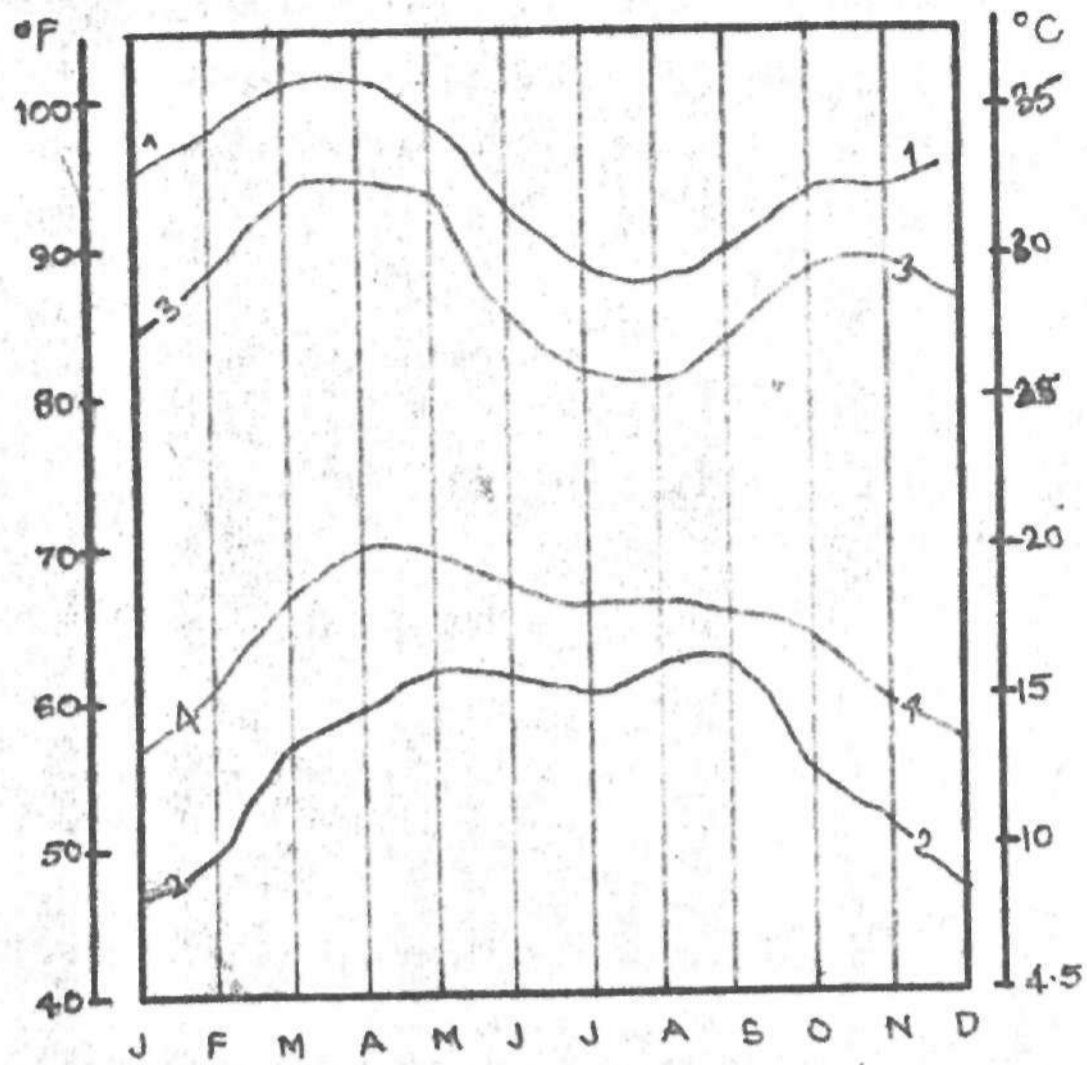
4. Wet Season

The rains begin in earnest from May to June, after about six months of drought. They are accompanied by devastating winds and electric storms. The regular rainfall continues more or less uninterrupted until October. The relative humidity is very high in August 70-80%. The weather during the rains is comparatively cool and agreeable.

- Refs. 1. Zaria and its regions
2. Prof. P.M. Hore

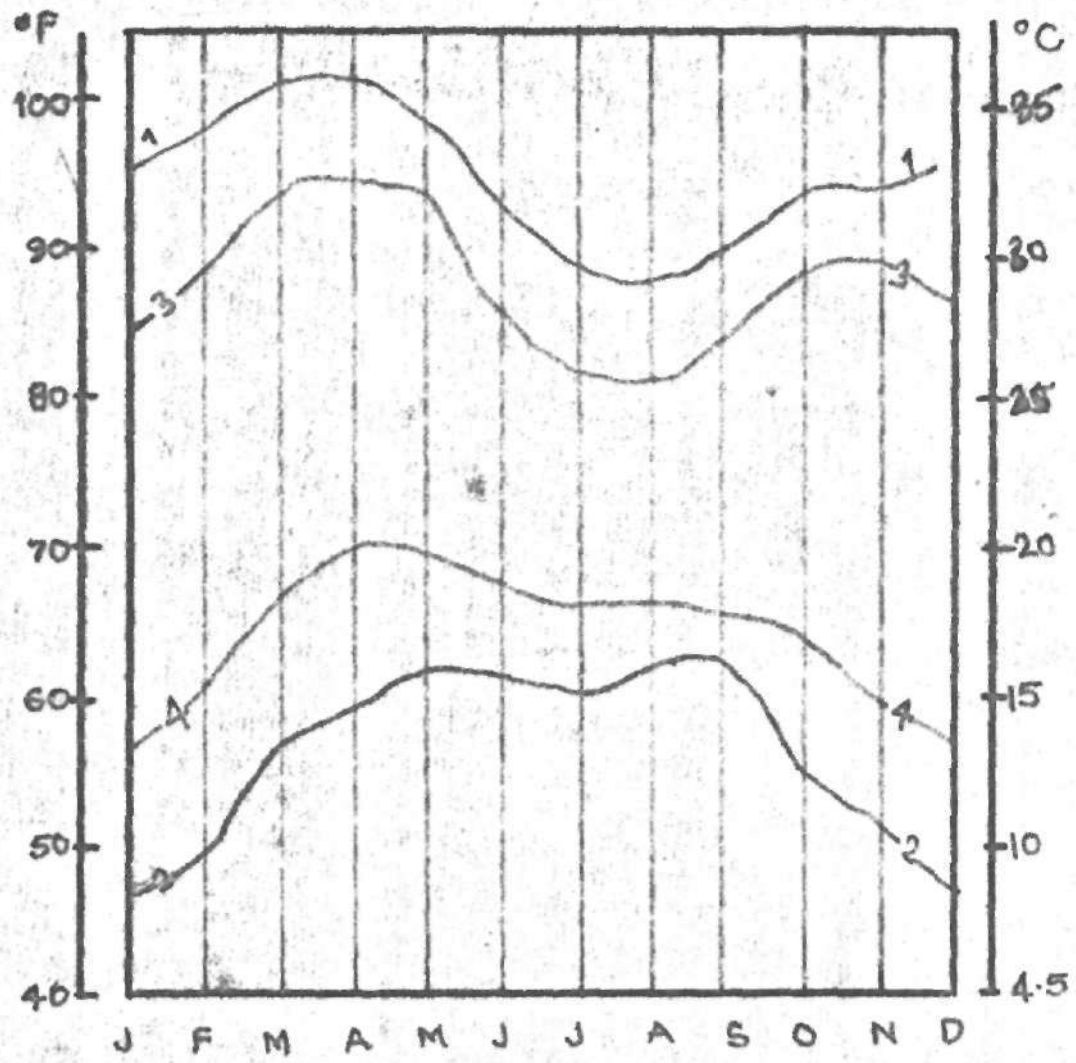


ANNUAL AVERAGE CLIMATIC CONDITIONS IN ZARIA.



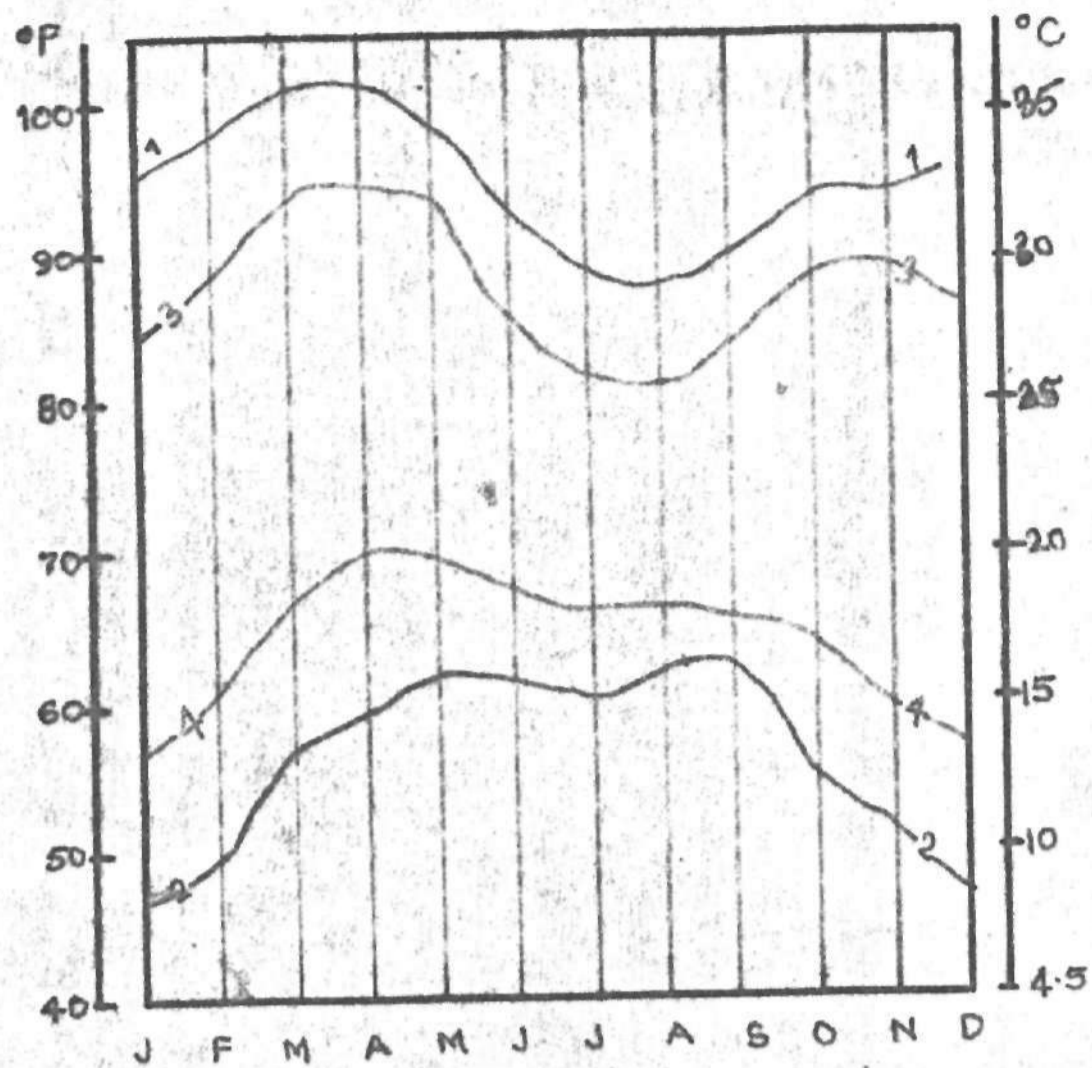
MAXIMUM AND MINIMUM TEMPERATURES AT ZARIA

- 1. HIGHEST DAILY MAXIMUM AND
- 2. LOWEST DAILY MINIMUM SCREEN TEMPERATURES
- RECORDED DURING 1958-68
- 3. MEAN MAXIMUM SCREEN TEMPERATURES
- 4. MEAN MINIMUM SCREEN TEMPERATURES



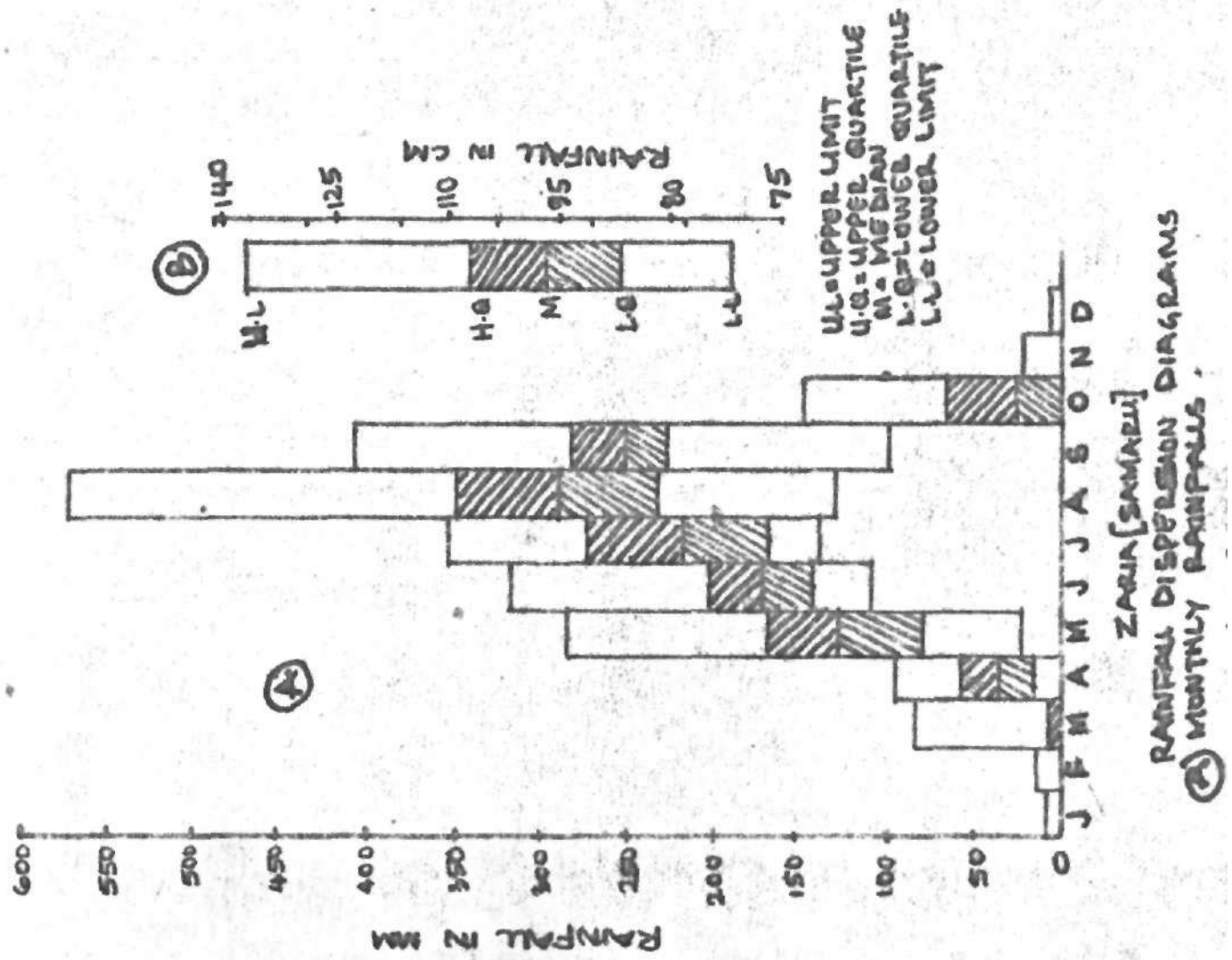
MAXIMUM AND MINIMUM TEMPERATURES AT ZARIA

- 1. HIGHEST DAILY MAXIMUM AND
- 2. LOWEST DAILY MINIMUM SCREEN TEMPERATURES
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MAXIMUM AND MINIMUM TEMPERATURES AT ZARIA

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- 2. LOWEST DAILY MINIMUM SCREEN TEMPERATURES
- RECORDED DURING 1958-68
- 3. MEAN MAXIMUM SCREEN TEMPERATURES
- 4. MEAN MINIMUM SCREEN TEMPERATURES



CHAPTER FIVE

DESIGN CONSIDERATIONS

Before the design stage is reached it is necessary to make realistic assessments of probable demand for the whole range of recreational resources, taking into account past trends, future population structure and the various factors influencing demand. This demand will then have to be converted into areas of resource in suitable locations, with full regard to desirable capacity standards and multiple arrangements. The resources will then be planned and properly inter-related because fortuitous provision of facilities is rarely entirely satisfactory.

5.1 DEMAND

The demand for the club has already been established in my introduction and it has been proved to have the backing of the Master Plan of the Ahmadu Bello University both in content and in aim. But still I would like to summarize some of the points raised for the demand.

- a. The lack of enough community facilities or inadequacy of them.

- b. The populations of the senior staff and the post-graduate students presently and when projected to the future show a marked increase which necessitates the provision of a new club that will cater for their recreation.
- c. The existing club with a maximum membership of 300 is too small even now not to talk of the future.
- d. The location of the existing club does not permit expansion.
- e. The facilities provided are too inadequate for the teeming population of the staff and post-graduate students.
- f. Lack of any forum where senior staff and the post-graduate students can meet.
- g. There only being substandard recreational facilities in town.

After establishing the necessity of the existence of such a club then research was carried out as to the user expectations of the facilities in the club. These then were found to be:

1. Recreational facilities like sporting activities that will help in recuperation and also aid physical fitness.

2. Leisure activities that will cool down a person after a hard day's work and release him from the tension of his work or life at home.

3. Social facilities that will improve contact and tear out the lonely ones by giving them opportunity to meet other people.

4. Entertainment areas that will provide a kind of escape even if momentarily from the world of academic work.

5. Easy-leisure areas like parks and green areas that will give the sense of being in the outdoors and that will improve peoples appreciation for the outdoors.

6. A meeting point that is conducive enough for any kind of conversation between members so as to help cross-fertilation of ideas.

Others are dining areas both indoors and out door areas where snacks could be taken at will. Also it has to be a place where a member could go for a drink or two and a chat with friends or visitors he might have.

These were obtained through

a) Sorting out work and leisure - considering the work the users of the club are involved in and then providing for diversion because in diversion there is leisure.

b) A deep research into international approach to leisure both at public level as well as in exclusive clubs.

c) Considerations of the needs as well as the response of the potential users concerning the types of activities suitable for occupying their leisure time.

d) Estimated time available and hours of use.

e) Benefits.

f) Choice.

Other necessary considerations are for flexibility expansion and change as well as the estimated running costs and how they are to be borne and by whom.

FINANCING

Financing of the project is considered to be the responsibility of the University at least at the building stage and the provision of the facilities. It is considered that the running of the club will be in the hands of some permanent workers to be employed by the University. Therefore some money generating facilities that will go fully commercial on completion have been provided. These are the theatre for various entertainment purposes and the restaurant and main bar. In the use of these

facilities consideration will be given to the members of the club. They will be charged less than non-members for meals or other entertainment programmes coming up. The profits made can then be used to offset the running cost of the club and some can be used in reimbursing the University of the money it spent on construction.

HOURS OF USE

The club will function between 9.30 a.m. and 1.00 p.m. and some activities like parties or discos can continue till dawn if so organised.

The peak hours of use are likely to be between 4.00 p.m. and 12.00 midnight. Most people will leave for home after entertainment for the night (film show, dances) etc. has ended.

MEMBERSHIP

As the name of the club implies membership is open only to senior staff of the University and also post-graduate students and their families. But the club can also be used by members of the public for entertainment or just to have a meal in the restaurant. This then makes us consider the club as having two wings -

an exclusive part that discourages infiltration by non-members right from the nature of the design (even though a receptionist position has been provided to filter out unqualified people to use the area).

and -an inclusive part that quite attracts people to go directly there. This is the area with facilities usable by both members and non-members.

As membership is automatic for the groups involved the membership will reach 6,000 by 1995 which is the plan period.

Maximum number of users at a time is 1,200.

CHAPTER SIX

CONSTRUCTION

The club has open design with reinforced concrete frame structure and a concrete shell-roof structure. The exclusive part of the club is in two levels the upper floor being carried by a skew grid formed by connecting any four enclosing columns by beams. This leaves the area underneath free to use partitions at will. Partitioning between use areas is by the use of glass telescopic sliding doors that allow for the two adjoining areas to be combined when the needs so arises.

The area that links that inclusive zone and the exclusive zone (it serves as a control point as well as a bar) is at one level and is concrete roof deck carried by a number of concrete columns. It is glazed on the outerparts to give view into the internal courtyard as well as the pool.

The restaurant area is also constructed by using reinforced concrete columns carrying a shell roof structure thus providing a lot of space for glazing to take the advantage of the views. Sliding doors are used to connect the outdoor restaurant and the indoor restaurant. The tables of the outdoor restaurant are permanent and made of concrete.

The theatre is constructionally different as it is surrounded by a series of columns carrying an egg shaped ring beam. An interesting structure in the theatre is the concrete pylon that serves as the screen as it is from this that cables are suspended towards the ring beam. These cables form the frame of the roof. Wire mesh is spread over them and then concrete covering is poured on the wire mesh thus making it all possible to have a very thin roof.

As the main intention is to make the theatre as open as possible adjustable vertical louvres are provided instead of a solid cladding wall.

SERVICES7.1 SEWAGE

On the Eastern part of the Kubanni Dam is the A.B.U. sewage treatment plant. Therefore the club's sewage system can be connected to this by means of buried pipes.

7.2 WATER DRAINAGE

The site is a slopy area and it slopes towards the reservoir. This provides a natural gradient for running rain water and the main problem now is how to curb erosion. To this end concrete pavements have been provided around all use areas. The outdoor recreation area which is a green area has been terraced although each terrace level is still sloping and the edge of each terrace level has been terminated by a low retaining wall made to look just like a paved footpath on top. This prevents the movement of soil from an upper level to a lower one.

The side of the swimming pool is also well paved and also at a slightly higher level than the surrounding with a rain drain (covered) surrounding it.

Rain water is therefore drained off the sports pitches and the exclusive side of the club into the ravine on the western side of the club. For the theatre side and the parking area the water is drained through another small valley on the Eastern side of the club.

WATER SUPPLY

The A.B.U. water treatment plants that treats the water in the reservoir is not far away on the Eastern side of the site of the club. Water supply from the site can therefore be obtained from there.

ELECTRICITY SUPPLY

The A.B.U. Main Campus is connected to the National Grid for it's electricity supply. This can be extended to the site from the line that serves the A.B.U. Water Works.

VENTILATION

The club has been designed to make use of natural ventilation. As it is an open plan with sliding doors and windows it is designed to make maximum use of the natural breeze that comes from across the lake. But the design is also quite flexible enough for placement of air-conditioners without breaking any walls as only the frame structure is made very solid.

CHAPTER EIGHT

SPACE ALLOCATION8.1 OUTLINE OF ACCOMMODATION

a) - Parking - There is a provision of parking spaces for up to 200 cars and overflow parking spaces on both the Eastern and Western parts of the designed parking lot. This is designed to be a fully shaded area.

b) - Service or delivery yard - enclosed to form a courtyard. Access only by passing through a gate which is locked against other people than the suppliers of food items and other necessities for the club. The wall surrounding it is made attractive and is used for symbols that guide people to different activities.

c) - The theatre with access through a foyer. From the foyer one can reach the toilet facilities provided for both men and women users of the theatre. Artists have a separate entrance - they don't have to come through the foyer. At the foyer is also the box office where tickets are sold just by the entrance to the theatre.

d) - The Restaurant - Entrance is either through the door that has a common entrance canopy with the theatre

or while coming through the exclusive part of the club through a corridor that joins them. The restaurant is both visually and physically connected with the outdoor eating area where eating is under the shades of trees on some concrete islands surrounded by greens.

e) - The kitchen connected with and serving the restaurant is designed in such a way that common facilities of changing and toilets are provided for both kitchen and non-kitchen workers.

f) - Administrative section with offices, a waiting area and a workers common room.

g) - Bar and its servery which is more easily or directly accessible from the main entrance serving the exclusive members. It is near the control point but a non-member can go to it without going near the receptionist. The bar flows into the internal courtyard serving the club members.

h) - A lounge that flows out and is only separated from the internal courtyard by means of sliding glazed doors. It commands a view over the swimming pool and the reservoir as well as the hills beyond.

i) - The reading room also on the ground floor with direct access either from the courtyard or the lounge. It is provided with its own store.

j) - The changing rooms for male and female and also toilet facilities centralised for the club members. These serve as noise barrier between the multi purpose sports hall and the reading room.

k) - The multi purpose sports hall that can either be used for badminton, table tennis, judo, karate or any sporting activity the members might decide to do indoors and which the hall is big enough for.

l) - On the first floor is the committee room which has direct access from the lounge down-stairs.

m) - The games^{room}/is also on the first floor and this is for easy-chair games such as cards, ludo, chess, and also others like darts.

n) - The last room on the first floor is the billiards and snooker room which has a view into the multi purpose sports hall.

o) - Six squash courts have also been provided and they have galleries for spectators. The area between the squash courts and the club building is paved and is provided for outdoor table tennis.

p) - Swimming pool large enough for water polo. It has an informal shape to give a sense of recreation and leisure and not competition.

r) - A pool side refreshment area that serves swimmers with drinks and snacks.

s) - A children's playground placed between the internal courtyard and the pool thus allowing parents to have a view of their children. It has creche for babies to be taken care of by nannies.

t) - A boating dock terraced all the way from the swimming pool and with a pier. Nine boats are provided for the leisure of the members to utilise the water in the lake.

u) - A wide green area I call the outdoor relaxation area with lots of shades and various kinds of seats for complete relaxation of the mind and the muscle. As it is wide and has some isolated seats some areas can also be used for picnic.

v) - A sandy beach by the side of the lake.

w) - An outdoor sports area with various sports activities for the physically active - all at recreational level.

8.2 SCHEDULE OF ACCOMMODATION

Entrance Hall	44 m ²	
Indoor lounge	180 m ²	
Reading room	150 m ²	
Sports changing rooms and toilets	98 m ²	
Multi purpose hall	180 m ²	
Committee room	90 m ²	
Games room	150 m ²	
Billiards and snooker	165 m ²	
Bar	96 m ²	
Bar store	18 m ²	
Kitchen	90 m ²	
Kitchen store	30 m ²	
Staff toilets and changing rooms	60 m ²	
Restaurant	180 m ²	
Offices (2)	36 m ²	
Foyer	72 m ²	
Toilets	72 m ²	
Theatre	625 m ²	
Outdoor seating		
Outdoor relaxation area		
Children's play ground	891 m ²	

Swimming pool	
Changing rooms, toilets and showers	135 m ²
Refreshment area	54 m ²
9 rowing boats	
6 squash courts	
6 lawn tennis courts	
2 volley ball pitches	
2 basket ball pitches	
2 handball pitches	
6 tables for ping-pong placed outdoors near the squash courts	

CHAPTER NINE

SITE ANALYSIS9.1 SITE LOCATION

The site is located on the western part of the Ahmadu Bello University Water Treatment Plant, just by the side of the Kubanni lake. It is bounded on the north by a new dual carriage way (construction work has started) that connects the central precinct of the Main Campus with the New Teaching Hospital at Shika, and to the south by the wide expanse of water in the reservoir.

The site commands a view of Kufena hills across the water to the south, Area 'B' to the west and the Dam to the south-east. View to the northern part of the site (academic area) is obstructed by the gradual rise in the profile of the ground.

9.2 FACTORS THAT AFFECT CHOICE OF SITE

a) Excellent views as explained above. These views can be exposed to a casual viewer to be enjoyed while relaxing leisurely indoors or outdoors.

b) Easy accessibility both from the academic and residential areas. As the club is to serve for meals or snacks or just relaxation for staff in-between lectures

this site is very suitable as it can be reached quite easily by staff in the academic area or central precinct which is on the northern side of the site.

The proposed landuse of the areas around the site has some allocation for residential buildings. Apart from that the site is also accessible to all existing residential areas without bias to any such area.

c) Total agreement with the A.B.U. Master Plan of 1979-1995 which allocated the areas around the Kubanni for green parks, play areas and other recreational purposes so that it will serve as the compositional backbone of the Main Campus.

d) Natural Recreational Resources - The availability of the water at the lake that can be used for rowing, the slopy area that allows for terraced park that has unobstructed views of hills and the water and the possibility of providing both indoor and outdoor sports. An island that can be reached by a boat.

e) Availability of land that allows for both present use and future expansion.

f) The relationship of the site to other use areas provided in the Master Plan, such as the New Cultural Centre which is to be adjacent to the club and which can be designed in conjunction with the club.

g) Good enough top soil for construction work. As the site is presently used for seasonal farming and is not part of the problem areas by the Kubanni little clearance work is required before building work can get started.

9.3 THE KUBANNI DAM

The Kubanni river has its source somewhere in the elevated ground above Shika and ends near the Gaskiya Corporation stream in Tudun Wada Zaria. The Kubanni river covers a length of approximately thirteen miles and has a catchment area that covers about 50 miles².

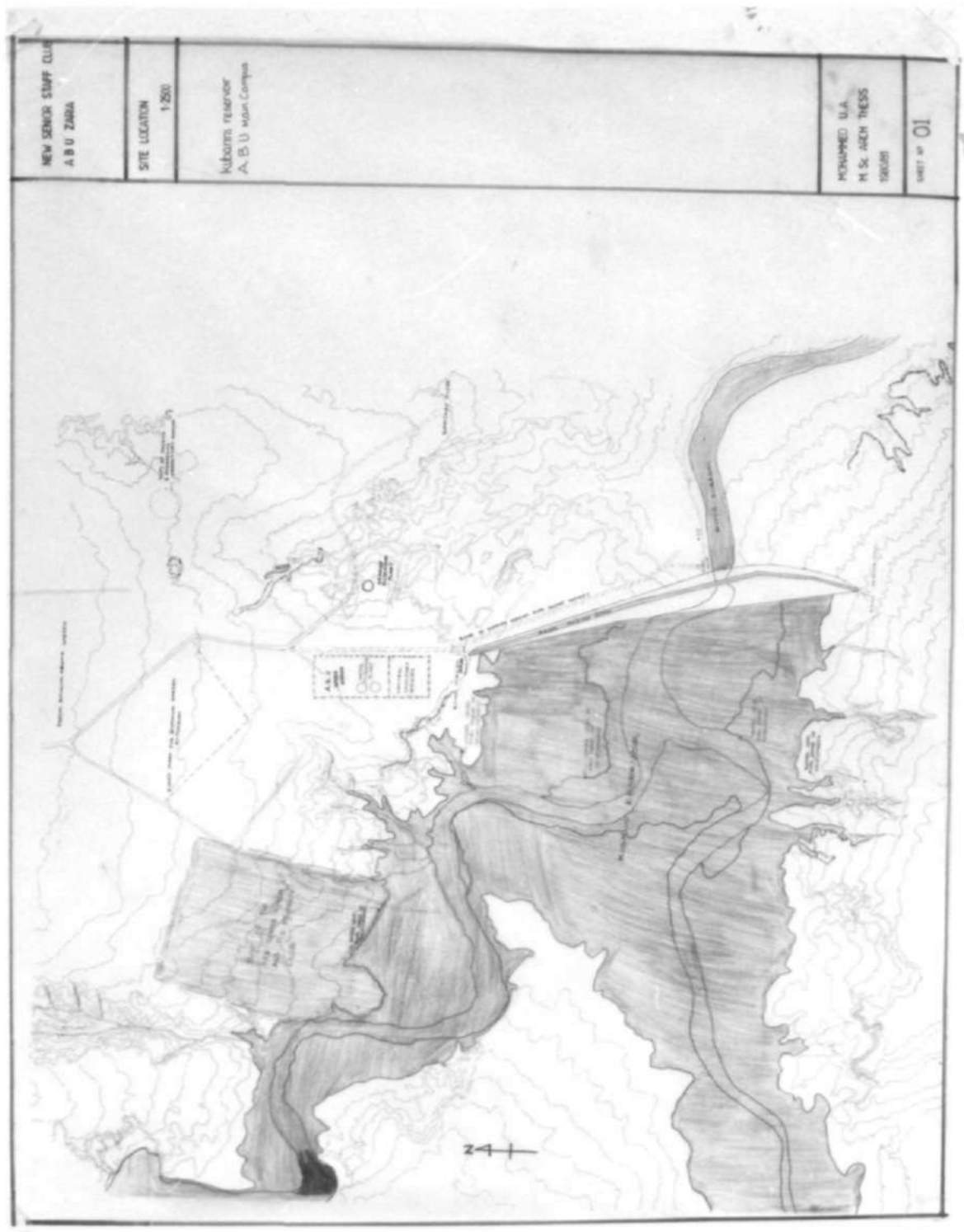
The Kubanni lake is 200 acres in area with a total capacity of 600 million gallons. It is estimated that two million gallons of water will be supplied to the University daily. The lake was constructed in two phases and it is now in its second and final phase. At some points the water is up to 12 m deep.

One problem that can be connected with the lake is that of water borne diseases like bilharzia that are carried by insects or other water dependent microbes.

But since 1974 various steps have been taken to eliminate such disease carriers, although these were objected to as being a way of exterminating the ecological culture of the lake. This led to the use of a chemical (Frescon) for the elimination of the diseases. As such the lake is now fairly safe for use by people for recreational purposes.

CHAPTER TEN

THE DESIGN



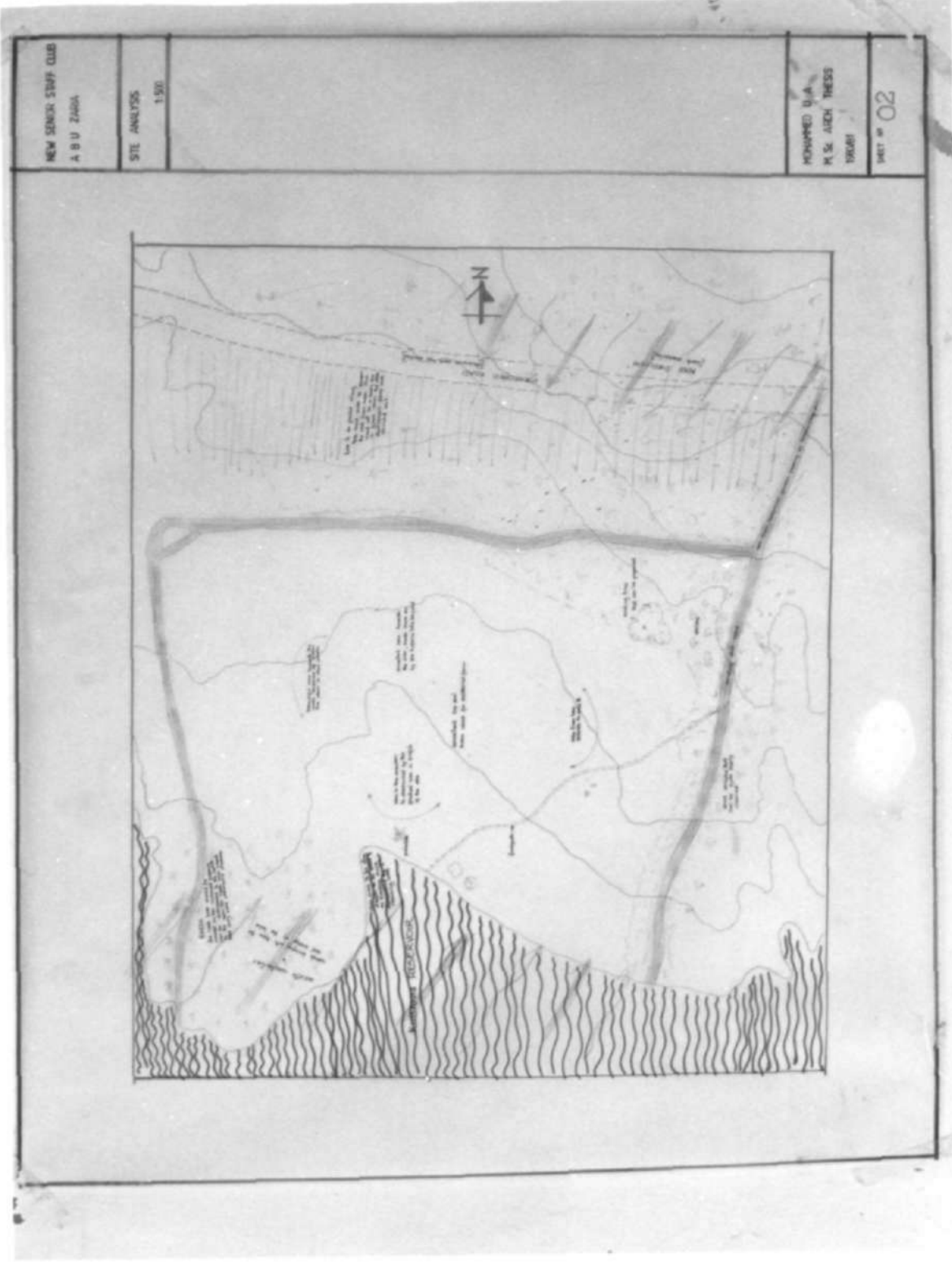
NEW SENIOR STAFF CLUB
A B U ZAKIA

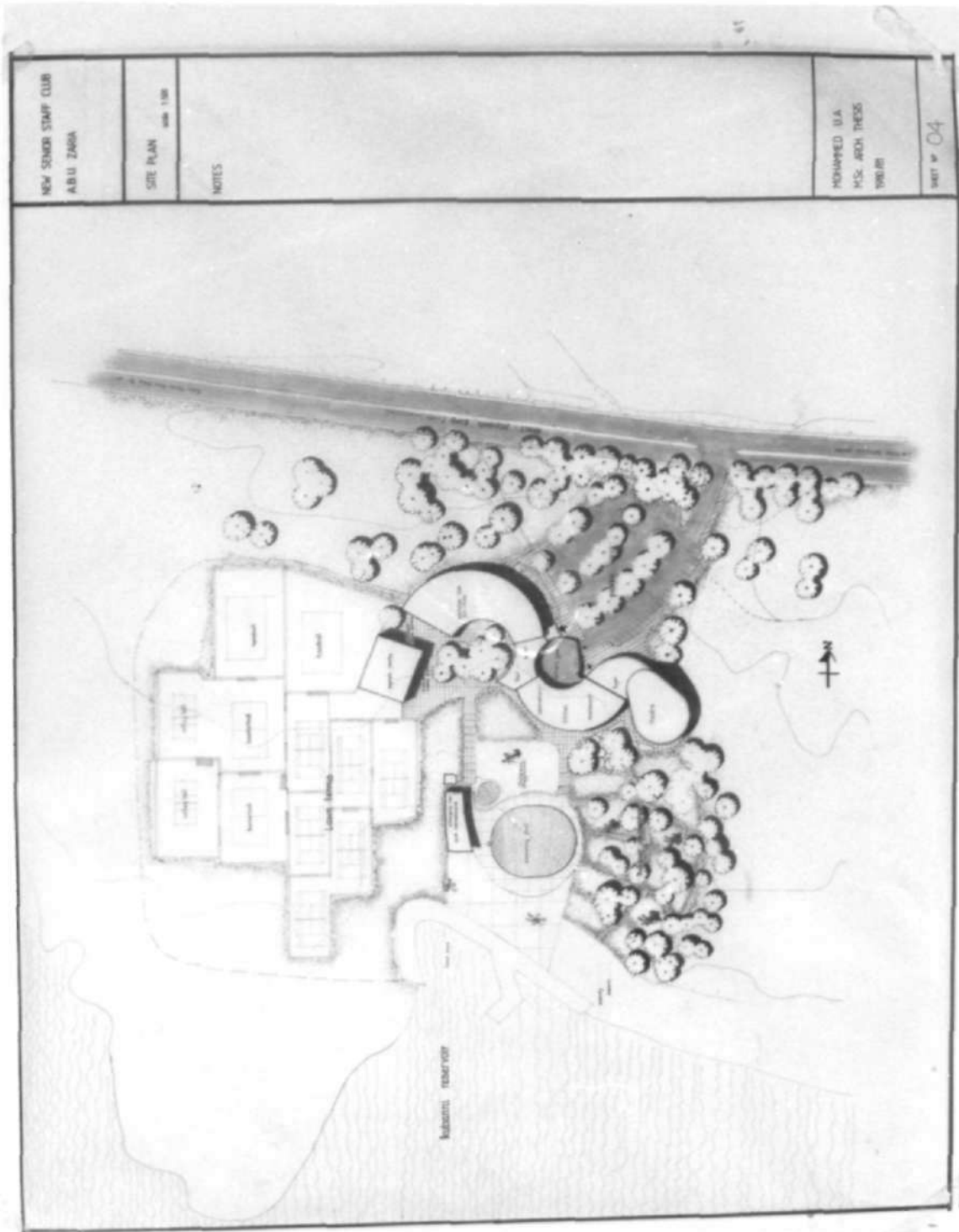
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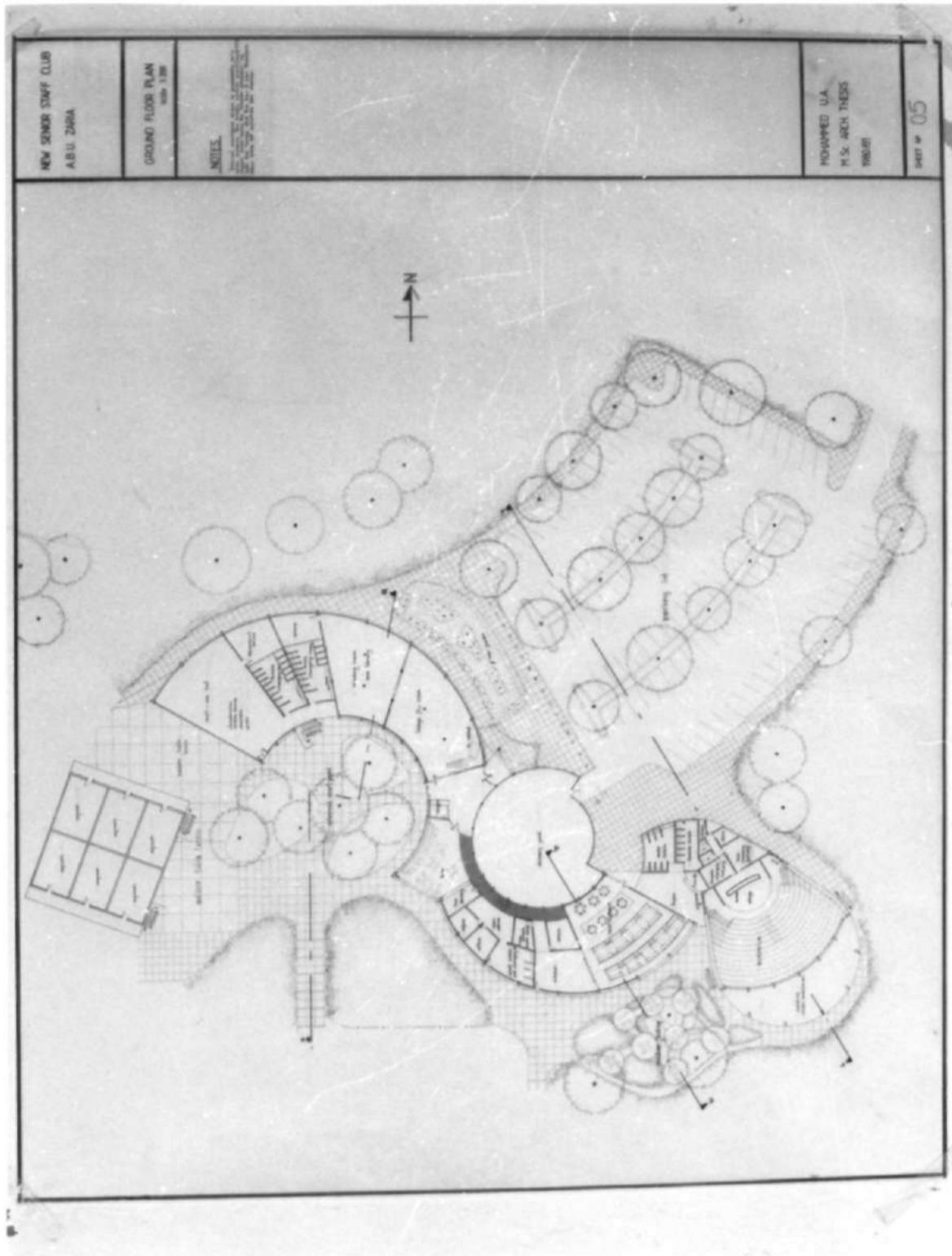
Nubaren reservoir
A. B. U. Main Campus

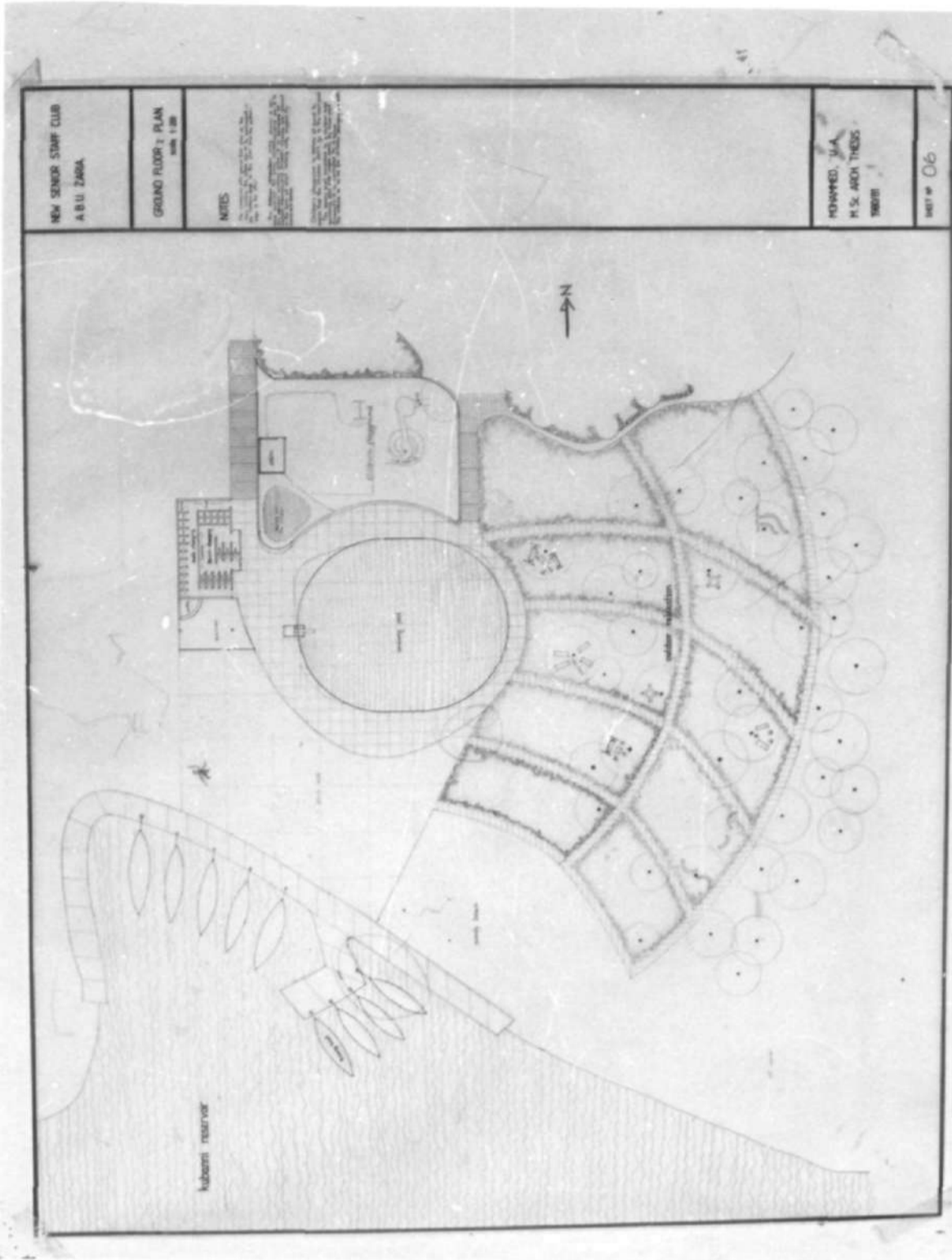
PREPARED BY
M. S. ADON THESIS
FACULTY

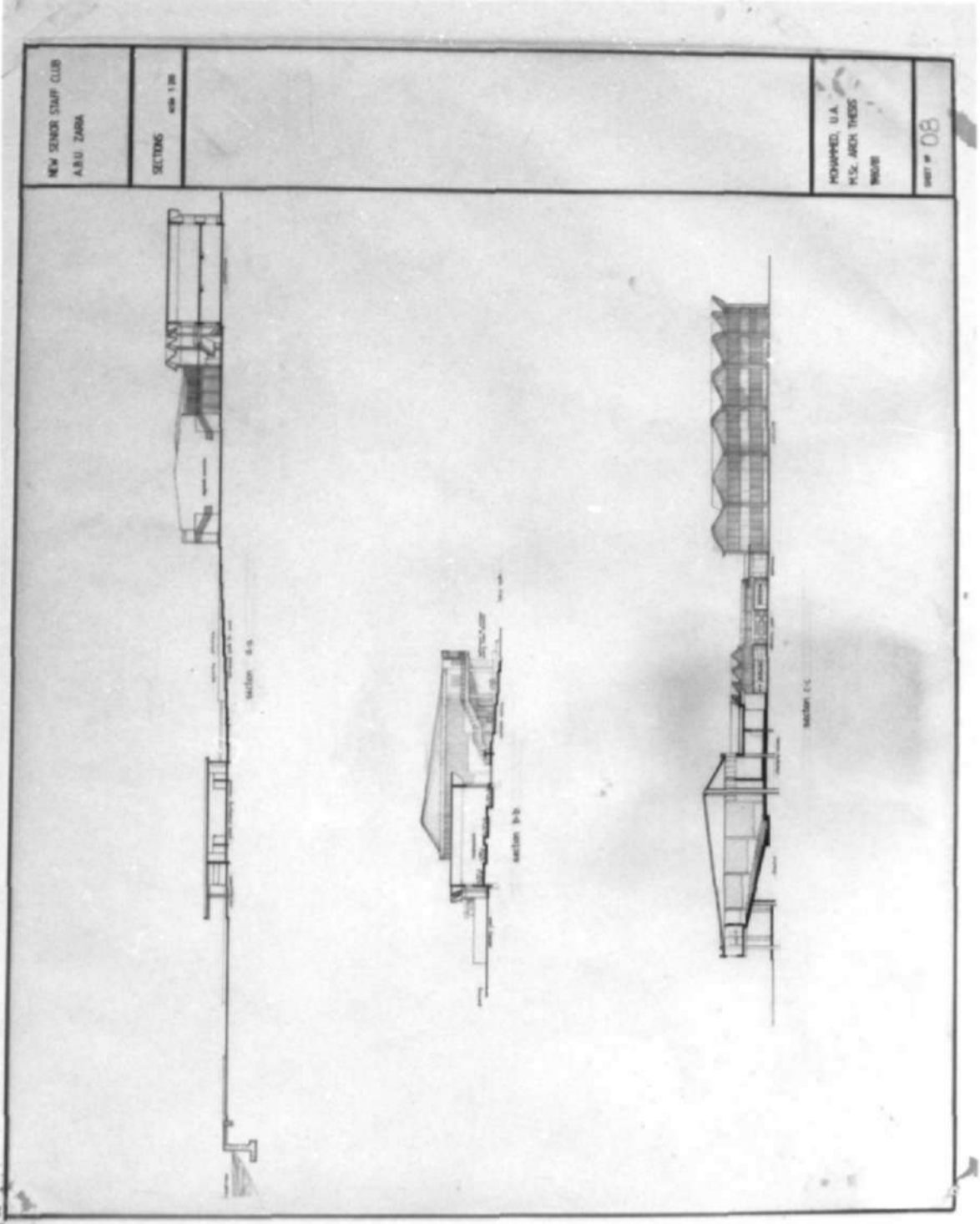
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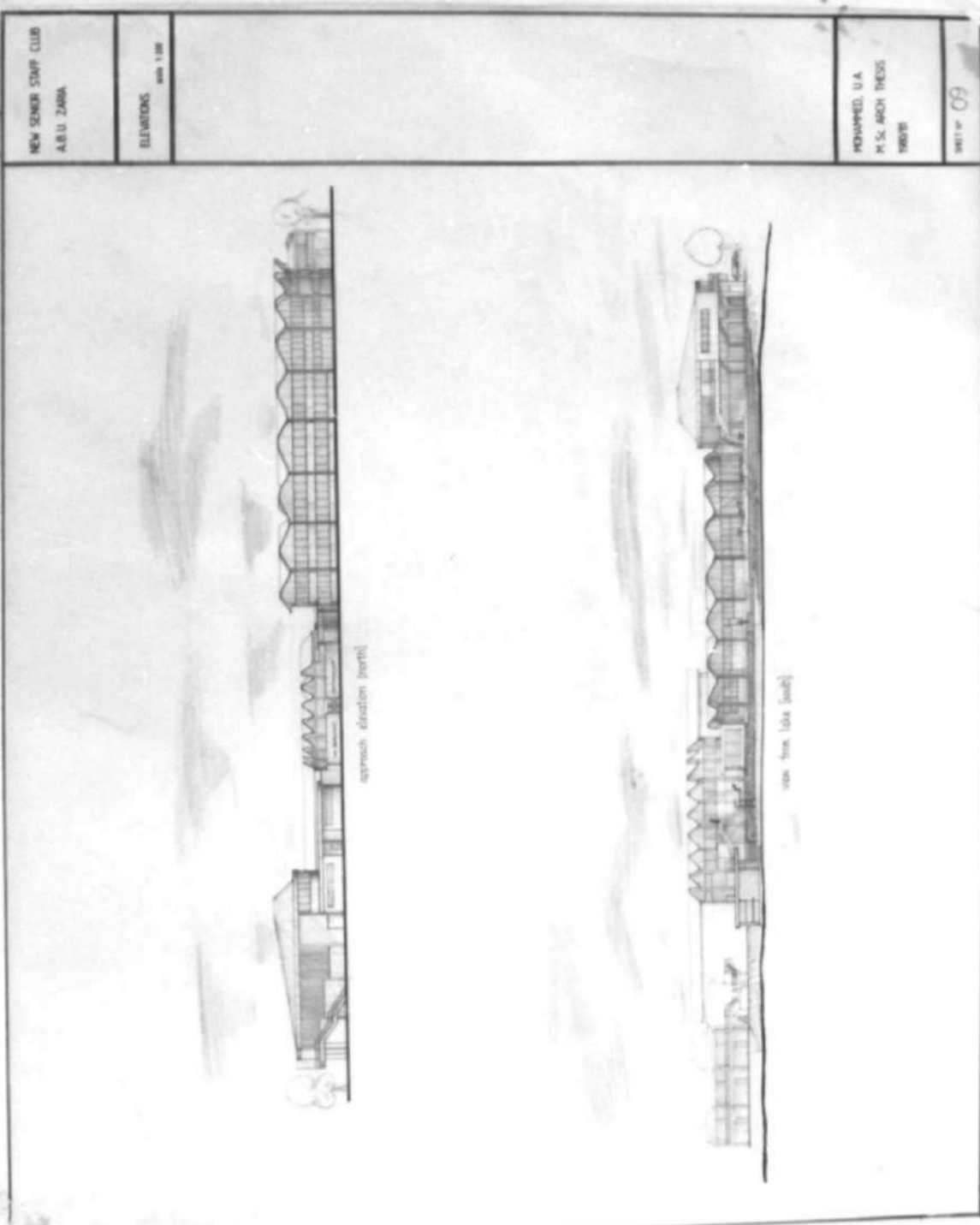


NEW SENIOR STAFF CLUB
ABU ZAHRA

SECTIONS
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FORWARDED, U.A.
P.L.C. ARCHITECTS
RACOR

SHEET # 08

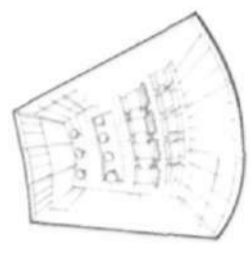
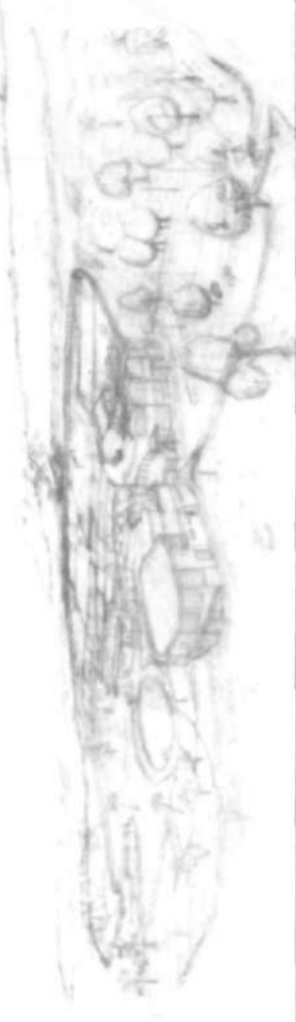


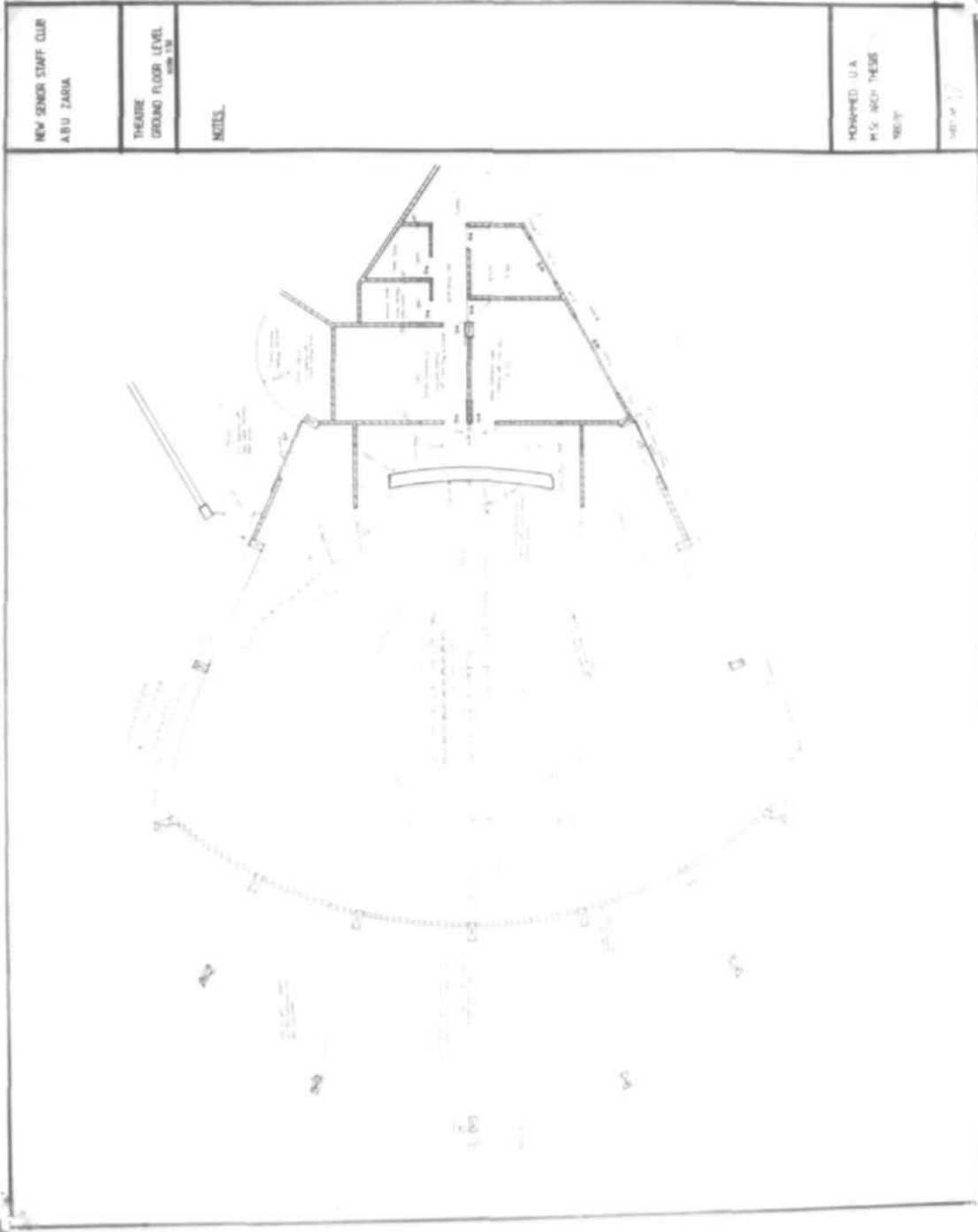
NEW SENIOR STAFF CLUB
A. B. U. ZAGRA

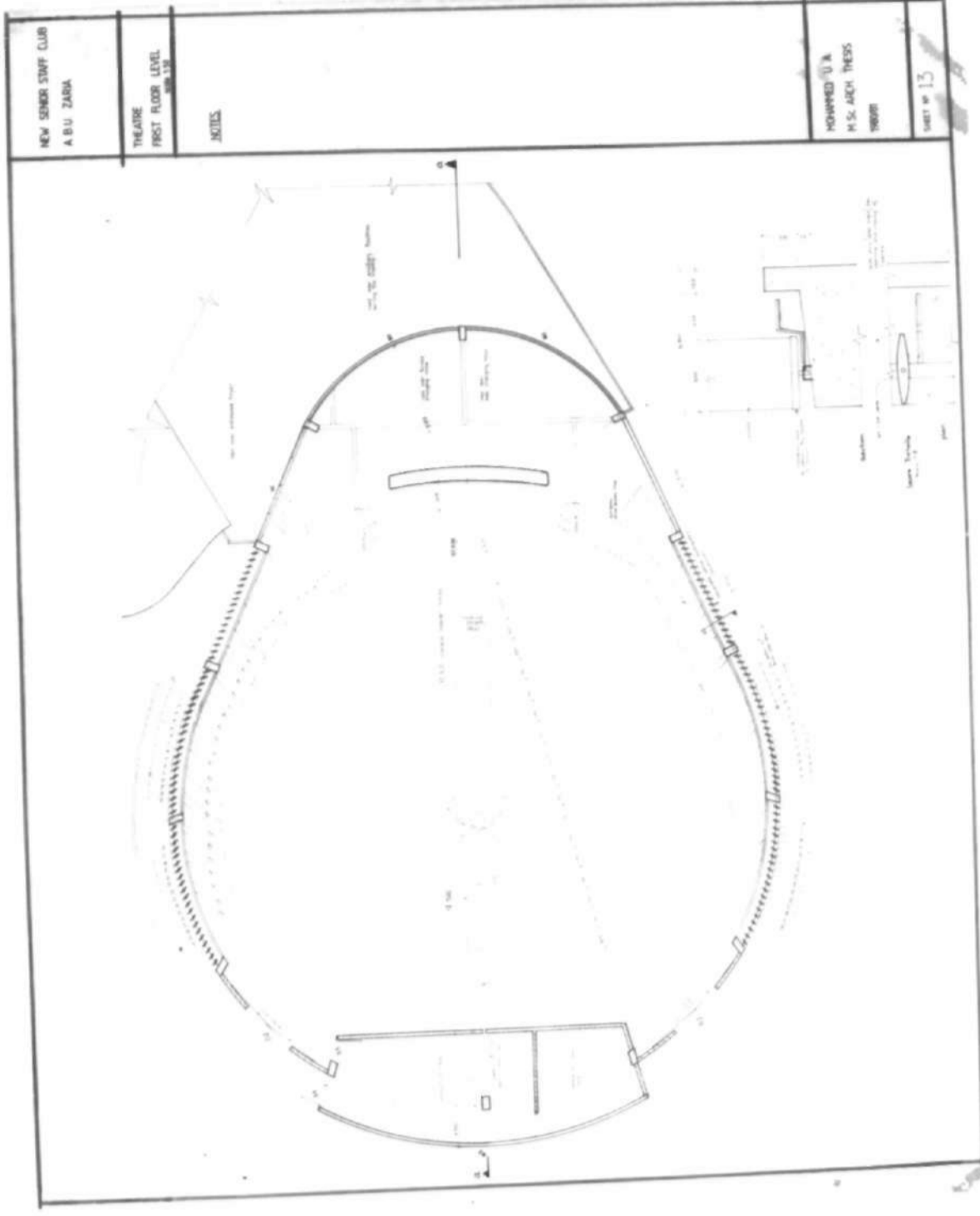
FREEDMAN PERSPECTIVE

RENDERING: U. A.
BY: S. J. ARCH. THESIS
MARCH

Sheet No. 10







NEW SENIOR STAFF CLUB
ABU ZABIA

THEATRE
FIRST FLOOR LEVEL
100.00

ACTING

PROPOSED TO
H.S. ALI THESIS
1980

Sheet No 13

NEW SENIOR STAFF CLUB
ABU ZAHRA

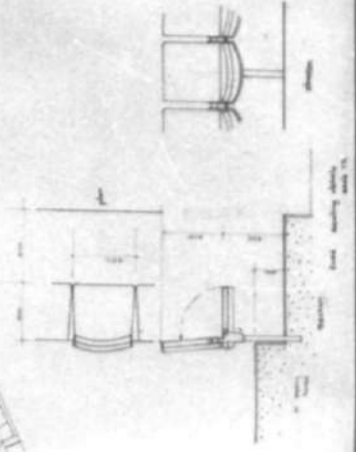
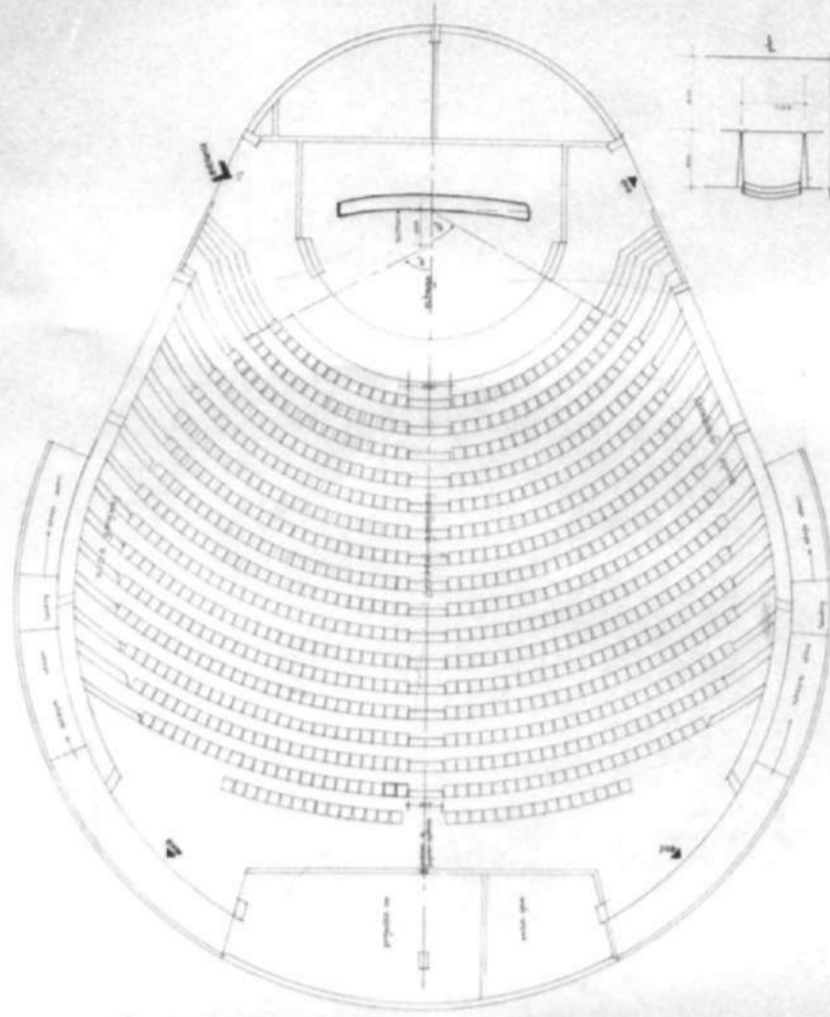
THEATRE
SEATING ARRANGEMENT
SCALE 1/8"

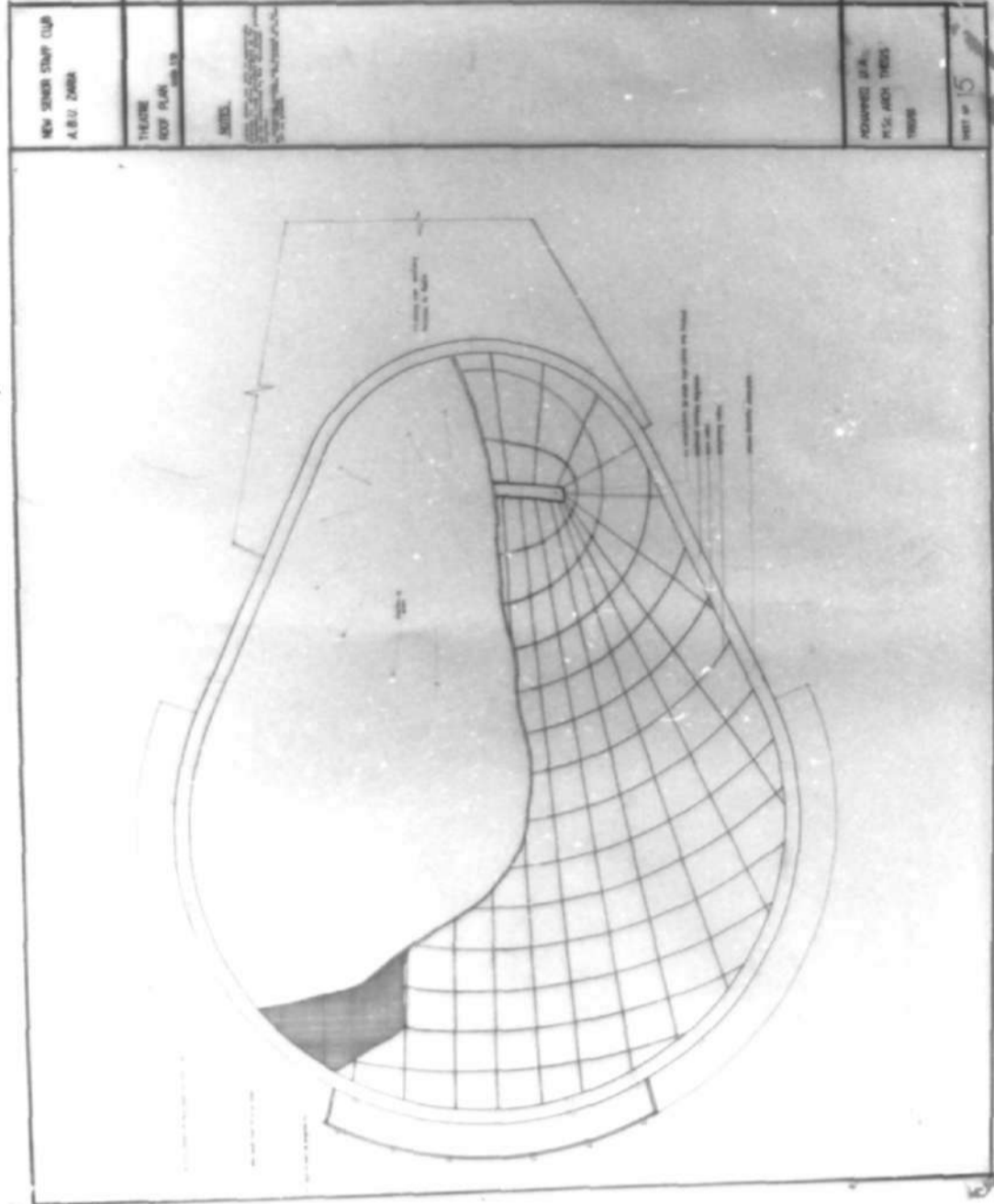
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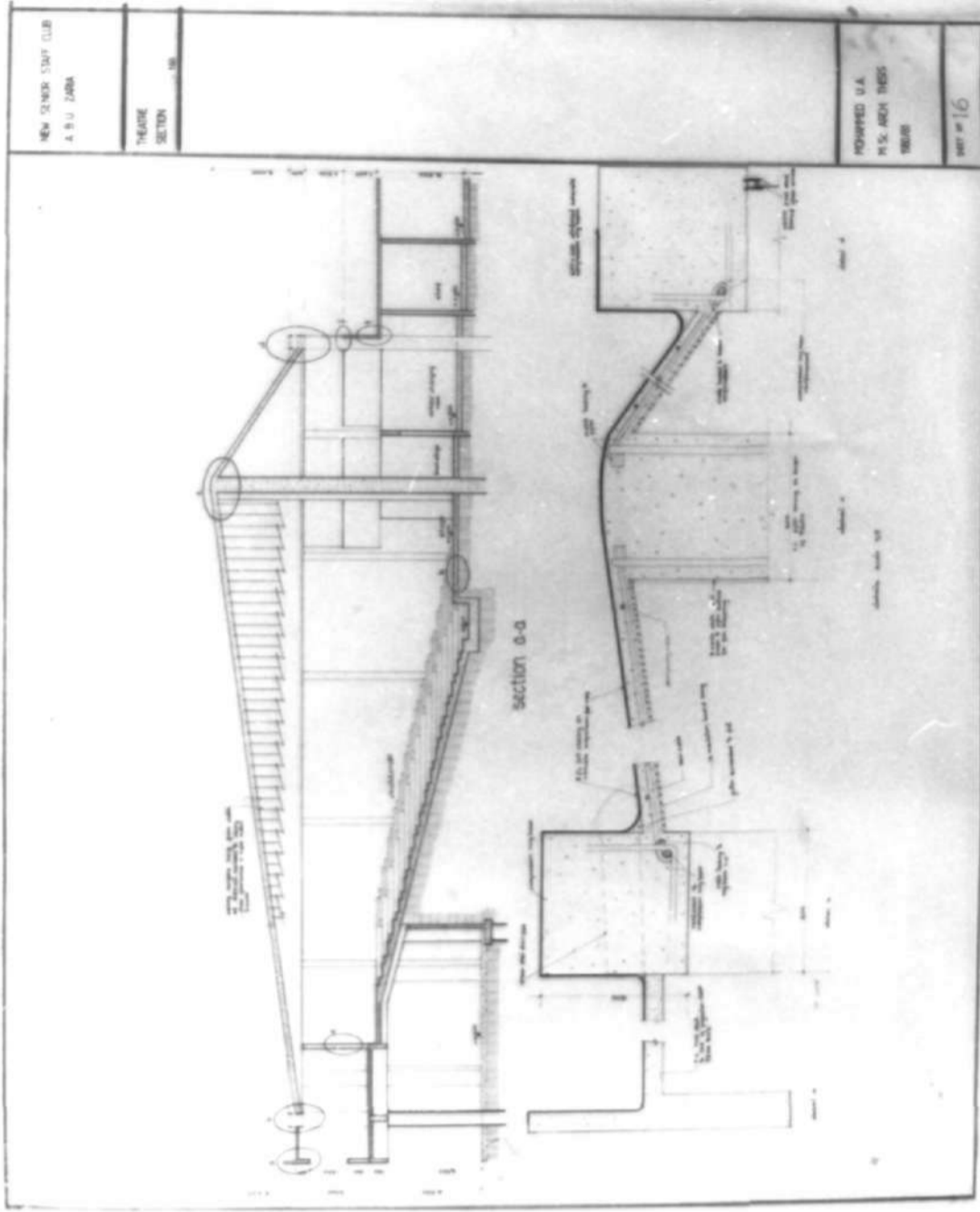
1. ALL SEATING SHALL BE IN ACCORDANCE WITH THE SEATING ARRANGEMENT SHOWN ON THIS PLAN.

FORWARDED TO
M.S. ARCH. DESIGNS
MEERUT

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NEW SENIOR STATE CLUB
 A. B. J. ZARA

TITLE
 SECTION

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 P. S. ARCH. DESIG.
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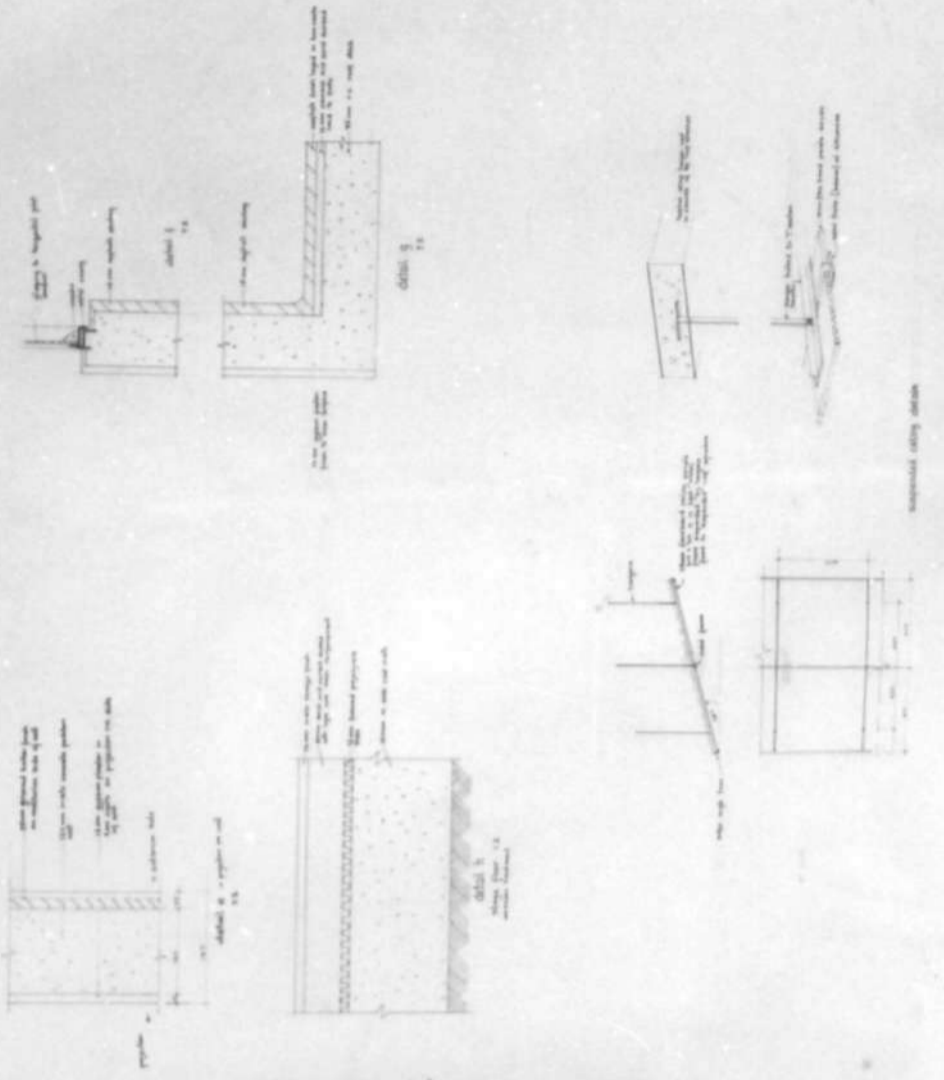
NO. 16

NEW SONOR STAFF CLUB
A.B.U. ZABA

THEATRE
DETAILS

HOUSSEIN U.A
H.S. ARCH. BUREAU
BAGDAD

SHEET 17



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