

NIGER REPUBLIC EMBASSY, ABUJA
B. TECH (ARCHITECTURE) THESIS.

BY

CHERGUI SASSI AHMED
(REG. NO. 90/1613).

DEPARTMENT OF ARCHITECTURE
SCHOOL OF ENVIRONMENTAL TECHNOLOGY
FEDERAL UNIVERSITY OF TECHNOLOGY
MINNA.

MARCH, 1997.

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FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA.
IN PARTIAL FULFILMENT OF THE AWARD OF B.TECH (ARCH).

DEPARTMENT OF ARCHITECTURE
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FEDERAL UNIVERSITY OF TECHNOLOGY,
MINNA.

MARCH, 1997.

CERTIFICATION.

Department of Architecture

Federal University of Technology, Minna.

The undersigned certify that they have read and recommended to the School Board (i.e. School of Environmental Technology, Federal University of Technology, Minna for acceptance this project thesis "NIGER REPUBLIC EMBASSY, Abuja" submitted by CHERGUI SASSI AHMED in partial fulfilment of award of the degree of Bachelor of Technology, (Architecture).

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PROF. SOLANKE
SUPERISOR/MONITOR

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DATE.

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DATE.

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H.O.D. ARCHITECTURE.

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DATE

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DEAN,
SCHOOL OF ENVIRONMENTAL
TECHNOLOGY.

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DATE..

DEDICATION.

This project thesis is first of all dedicated to God and to the following people who in one way or another have been always with me.

My Mum, Dad, Sisters and Brothers.

ACKNOWLEDEMENT.

My Sincere gratitude goes to the following people, Head of Department of Architecture, Dr.(Arc.) G.C. Nsude, who always wanted to see the progress of this thesis work.

To my Supervisor Professor S.O. Solanke, who always received me to discuss problems and the knowledge gained has led to the reality of this thesis wrote through proper supervision.

To the entire staff of the Department of Architecture and to Mr. Akonmu Williams of Building Department.

My thanks also goes to the Head of Department of Civil Engineering, Federal University of Technology, Engr. (Dr). E. B. Oyetola and to the Head of Department of Building Technology, M. Wuna.

To Mr. Bello, A. Staff of the Nigeria Embassy, Niamey (Niger Republic).

The following colleagues should be specially for this, since desire to always know the progress of this work namely; my classmatres, Katoune, Ousmane, Maustapha, Moctar, Laura (Miss), and others.

To my parents and relatives.

To Mr and Mrs Yusuf Elmoctar Nie Jamila.

Above all, I am grateful to Almighty God for giving me good health to withstand this academic programme, for his guidance, protection and supplying of my needs.

Thank you all.

ABSTRACT.

Niger and Nigeria are two Countries related historically and shearing a border line more than 1000km (Say - Barwu).

For Niger to have an embassy in Nigeria is normal. And this for strengthening their social, economical, political and cultural relations through diplomatic means.

Designing the Embassy for the Niger Republic in this Country is of great challenge to me being a student of Niger in the Architecture Department in Nigeria.

In order to achieve security purpose, I designed a control room at the gate equipped ^{with} advanced means, and the fence will be topped with controlled electrified wires capable of electrocuting when coming near the fence.

The Administrative block is equipped with all facilities ranged from the reception on ground floor to the Ambassador's Office (50m²) upper floor. Two doors are attached to his office the first one is a private exit or entrance door, the second leading to his private Secretary, through the private waiting area.

Attached to the administrative block which is a semi-public area, the ambassador's residence is located at the back so as to insure privacy, including the executive chalets and domestic chalet which are in the private area.

Then in the public area, there is the "case de passage" the multi-purpose hall and the open seating area. The mosque and the sport field are also within this area.

The parking space is divided into three:- Outside the gate visitor's parking space, and in side at both side of the gate is located the staff parking area at the right and the invited visitor's parking space at the left.

There is also an emergency exit from the residence to the street.

The flag is mounted on top of a famous cross called "croix d' Agadez" known by every body. It is located in front of the building.

The whole site is well landscaped, in some areas I introduced the desert sand with date palms, to make it look an oasis.

TABLE OF CONTENT.

TITLE PAGE:.....	i
CERTIFICATION:.....	ii
DEDICATION:.....	iii
ACKNOWLEDGEMENT:.....	iv
ABSTRACT:.....	vi
TABLE OF CONTENT:.....	viii
TABLE OF ILLUSTRATION:.....	

CHAPTER ONE

1.0 INTRODUCTION:.....	1
1.1 AIMS AND OBJECTIVES:.....	3
1.2 RESEARCH METHODOLOGY:.....	3
1.3 SCOPE OF WORK:.....	4
1.4 DATA COLLECTION:.....	4

CHAPTER TWO.

2.0 PHYSICAL AND SOCIO - CULTURAL BACKGROUND:.....	6
2.1.1 OVER ALL URBAN FORM:.....	6
2.1.2 LOCAL RESIDENTIAL COMMUNITY:.....	6
2.1.3 CENTRAL PUBLIC SPACE:.....	7
2.2 PHYSICAL LOCATION AND CLIMATIC CONDITION:.....	7
2.2.0 LOCATION:.....	7
2.2.1 THE GEOGRAPHIC LOCATION AND CLIMATE CONDITIONS OF ABUJA:	8
2.2.2 TOPOGRAPHY:.....	9

2.2.3	GEOLOGY:.....	10
2.2.4	VEGETATION:.....	11
2.3	SOCIAL - CULTURAL FACTORS:.....	13

CHAPTER THREE.

3.0	CASE STUDY:.....	16
3.1	INTRODUCTION:.....	16
3.2	CASE STUDIES:.....	16
3.2.1	NIGER REPUBLIC EMBASSY, ABUJA:.....	16
3.2.2	EMBASSY FOR THE FEDERAL REPUBLIC OF NIGERIA, NIAMEY (NIGER REP.):.....	17
3.2.3	CANADIAN EXTERNAL AFFAIRS, LAGOS:.....	18

CHAPTER FOUR.

4.0	THE DESIGN:.....	19
4.1	SITE ANALYSIS:.....	19
4.1.1	LOCATION:.....	19
4.1.2	TOPOGRAPHY:.....	19
4.2.3	VEGETATION:.....	19
4.1.4	SOIL:.....	20
4.1.5	CONCLUSION:.....	20
4.2	DESIGN PHILOSOPHY AND CONCEPT:.....	20
4.3	FUNCTIONAL ANALYSIS:.....	21
4.3.1	REQUIREMENT OF THE EMBASSY:.....	21

4.3.2 SITE PLANNING:..... 23

4.4 SPACE REQUIREMENT:..... 25

CHAPTER FIVE

5.0 CONSTRUCTION AND SERVICES:..... 28

5.1 MATERIALS:..... 28

5.2 CONSTRUCTION:..... 32

5.3 SERVICES:..... 32

CHAPTER SIX.

6.1 AESTHETIC AND GENERAL APPRAISAL:..... 35

CONCLUSION:..... 36

BIBLIOGRAPHY:..... 37

CHAPTER ONE.

1.0 INTRODUCTION.

Most diplomatic negotiations takes place in embassics or legations abroad, or in the foreign offices of the countries to which ambassadors are accredited. The physical buildings and grounds where diplomats work are known as embassics, or as legations if of a Secondary status. Included are the buildings need to conduct the business of the mission and the residence of the ambassador.

It will be the same when I will say "A country in a country."

In ambassador is the official representative of his government, he is a diplomatic agent of the highest rank.

He is "charged with four basic responsibilities that ranking diplomats have carried throughout history. There are: protection of his country's interest abroad; reporting to his government on conditions in the country of his assignment, negotiation of agreement; ceremonial representation....

As executor of his country's foreign policy.... his interests and his responsibilities range through politics, economy, commerce, industry, agriculture, finance, labor, standards of living, transport and communications, social welfare, education, science, art, reigion - in fact all aspects of life in the country of his assignment."

There is about three types of Ambassadors:

-An Ambassador ordinary lives in the foreign country to which he is assigned. He has the power to perform routine duties only, and must await instruction from his government on important matters.

- An Ambassador extraordinary, sometimes called and "ambassador without portfolio" or "moving ambassador," is one who is sent on special missions only.

- An Ambassador plenipotentiary is an ambassador ordinary or extraordinary who is given full power to conclude a treaty or conduct other important business.

The main duty of an ambassador is to report on what he observes and finds out in the foreign country. He entertains and is entertained, and maintains a wide variety of social contacts.

The ambassador, his family, and his staff are exempt from arrest in the country in which they serve (under the privilege of diplomatic immunity). Local police can't arrest them. But if a diplomatic agent flouts local laws or is disrespectful or indiscreet in his acts or words, the foreign government may ask his home government to recall him and it may even dismiss him. Designing the Niger Republic Embassy at Abuja is of great challenge to me as a student in Nigeria. So in this my proposal my main focus is to design a very functional Embassy as well as taken into consideration the philosophy of the department (Architecture - Federal University of Technology, Minna).

1.1 AIMS AND OBJECTIVES.

The main aim is to create an Embassy which should be complete in all aspect of function, aesthetics and services.

To present new innovation in design which allows for flexibility in the area arage -

To create a functional complex, acceptable for both to the users and the immediate environment.

The design proposal shall achieve the following.

- 1 - A welcoming and accessible embassy
- 2 - Creation of job opportunities for citizen, reducing a little bit unemployment.

1.2 RESEARCH METHODOLOGY.

For this project, Embassy, the following are the method employed for the research work:

reading and studying through vast literatures of related topics, so as to obtain the necessary information about Embassy, and being able to determine the standard used in the design of the Niger Republic Embassy.

1.3 SCOPE OF WORK.

This design proposal is expected to accommodate about 20 - 25 staffs.

Thus design proposal for the following accommodations:

- . Administrative units
- . Case de passage
- . Clinic (First Aid room)
- . Multi purpose Hall, in which different activities may take places.
- . Residence
- . Executive chalet
- . Supporting out door facilities such as play areas, landscaping facilities, car parking.
- . Auxiliary facilities such as, mosque, Generator water tank ...
- . Domestic chalet
- . Open seating area, where cultural activities may take place

1.4 DATA COLLECTION.

One of the most critical and important point in design an embassy is data collection. Because some embassies may not allow you to go in, some may just treat you as you come for spying.

These are other data collection means exploited in the cause of this research includes:

- (a). Photographic Records - this consist basically photographs of some existing features for visualizing purposes.

- (b). Case study - This in the study and review of existing and documented related structures presented as Design Environmental problems and solutions. Investigate the topography, vegetation, soil condition, access facilities, location of the site etc.
- (c). Personal visit - This is the visiting of, such building relating to, the diplomatic aspect, to ascertain, problems and gains.
- (d). Oral interview - Direct interview with users, such as staff, workers, visitors.
- (e). Other sources - This include information from Niger Republic Embassy, Abuja; Ministire des Affaires Etrongeres Niamey; Commission mixt Nigero - Nigerian (Niamey) and some from my friends and Federal University of Technology, Library.

All data collected are carefully studied, critically, analysed and synthesised, to yield a meaningful out put. The out put are however, subjected to positive criticize.

CHAPTER TWO.

2.0 PHYSICAL AND SOCIO - CULTURAL BACKGROUND.

Nigeria has an important Urban tradition, in which case the New capital City of Nigeria must preserve and build on that which is unique and valuable in Nigeria's urban tradition.

The important ingredient in the development of Abuja, is a review of the relationships that have developed between social and physical aspects in existing Nigerian cities.

The indigenous tradition structure of Abuja, show the following social/physical characteristics:

2-1-1 Overall Urban Form - This is a process of accommodating the city form to maximize the site opportunities and of providing for public transportation.

2-1-2 Local Residential community - Within this community tradition, both the natural site constraints of the city and the flexibility of grouping various local service facilities.

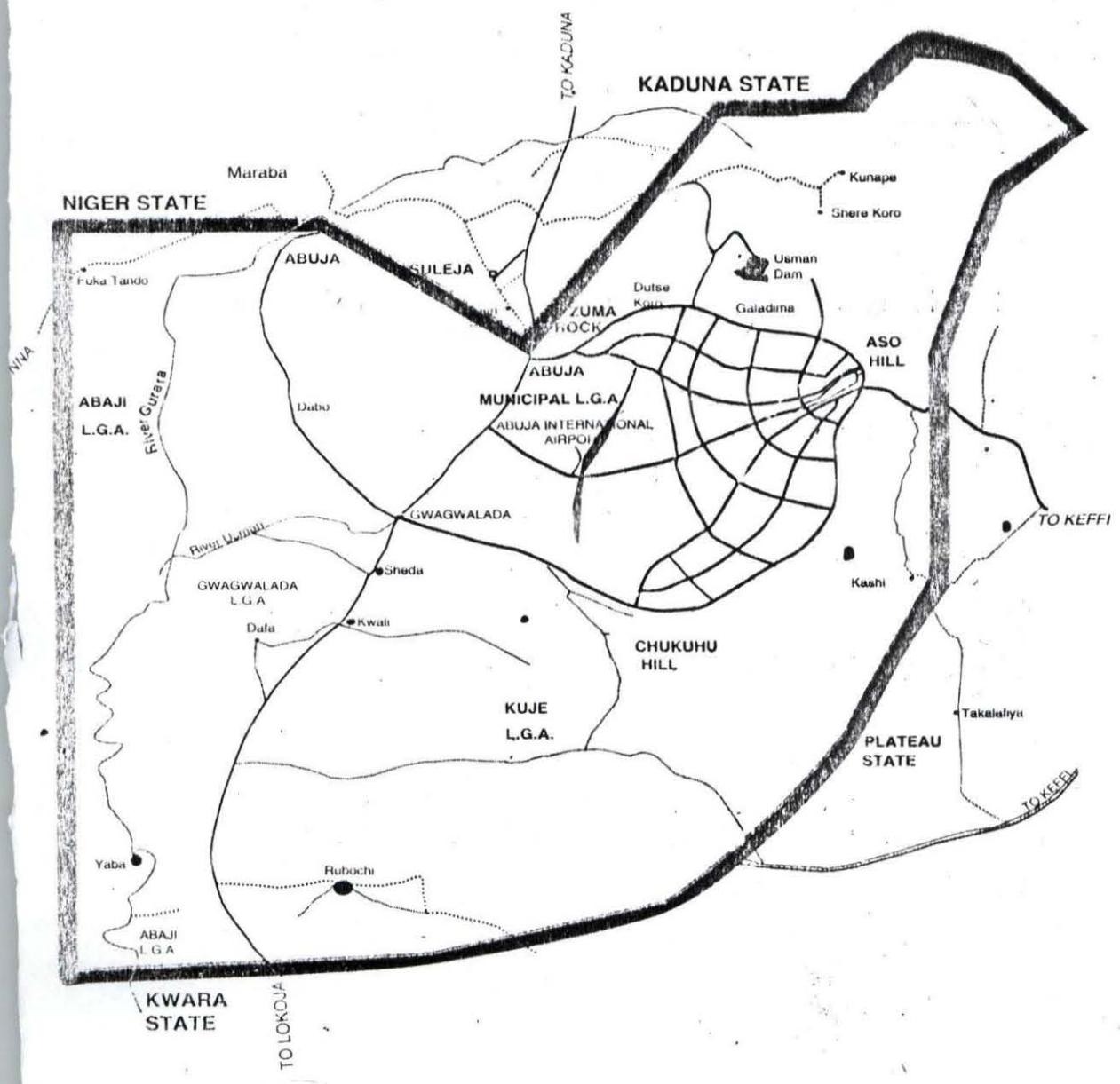
Five types of factors identify a local residential communities.

a - Physical - Primary spatial boundaries and local design quality

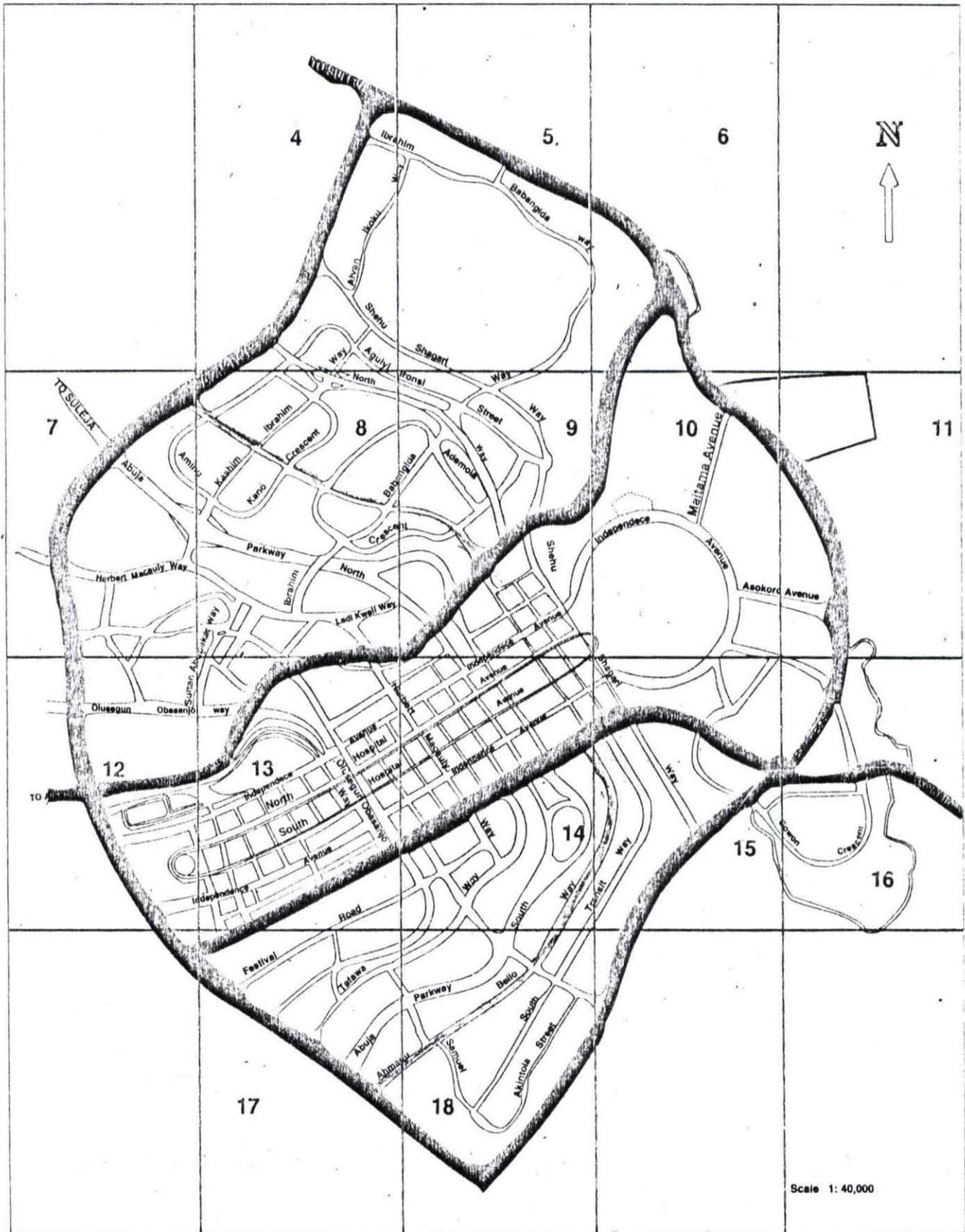
b - Service system - Facilities and services provided by residents.

c - Social - Kinship and cultural ties which encourage interchange among residents.

MAP OF FACT



MAP OF ABUJA CITY



NOTE

Each grid represents a street map page, and the numbers on each grid represents the page number.

- d - Government - Mechanisms of service communication and control between the local area and various levels of formal government.
- e - Economic - Employment and commercial establishments within short travel distances of home.

2.1.3 - Central Public space - It aims at creating a functional and organically - wholly central area early in the life of the New Capital by concentrating facilities along the axis to convey a sense of completeness and urbanity. The organisation is based on:

- (a). Defining the Central Area as a unique and special place
- (b). Producing a sense of arrival at the Central Area for those coming to it from elsewhere.
- (c). Imposing geometrics which allow flexibility and predictability in movement patterns in the Central Area.

2-2 Physical location and climatic condition

2-2-0 Location

The area within which the site proposed for the development of Embassy is located in Maitamav, Abuja.

The Federal capital territory is located in the less developed middle Belt of the country. The site selected by the location committee is an 8,000sq. kilometer area, south of Abuja surrounded by Niger, Kaduna Plateau and Kogi State which was defined in the 1976 Federal Capital Territory decree. The Federal Capital Territory is centrally

Located with Nigeria lying above the hot and hind low lands of the Niger Benue, though but below the drier parts of the country lying to the North. It also lies to the North of the wide alluvial plains formed by the confluence of the Niger and Benue Rivers.

2-2-1 The Geographic location and climate conditions of Abuja is going to be discussed here taking into consideration the following

(i). - Rainfall

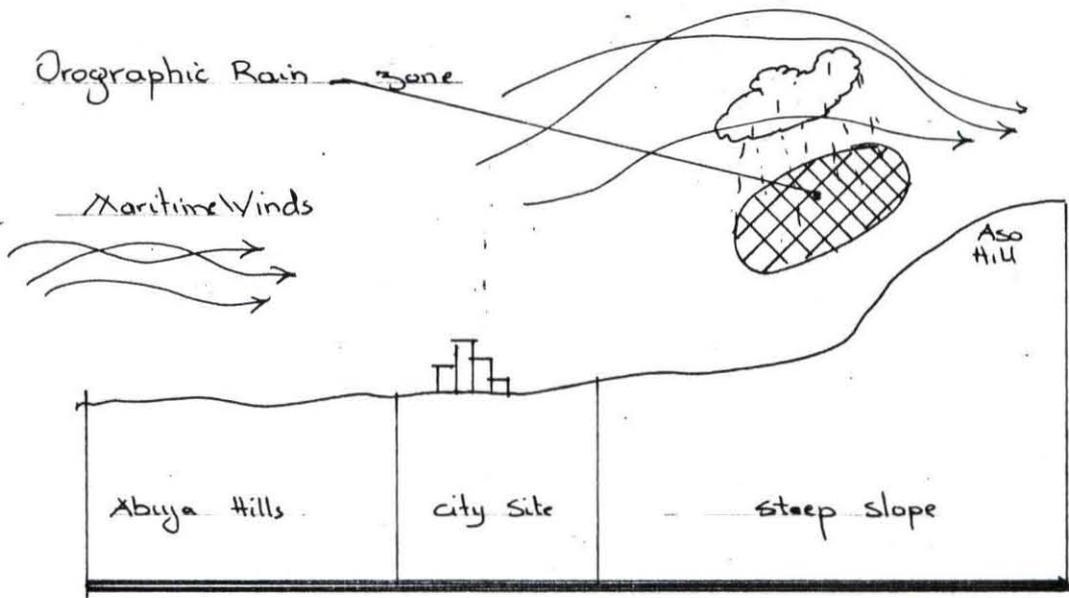
The raining season in the Northern part of the city started around 10th of April. The duration of the raining season is between 180 days to 190 days. 60% of the annual rainfall in Abuja is the month of July, August and September. The concentration of rainfall shows the need for drainage system to handle large volume of water very quickly. The rain may last for one-half hour followed by drizzle of several hours duration.

(ii). - Temperature.

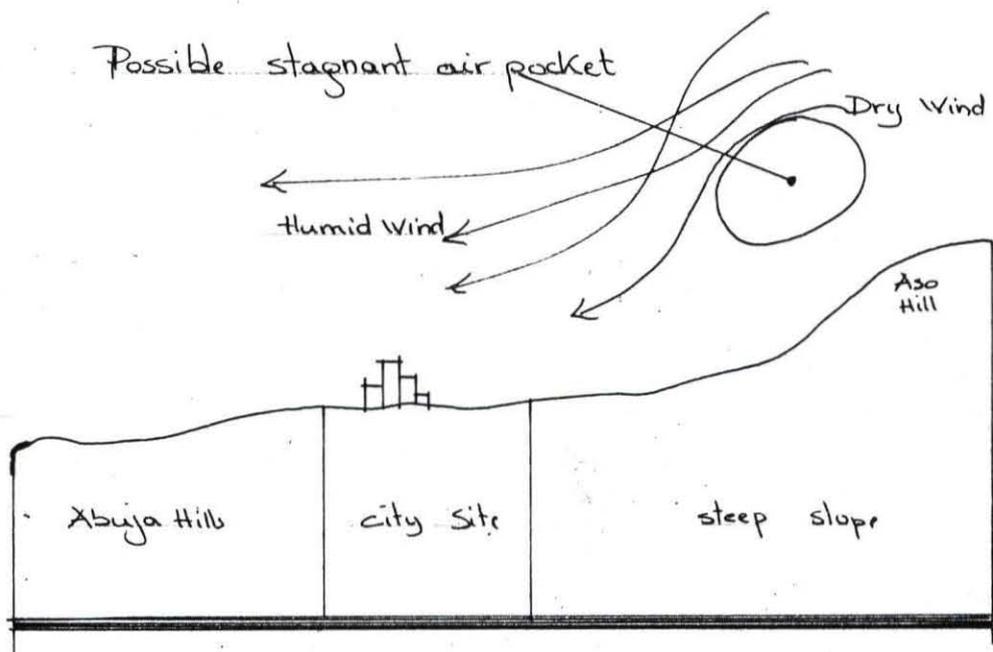
Abuja has its highest temperature during the dry season when there are few clouds. Between the highest and lowest temperature in a day, changes in temperature of 17°C has been recorded. During raining season the maximum temperature is lower due to dense cloud cover. The annual range is also lower, not more than 7°C in July and August.

(iii). - Humidity.

Human sensibility to temperature is greatly affected by relative humidity. During the dry season relative humidity falls in the afternoon to 20%.

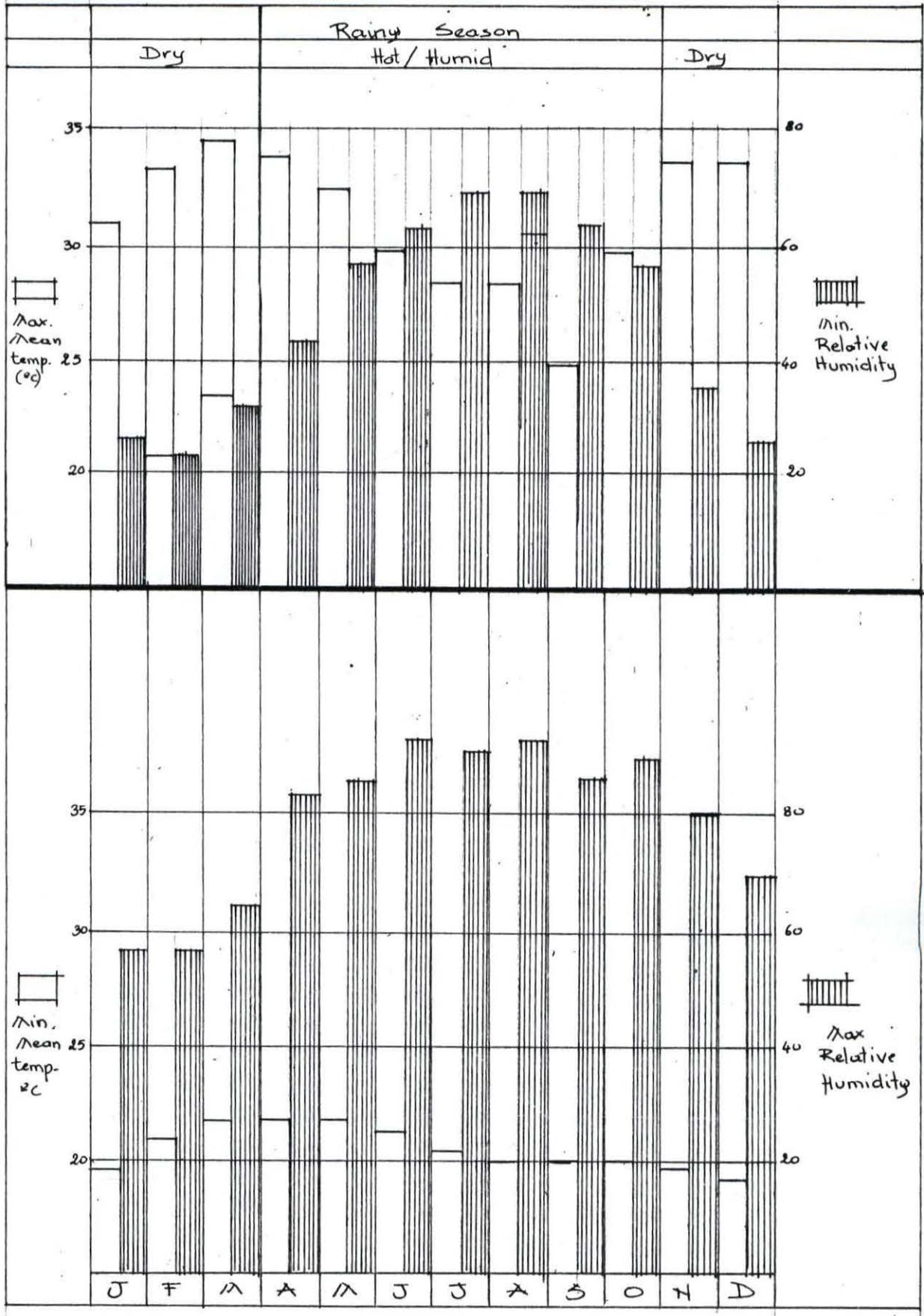


- Wet Season 6-7 months



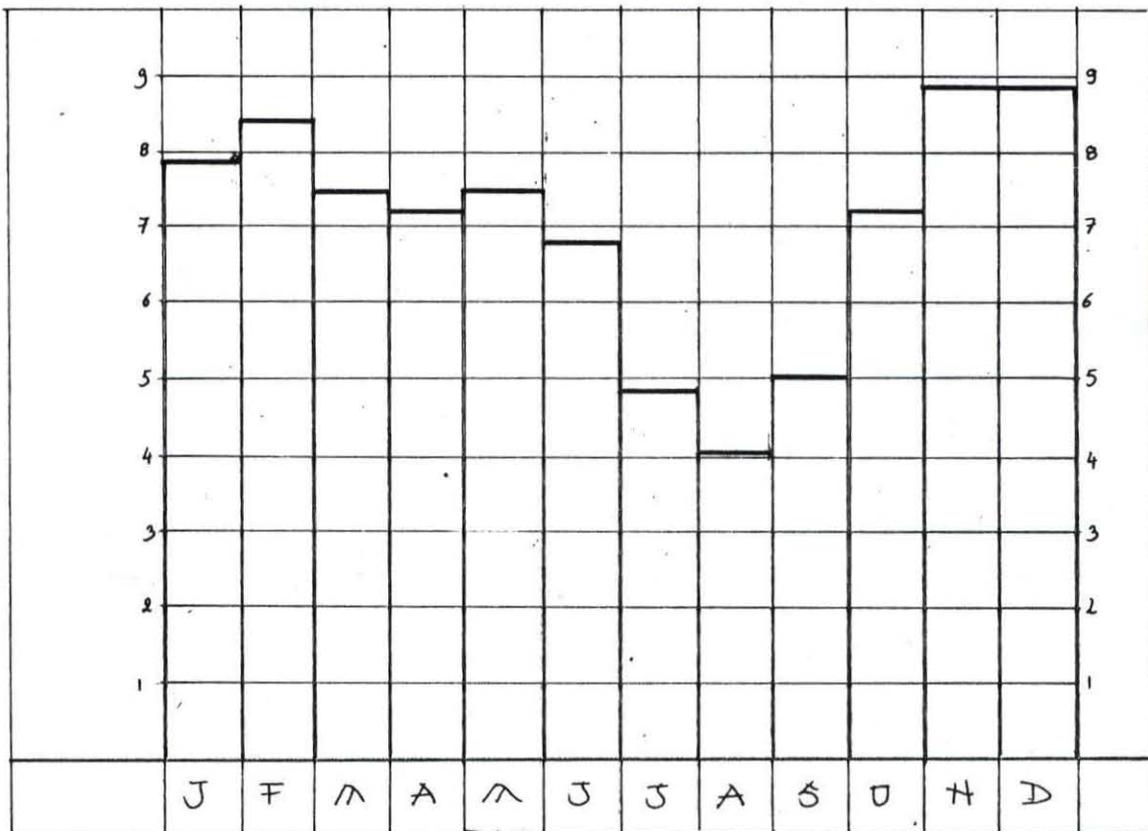
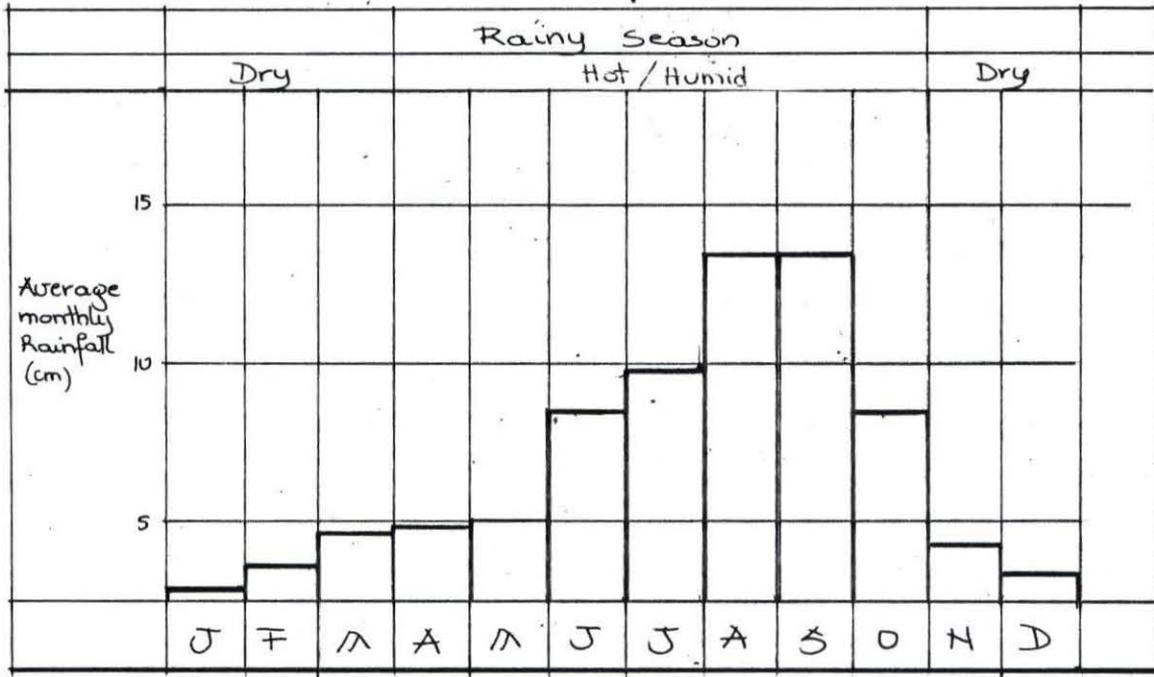
- Dry Season 5-6 months

CLIMATIC DATA:



Mean Monthly Temp. and Humidity

Mean Monthly Rainfall



Mean Monthly Sunshine Duration

The low relative humidity coupled with the high afternoon tos, account for the deccating effects of the dry season. However in the raing season, the relative humidity is much higher especially in the morning hours when in likely to be 95%, the effect of this is to create a heat trap, even though there is low in temperature when this accen, the feeling uncomfortably hot.

(iv). - Wind Dust.

Abuja is dominated by two major air masses - these are the tropical moritime air mass and the tropical contiental air mass. The tropical moritime is formed over the Atlentic Ocean to the south of the country, and is warm and moist. It moves in a south - west to north - east direct.

The tropic continental air mass is developed over the Sahere Desert and is warm and dry. It blows in the opposite direct of north - east to south - west.

The oscitlation between these two air masses produces the highly seasonal characteristics of weather conditions in the country. The tropical continal, mass in associated with dry season, while the mentive mass is associated with wet season. The two masses are xsed by the presence of preveiling wind.

2.2.2 - Topography.

The area is typified by gently andulating territory interlaced by aivenive depressions. The height variation from crest of hill to water-course varies around 50m, more or less - in the immediate vicinity of some-

one on the ground it produces short views of a mile or less - The visual scale is intended to be used as design focal points to convey the sense of the larger scale of the city.

The city site consists of uplands and plains with numerous inselbergs, whalebacks and other rock outcrops of various sizes.

2.2.3 - Geology.

The major rock units underlying the Federal Capital City are the metamorphic rock, sedimentary rock and igneous rock.

- (i). Igneous rock: this includes Biotite granite which comes in two forms such as, the coarse porphyritic and the fine to medium - grained. The third type of igneous rock is the Rhyolite. This forms small round intrusives and surrounded by porphyritic gneiss in the Usman valley of the north - western part of Abuja.
- (ii). Sedimentary Rock: is located in the stream beds throughout the city. This consists of largely sand with rare gravel beds and local deposits of clay.
- (iii). Metamorphic Rock: This includes the Biotite - Muscovite schist. It is limited to four narrow outcrop bands along ridge tops at the eastern edge of the city. Also includes migmatite, which is underlying the majority of the site.

The tropical continental mass is associated with the northerst trade winds while that of the tropical mentive is the southerest monsoon winds. There is vouation in the intensity and denotion of each type of wind in a particular place, due to interface of these two masses.

In June, only the southerly flow of air component predominates while that of the northerly flow weakened. It brings lot of rain, being moisture beden. However in sept the tropical continental begin to intensify over the city and the northerest trades become the dominant wind between October and March bringing with it dry, doudless but derst- beden conditions is associated with haimutaan.

(v). - Sun and Cloud Cover.

During the dry months (November - April), the monthly variet in the amount of sunshine follows the general trend of an increased from over 275 hours on the city. As the rainy season approaches, the docudiners increased, the city site is exposed to 2,500 sunshine hours annually (Mabogunye 1977). The decline in sunshine hours becomes more intense as the rainy season progresses and it got to its lowest values in August. At this period, there is an inversion in the city where is less sunshine hours comped to the southern parts of the territory.

2.2.4 - Vegetation.

The veg of the city is xzed by park savanna - This is a typical stratified community with a discontinous canopy, shub, and grass layer. Park savanna includes a thick, tall gross layer consisting of And opogon

and Hyparrhenia Species and most common strub layer such as Terminalia, Piliostigma, Amona, Nauclea and Bombax. The shub savanna veg. occurs on flatter plain and underlating terrain. A preserved riveine and rain forest stablize stream barks and during the rainy season, there would be reduction in the crosive potential of flood flows, hence water quality is maintained.

2.3 SOCIAL - CULTURAL FACTORS.

i - Demographics.

Extrapolation from latest available statistics determines the demographic characteristics of Abuja - City and to subsequent influence on the project at hand.

Analysis shows that 40 to 60 percent of; the informal service work force and a small percentage of the industrial work force is either non-wage (trainees, apprentices, etc.) receiving various forms of non-monetary compensation, or are bringing in sufficiently small amount, of income on a part-time basis to ignore for income calculation purposes.

There characteristics are: Age/Sex distribution the number of house holds; and the anticipated income distribution by the year 2000 population.

ii - Economy and commerce

Range of business, household and personal services that supply goods and services to the capital city include:

- a - Large - scale modern retail shopping centres
- b - Private commercial offices in the commercial core, sectors centres and district centers.
- c - Specialised business services e.g. banking, insurance, real estates.... etc.

The proposed Embassy, in the Federal Capital City with all these services is a good point, because it stands administratively in terms of financial, insurance and banking protection.

iii - Transportation and traffic control.

The use of linear spine/feeder system, make possible a series of entrances and exists to allow buses to loop off of the spine, and to provide direct service to a district and then to return to the spine.

The street pattern refined for this alternative would allow maximum flexibility in transit within the sector as well as providing a high level of transit service between sectors vice the transit spine.

Because this alternative does not imply a fixed feeder loop, additional access points to the transit spine have been developed to accommodate projected honsit demand.

Auto or delivery truck criculation within the sector has been exemined and has been found to be easily accommodated on the same circulation roads used by the public transit system.

All these are quite good for an Embassy design because it provides: easy and accessibility with minimum constraints to reach and for delivering (fuel).

iv - Land Use

Special attention was paid to standards for residential and local

public facilities as the major landscaping element in the city.

The 25,658 hectares include "unusable land" such as rock out cropping or steep slopes not otherwise programmed for open space.

The total city area is equivalent to 256 square kilometers.

CHAPTER THREE.

3.0 CASE STUDY.

3.1 INTRODUCTION

The purpose of the research is to study the problems and general trends in Embassies. These trends and problems will then serve as a guide in the determination of the facilities to be provided in the proposed Embassy for the Niger Republic.

In order to tackle these problems design appraised or case studies was taken from within and outside Nigeria.

3.2 CASE STUDIES.

3.2.1 NIGER REPUBLIC EMBASSY, ABUJA. CASE STUDY I

Embassy of the Federal Republic of Nigeria, Niamey (Niger Republic)

(i). Introduction

The embassy has been commissioned on the 24th of June 1993, by General Ibrahim Babangida.

The site is located in Yantala Bas.

(ii). Merits

- . Well located
- . The site provided is very wide
- . The fence is electrified on top
- . Well Landscape

- . Enough parking spaces
- . It is functional
- . Well secured
- . The Flag pole is well located

(ii). Demerits

- . Visitor's parking space is not well planned
- . The Generator House not well located
- . The residence is far away from the crate
- . No provision for health facilities
- . Lack of vartical elements on the facade
- . No emergency exit

3.2.2 Case Study II

Embassy of the Republic of Niger, Abuja

(i). Merits

- . The fence is electrified on top
- . Aesthetically good
- . Well located
- . The flag pole is well positioned

(ii). Demerits

- . It is not functional
- . No visitor's parking space
- . Lack of parking space
- . Not well landscape

- . The site is very small
- . Lack of waiting area
- . Security not very efficient

3.2.3 Case Study III

mission: External Affairs, Lagos

(i). Merits

- . Provision for all necessary facilities
- . Well securied
- . Flag pole is well located
- . Well landscape
- . Aesthetically good

(ii). Demerits

- . There is many entrances
- . No provision for Health facilities
- . Parking space is not enough; both for public and staff.

CHAPTER FOUR.

4.0 THE DESIGN

4.1 SITE ANALYSIS

4.1.1 LOCATION

The site chosen for this project is located at maitama District, Abuja. Taking into consideration that the chosen site has around it, but at the same time easy accessibility, good road network.

4.1.2 TOPOGRPHY.

The given site for, this project is sloping towards the access road, but almost flat terrain at the top. The longer side of site is orientend in the North - West direction.

The site is covered with reasonable extent of grass cover, lowering temperature and preventing wash of top soil.

The nature of the soil will not pose problem of drainage and there is provision for drainage channels along the front side to take care of any accuring problem.

4.1.3 VEGETATION.

The vegetation on the site is that of savanna grass land which is present all over Abuja-City; consisting primarily of grasses and trees scattered almost everywhere on the site. The trees are composed of decidions, and evergreen. The height of the trees are, however, varied from small to medium in height at maturity.

4.1.4 SOIL

The site is presenting a compacted soil. It consists of small gravels, decay plant and animal materials at the vary top layer.

The soil type is one of great stability and firmness, with good compressibility. It has no frost action and gives an excellent drain.

The foundation type to be used during construction must follow the requirements of this soil

4.1.5 CONCLUSION

The site analysis of the site for the proposed Niger Republic Embassy affers hopes of a reasonable degree of privacy, suitability, visibility, quietness and most important the security and accessibility.

4.2 DESIGN PHILOSOPHY AND CONCEPT.

Architectural motives and ideas are responces to important symbolic design themes and the derivation of these ideas and their subsequent development follow a requence of reasoning.

The nature of the environment or the function of the design, could be some of the basic factors influencing its development.

The major thing in this design is to satisfy the design aims and objectives as well as the function of the building.

The following are the prime consideration:

1. Cheerful and welcoming environment
 - clearly visible entrances
 - good combination of soft and hard landscape elements
 - provision of play areas
 - choice of symbolic feature
2. Privacy, security and visibility
 - many walls are glazed
3. Flexibility, simplicity and integration
 - choice of simple geometric shapes

4.3 FUNCTIONAL ANALYSIS.

4.3.1 REQUIREMENT OF THE EMBASSY.

For a successful design and planning and as well as function to be achieved, the following requirements are necessary:

A. Security Department.

1. Security Gate
2. Control Room
3. Bedroom for Guard
4. Vertical tilte at the gate

B. Embassy

1. Case de passage
2. Clinic
3. Offices
4. Multipurpose hall

5. Exhibition over
6. Emergency stair case for the ambassador
7. Toilets and stores
8. Archives room

C. Residential

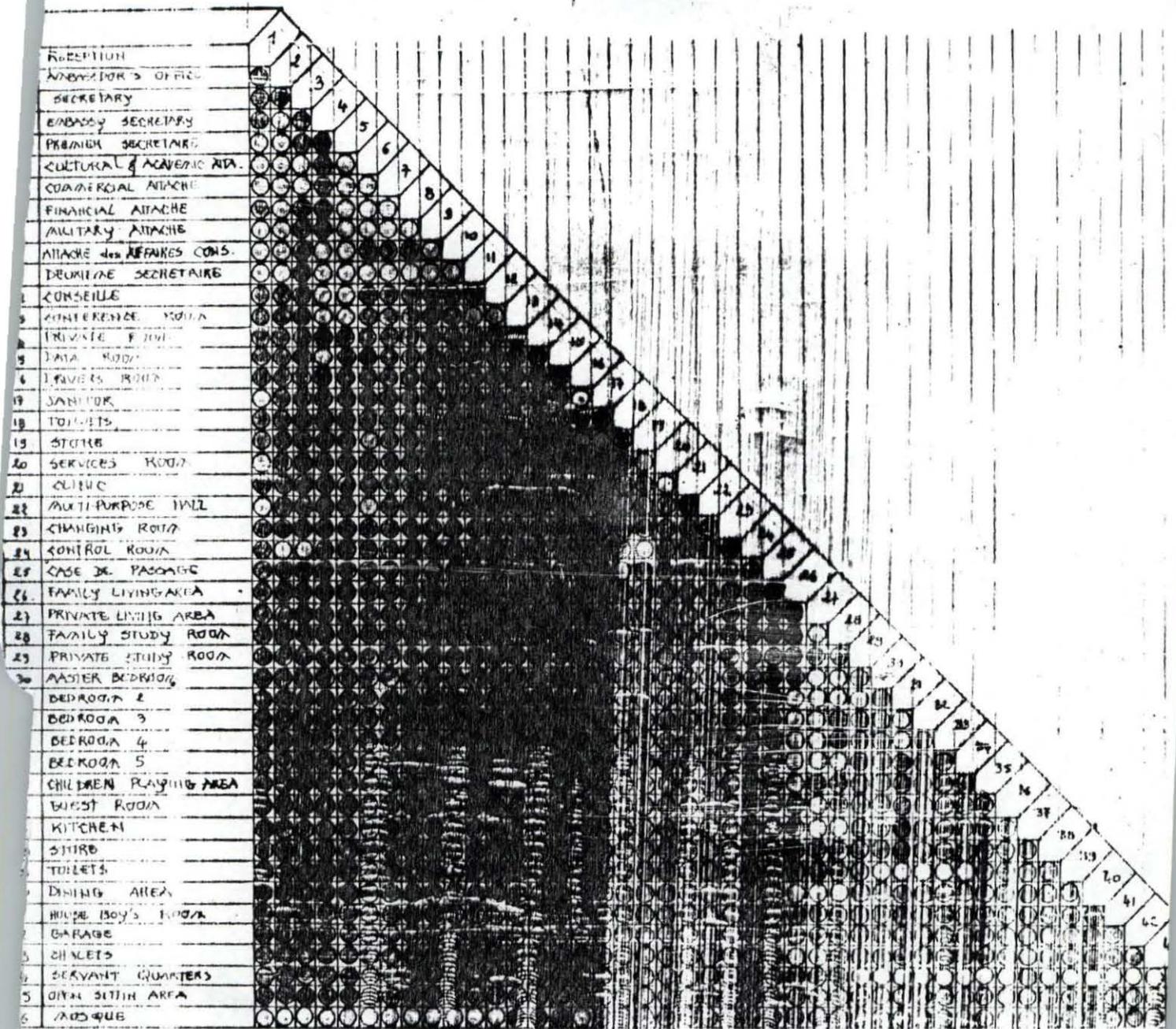
- Ambassador's residence
- Executive chalets
- Domestic chalet

D. Support Facilities

1. Mosque
2. Water Tanks
3. Generator Room
4. Car Parking
5. Recreation facilities such as swimming pool, sport field, graden
6. Open seating area for cultural activities

Each unit above is extensively analysed. Examining the relationship with each other. Within the unit also the same analysis of the required relationship is carried out these were carried out with in each unit and among different units as:

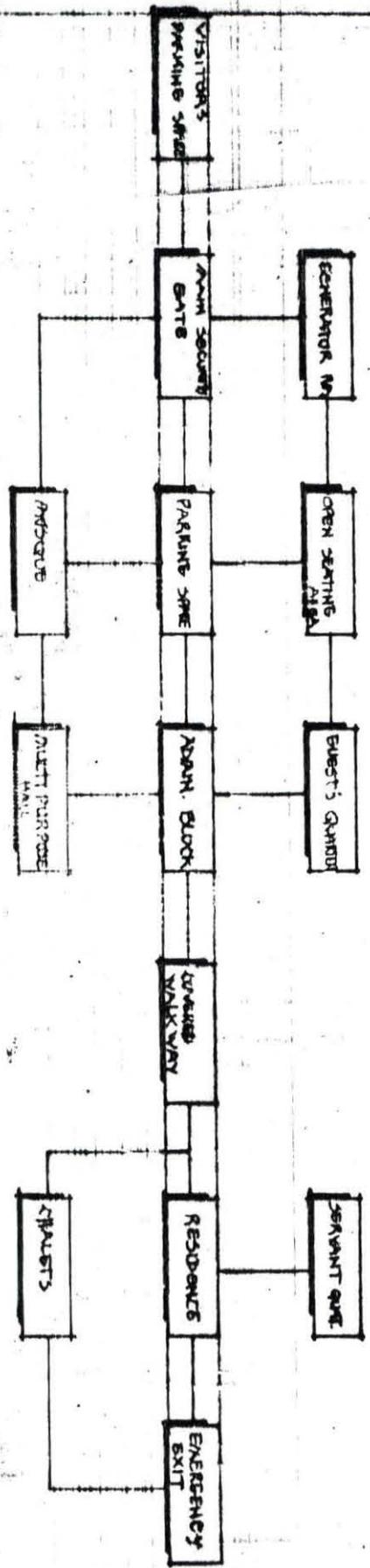
- a. triangle of functions, using hot, warm, cold relationship, as each relations demands.
- b. Functional diagram, which interpret this relation and transfer it into boxes representation.



TRIANGLE OF FUNCTION

Niger Republic

COLD
WARA
HOT



The integrated triangle of function which eventually express itself as boxes representation on integrated functional diagram.

This design method used is called canonic design approach, it allows function to lead into one another and this is a special point in Embassy design where interrelationship of each part is highly important.

4.3.2 SITE PLANNING.

The design approach use, allow for flexibility in site planning. Site can easily be planned according to the functional requirements and or nature of the environment.

A. Security Department

The security department, accommodate facilities for check up purpose at one hand and security at, the other. This is where high control is made by the use of computer system/camera for security.

B. Embassy.

This is where diplomatic decisions are taken. It's need for privacy, security and quietness.

Therefore the design and planning of the layout is done in a way, that the main entrance is not mistaken and the multipurpose hall entrance is easily located.

Adequate car parking is provided nearby, though not obstructing but complementing the overall design.

C. Residential

The planning of the area, leave no doubt that the accommodation and its residence can not be obstructed, nor it being an obstruction. In the design of the site, covered walkway is provided to join the office, and the residence.

D. Support Facilities.

For these facilities however a good service access is required. The planning of the site allow the service route without obstructing the main access route except required.

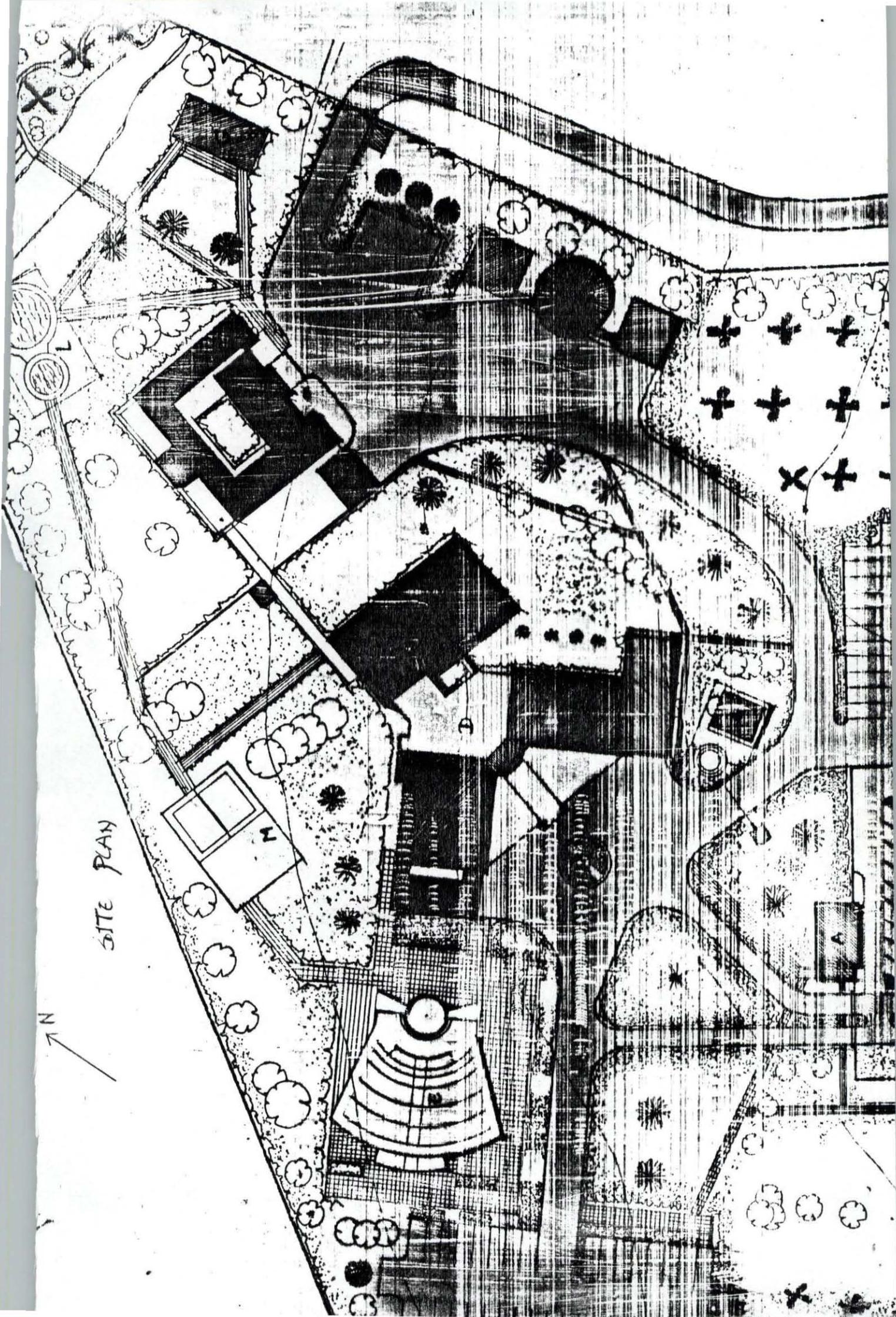
E. Auxilliary

Convinient parking spaces have been provided at the location of various unit.

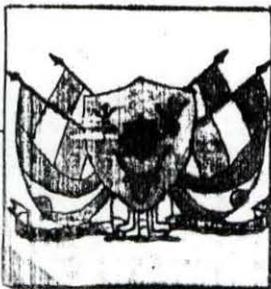
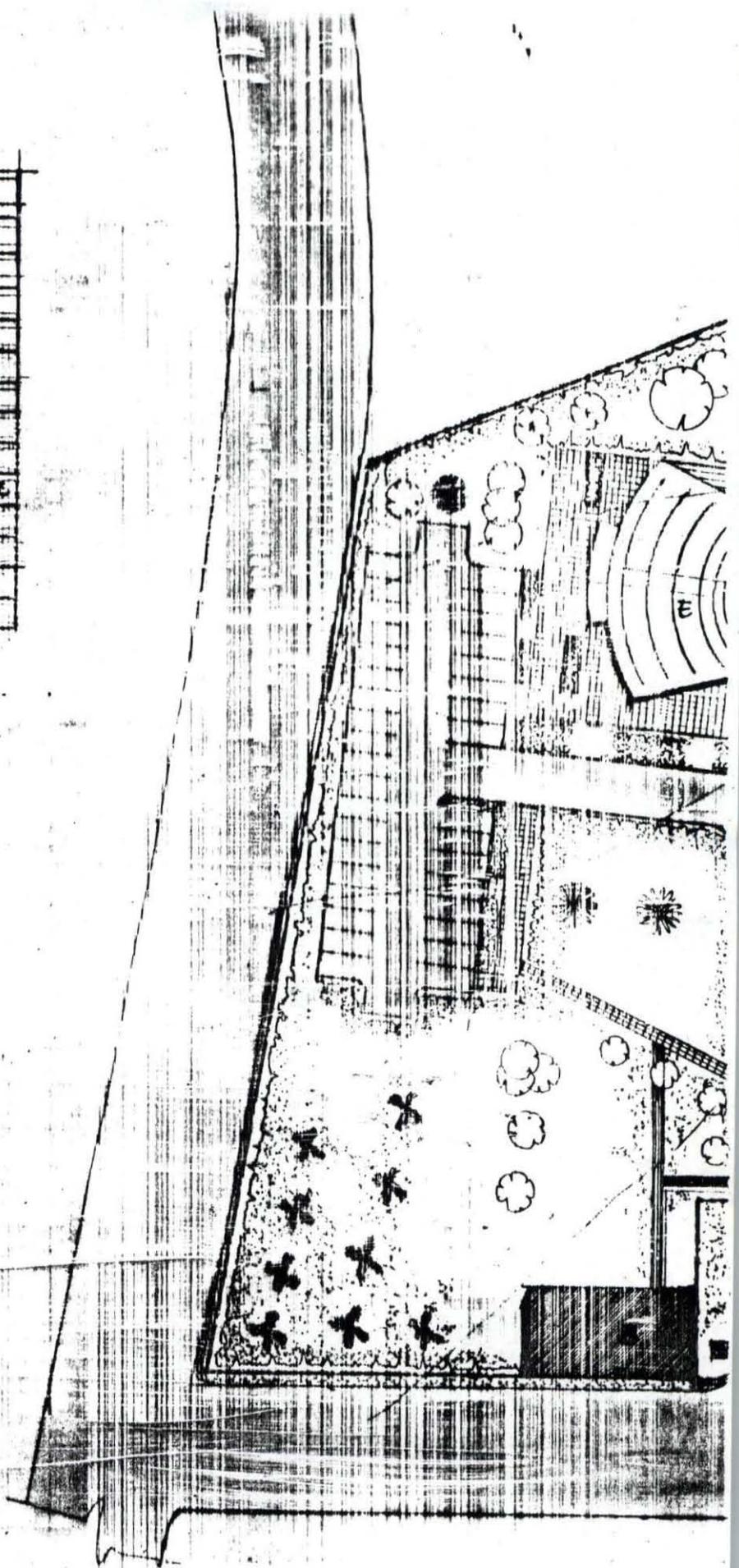
The recreation facilities for the embassy includes: play ground, seat-outs, basketball field, long tennis.

In landscaping the site, a lot of trees, shrubs, trimmed hedges and planted flowers are used.

There is also some Niger trees which will be planted such as: ecaliptus, date palm ... etc.



KEY	
A	SECURITY GATE
B	GENERATOR HOUSE
C	MOSQUE
D	ADMIN. BLOCK
E	OPEN SEATING AREA
F	RESIDENCE
G	SERVANT QUARTERS
H	CHALET'S
I	VISITORS PARKING SPACE
J	STAFF PARKING SPACE
K	GARDEN
L	SWIMMING POOL
M	SPORT FIELD



B. Terr.
Frasia

Niger Repul

SPACE ANALYSIS.

A.	Security department :.....	Space (m ²)
1..	Security gate:.....	30
2.	Guard room:.....	6
B.	Administrative block	
1.	Reception:.....	6
2.	Admbassador's office:.....	55
3.	Secretary:.....	25
4.	Embassy Secretary:.....	20
5.	Prime Secretary:.....	30
6.	Cultural and academic attachi:.....	25
7.	Commercial attachi:.....	30
8.	Military attachi:.....	40
9.	Conference room:.....	55
10.	Private room:.....	25
11.	Driver's room:.....	16
12.	Janitor:.....	15
13.	Toilets:.....	2
14.	Store:.....	
15.	Attachi des Affaires Consulaires:.....	
16.	Multipurpose Hall:.....	
17.	Changing room:.....	
18.	Control room (visual):.....	

- 19. Services room:.....
- 20. Clinic:.....
- 21. Deuxieme secretaire:.....
- 22. Case de passage:.....
- 23. Conseilli:.....

C. Residence.

- I. Ambassador's residence:..... (m²)
 - 1. Family Licing Area:.....
 - 2. Family strudy Area:.....
 - 3. Private living Area:.....
 - 4. Private study Area:.....
 - 5. Master bedroom:.....
 - 6. Bedroom 2:.....
 - 7. Bedroom 3:.....
 - 8. Bedroom 4:.....
 - 9. Bedroom 5:.....
 - 10. Kitchen:.....
 - 11. Store:.....
 - 12. Children playing Area:.....
 - 13. Dining room:.....
 - 14. Guest room:.....
 - 15. Toilet:.....
 - 16. Garage:.....
 - 17. Hause boy's room:.....

II. Chalets

(a). Executive chalet

Sitting area:.....
Dining room:.....
Kitchenette:.....
Bedroom:.....
Study area:.....
Toilet:.....

(b). Chalet

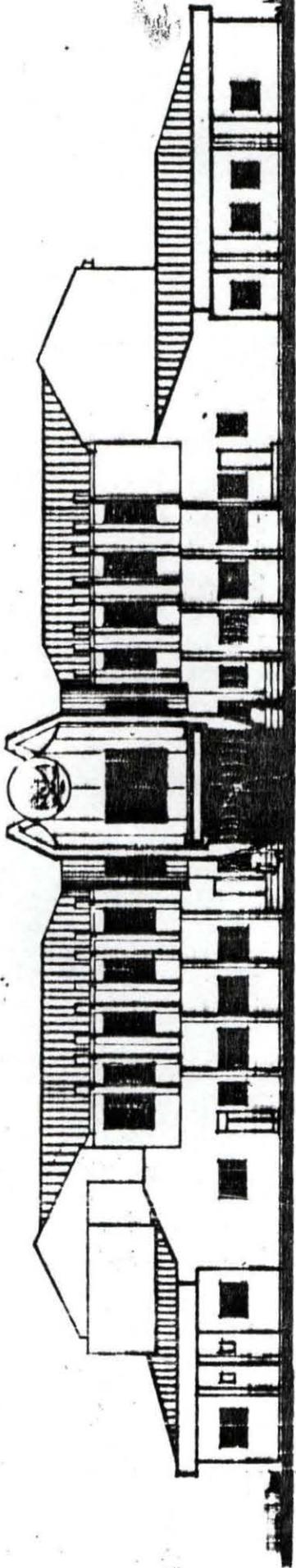
1. Living area:.....
2. Bedroom:.....
3. Toilet:.....

III. Servants Quarters

1. Bedroom:.....
2. Kitchen:.....
3. Toilet:.....

D. Ancillary facilities (m²)

1. Open seating area:.....
2. Mosque:.....
3. Generator:.....
4. Basket ball pitch and long tennis:.....
5. Swimming pool:.....



APPROACH

CHAPTER FIVE.

5.0 CONSTRUCTION AND SERVICES

5.1 MATERIALS

Building materials are characterised by distinct properties of strength, stiffness and clasticity, density or hardness, resistance to wear caused by Physical or Chemical action, fire resistance and thermal conductivity.

Building materials are in standard sizes when they come from the manufacturer.

This should be verify during the design and planning phase of the building to avoid unnecessary waste of materials during construction because the sizes could vary slightly between manufacturers.

A. Floors.

Quarry tiles are used as floor finishes. They are very hard type of floor tile normally of face size 150 by 150mm and 12 or 15mm thick, available in red, brown, blue ...etc. They form an excellent hard-wearing, water-proof surface.

The richness of the coloured tiles may be shown to the full by wiping the surface with a rag soaked in a composed solution (linseed and turpentine)

B. Walls.

Except in some particular cases the wall of all structures in the

embassy is made of sandcrete blocks. The finishes employed include sunsheding devices on exterior to enhance aesthetics and also control the light received in the building and also to break the horizontal monotomy of the structure.

C. Wood.

Wood offers in addition to its strength, durability lightweight, and easy workability, natural beauty and warmth to sight and touch.

Grain direction is the major determining factor of wood as structural materials.

Preservative treatment are often used to protect wood from decay or insect attack. Of these, pressure treatment is the most effective.

D. Plywood Laminated Timber.

Engineered grades of plywood are used for wall and roof sheating, subflooring and underlayment. It is also prefered to use solid timber for large structural members. Because of its better finished, dressed appearance, weather resistance, controlled moisture content and size availability.

E. Stone.

Stone is an aggregate or combination of minerals, each of which is composed of inorganic chemical substances.

Stone is not uniform in size, but as a load-bearing wall material, it is similar to modular unit masonoy. The type of stone work commonly used include: rubble work ashlar and trim.

F. Concrete.

Concrete is inherently strong in compression, to handle tensile forces, it can encase and band with steel reinforcement. It can be formed into almost any shaped with a mixture of cement, water and aggregate. Its potential strength is determined by its water: cement ratio

Concrete may be finished in a number of ways.

Troweling produce a smooth surface

brooming produce a textive surface

Concrete may also be painted or have a finish applied to it, such as stucco.

G. Steel.

It is used for heavy and light structural froming as well as a wide range of building products such as windows, doors, hardware, and fastenings. As a structural material steel combines high strength with stiffness with electicity.

Normally, ordinary steel is subject to corrosion and should thus be painted, galvanised or chemically treated for protection against corrosion.

H. Non-ferreous Metals.

Aluminium: Naturally, light in color, may be dyed a number of warm and bright colors during anovidizing process. It is often used as secondary building elements such as windows, doors, roofing flashing.

Care is usually taken to insulate aluminium from contact with other metals to prevent galvanic action. It is also protected from alkaline materials such as Net concrete, mortor, or plaster.

Copper: It is used in construction where corrosion resistance, ductility or high electrical and thermal conductivity is required. Often in sheet form for roofing and flashing.

I. Glass.

Glass is chemically inert, transparent, hard, brittle material. It would be used as foamed or cellecular glass for rigid, vapourproof thermal insulation. Glass is primarily used to glaze a building windows, sarh and skylight openings.

The variance of glass type include:

- Heat - absorbing glass, tinted sheet that absorb, radiation
- Tempered glass, heat strengthened for increared resistant to impact.
- Wired glass, used to glage opening suscaptible to fire hazards.
- Insulating glass, which provides thermal insulation.

J. Paint.

Paint refers to an opaque or clear film - forming material which is used to protect, preserve or visually enhance the surface to which it is applied.

The psychological effects of colors and surface texture are of prime consideration in its application. Certain colors are stimulating

while others are relaxing.

The use and selection of paint are influenced by: Surface preparation, type of paint, coverage, method of application and drying.

5.2 CONSTRUCTION.

The construction employed in this design proposal is based on functionality, flexibility of construction and to achieve the beauty of the building. The mode of construction used in the post and beam construction with unfill of non-load bearing walls.

The materials for the roof, walls, floor and finishes application are to be carefully chosen in relation to these properties.

5.3 SERVICES.

i. Electrical Service.

The National Electrical Power Authority (PLC) should be notified of the estimated total electrical load, requirement for a building during the planning phase, to confirm service availability, and co-ordinate the location of the service connection, service switch and switch board.

To reduce cost, maintenance and noise and heat problems, transformers are usually placed outdoors.

The services connection may be:

Overhead - less expensive, easily accessible, carry high voltage over long runs, may be unsightly.

Underground - more expensive, protection during extreme weather conditions,
used in high-land density.

The basic components of a building electrical system include:

- Service connection
- Service switch
- Main switch board
- Panel board
- Service outlets
- Switches and controls
- Wiring and conduit

ii. Plumbing.

The layout of plumbing system should be as straight forward and direct as possible with properly sloped horizontal runs and angular connection.

Vents: Permits offensive gases to escape, admit fresh air into the system.

Traps: Utilize a portion of the waste water to acts as a seal and prevent sewer gases from enteing the inverior of a building.

iii. Mechanical Services.

Heating, ventilating and air conditioning system condition the interior spaces of a building for the environmental comfort of the occupants.

Outlets

The location of heating and cooling outlets depends on the size and proportion of the space, its aress of heat loss or gain, its wall, ceiling and floor construction and finish.

iv. Sewage and storm water.

There is a central sewage channel and thus the sewage on the site will be channelled along the gently slopping topography and connected to the main sewer, while the storm water will be chained into a gutter along the entire site and then directed to the nearest stream.

v. Fire.

The building is design in such a way that the discontinuity between facilities which minimizes the spread of fire over the whole building. But the use of fire fighting equipment such as water sprinklers hydrants would be employed at specific location.

vi. Accoustics

Accoustical. Ceilings provide integral accoustical treatment along with a finish ceiling surface. They are usually in the form of files that may be applied directly to or susended from the under side roof or floor construction.

In the multipurpose hall the simplest solution to accoustic proble common with such building is the opening of all windows during use and the use of electro - acoustic aids.

CHAPTER SIX.

6.1 Aesthetic and general appraisal

(i). Aesthetics

a. Landscape

This aspect has been of great success, as every element use in this regard, adequately expresss itself and complement other elements.

Beside, the building elements as well so the planning elements such as car parking were all well suited to attempt a master piece. In the landscape however a lot of trees (date palm, ecalyptus) strubs trimmed hedges and planted flowers were used.

b - Physical structure

From the floor plan to the elevation, these are well articulated, there is flow within the elements chosen. A reasonable degree of harmony is achieved with various rythm to break monotony on the elevation.

(ii). General Appraisal

The location of the site is such that easily accessible.

Adequate parking space for staffs and visitors.

There is enough space for landscaping which also provides and environment for working.

The structures on site are adequately spaced. In addition of high pecurity there is an underground emergency exit which leads to the residence and outside the compound.

Externally the facade treatment is a product of modern technology related to the traditional architecture.

CONCLUSION.

Before the achievement of this design proposal, many studies in all their forms have been carefully carried out. These data were processed and the outcome with recent development combined, to produce this all incorporated Embassy.

The maintenance and constant improvement of the embassy is therefore essential.

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*Reception

This is the place where decision is taken, it should be the first item to locate properly, it should be located such a way if you enter the building, you will meet somebody to give information.

Most case the reception area is small, but in my own design it incorporates both the reception and a waiting area.

So after making the space analysis of the type of furniture that will be there, I arrived at.

*Ambassador's Office.

This is the office of the head of the Embassy, it should be located in a quiet area near the Conference Hall. That is where decisions are taken.

It needs a large area, which includes both the office and a small private area for particular discussions with other high personalities.

After analysing the operational area, furniture area and circulation space plus allowance,

*Secretary's Office.

This is the Ambassador's private Secretary. It is in this office that the embassy secretary will ask for audience, if whether the Ambassador can receive you or not. There is also a waiting area, in case He is busy.

*The Embassy Secretary.

This is where things concerning the Embassy are handled first. It is at this office that someone may ask for audience.

*Prime Secretary's office.

The prime secretary is acting the same role as charge of affaire. When the Ambassador is away, he is the one who will take over the functions.

The office is near to the ambassador's office.

*Conscille's Office.

This is like the ambassador's adviser, because in most cases some amabassador's are not well trained in international Relations. In which case there is a need of a "Conscille" who learnt specially international Relation studies.

*Attache

Attache is a specialized member of the staff of an embassy. We have five Attaches.

- Military Attache

He is taking care on cases concerning military. He is in direct liaison with the Ministry of defense, He may receive order from the ambassador.

- Commercial Attache.

This is handling cases on bilateral exchange of goods between the two countries. He is in connection with "Chambre, de Commerce" through the ambassador.

- Financial Attache.

This is the one handling the most important thing "money". He is the one paying the salary to the workers, selling the stamps for passports and visas.

- Cultural and Accademic Attache.

This is the one taking care of student's problems in Nigeria. If He cannot satisfy them the case will go on till it reaches the ambassador. He is in direct link with the Data room. If there is any cultural ceremony going on He will be the one who will organized it.

- Attache des Affaires Consulaire.

This is where the visas, passports... are established, but it is only the ambassador who will signed them.

It is in direct connection with the consulat if there is any.

*Second Secretary (deuxieme Secretaire)

He is the one who will over, the functions of the embassy in case the ambassador and the prime secretary are away. It is not possible to

have three of them away.

*The Conference room.

This is where general meetings are taken place.

This is a room where enough sits are available.

The dimensions of the meeting table are 3.1m x 7.1m. for about 16 chairs around it.

C - Residential area.

1 - Living area.

The living area is part of the house which most friends and guest see. This is the area that usually becomes the showplace.

The living area is composed of a number of rooms. They include the living room, dining rooms, recreation or family room, den or study, foyer, outside patios, and guest bathroom.

a - Living rooms.

The living room for many families, is the center of activity. Depending on the specific occasion. Its size and arrangement will depend on the life style of the member of the family who will ultimately use it.

A small living room may have as few as 14m²

an average size around 24m²

while a large one may exceed 38m²

Specific furniture will reflect the use to which the room will be subjected.

The location should not be such that a natural traffic pattern will be established through it to other parts of the house.

Dining room

Most modern homes today have a dining room. The main function of a dining room is to provide a special place for eating.

Dining rooms vary greatly in size, a small room, capable of seating four people around a table and providing space for a buffet would require an area of approximately 12m².

The location of the dining room is important. For efficient use it should be adjacent to the kitchen and living room.

Bedrooms.

Bedrooms are sleeping area, and it should be in a quiet part of the house away from traffic and other noise. If possible, the sleeping area should have a south or southwest orientation as that it may take advantage of cool summer breezes which usually prevail from this direction.

The size of the family usually determines the number of bedrooms needed.

The minimum size of a bedroom is being recommend as 9.5m^2 .

The medium size bedroom contains room for a double bed, chest, chair, double dinner and night stand has an area of 17m^2 to 20m^2 .

A large master bedroom with private bath included has an area of 35m^2 to 40m^2 .