

**REHABILITATION / TRAINING CENTRE FOR THE
PHYSICALLY CHALLENGED IN EDO STATE**

**"A design environment to reduce the effects of disability to the
physically challenged"**

By

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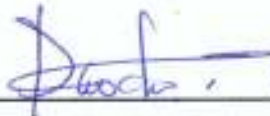
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DECLARATION

I Daodu S. Afeosemobo of the department of Architecture, School of Environmental Technology, Federal University of Technology Akure hereby declare that the thesis work has been a personal academic under taking carried out under the supervision of Prof. O. O. Ogunsote and Arc. Y. M. D. Adedeji of the Department of Architecture, Federal University of Technology Akure and that all contributory references have been duly acknowledged.

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CERTIFICATION

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DEDICATION

This project is dedicated to the less privileged and those whom God has given the mind of services to humanity.

ACKNOWLEDGMENT

I thank God for His infinite mercies and the ability given to me to carry out this work.

My acknowledgment also goes to my parents Mr. E.A. Daodu, Mrs. C.O Daodu, my project supervisors Prof. O.O Ogunsote and Arc. Y. M. D. Adedeji, my project coordinator Arc. Fadamiro. And all my friends amongst whom are Austine, Ajibulu, Patience, Biola, Osewen, Lugard, Smart, Abe, Smith, Rossey, Alhaji etc. A special thanks also to the staff of Ministry of Youth, sport and social Development, Benin City; Lagos, Ibadan to mention but a few.

I am grateful to my brother Dele Daodu whom after God gave me direction in life. Your contributions in my life will forever remain indelible in my mind.

ABSTRACT

Disabled persons have always existed in communities the world over and have often been relegated to the background, often denied access to basic human rights such as education, access to public buildings and most especially the right to employment. However, this trend is changing, thanks in part to efforts from voluntary organization and new developments in the fields of technology and medicine. More disabled persons are surviving through childhood to adulthood and old age and arises a need for them to become integrated into the community. Unfortunately, the community has created barriers within the built environment as well as in the economic sector which impede the disabled persons' progress.

Some effects are being made by Governments and organizations but it is clear that disabled persons have to be trained. Training is best undertaken in a rehabilitation centre where all aspects of training could be taken care of.

This project is a proposal for the design of one such centre for male and female, physically and sensory impaired adults and adolescents from all states of the Federation.

This study is needed to compliment the technical input to making these people responsible member of the society as such, improving the image of our society.

The centre is to be developed by the Federal Ministry of Culture and society welfare and is located in Benin City site, and services Scheme, Edo State. The centre is meant to train the disabled persons in vocational studies such as handicraft, sewing as well as some amount of formal and adult education.

The needs of the different users i.e the trainees, the staff and the community at large, have to be identified as well as the other general requirements and specific design requirements.

On the basis of this information, concept based on integration of the disabled individual through participation in social interaction was developed into the design proposal. In this proposal a hierarchy of activity spaces will be created, and linked

visually and specially by a network of corridors and walkways, shaded areas all focusing on a central court. The centre is thus meant to function as micro-community that will prepare them to take their rightful place in the larger community.

Chapter one will focus on the introduction/ General background of the disabled persons while chapter two will focus on literature review, concept of rehabilitation process, chapter three will focus on case studies carried out, chapter four will focus on the synthesis of study, chapter five deals with site Analysis of the proposed site while chapter six will focus on the proposed project design. Chapter seven gives details recommendation and conclusions.



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CHAPTER ONE

1.0 INTRODUCTION

Begging by the disabled persons has constituted a serious social problem to Urban centres of many developing nations, Nigeria inclusive. According to Horby (1983), to beg is to ask for food, money, clothes e.t.c. Making a living by asking alms in the street, living by begging from the rich or the more fortunate members of the society Alade (1991) observes that disabilities exist in all classes, ranks and among all age groups. They have different effects on different people. The effect could be temporary or permanent, total or partial, fixed or changing. Some have slight effects on the working life of the people affected while some have more serious effect. Some of those disabled persons, resort to begging around primarily because of situations or circumstances around them that is beyond their human control. For instance, in the olden days, in the southern part of Nigeria, it was a taboo for somebody to beg. It was termed as big disgraces to the family of the beggar because of the shame on the family's image. Such families take adequate care of their disabled but the situation has changed today and some families adopt a non – challant attitude on their disabled.

This type of care-free attitude of those families on their disabled compels the disabled to go to the street to beg for survival. It is pertinent to note that disability has serious social and economic effects on its victims. Mc Gowan and Porter (1967) expressed the social and economic effects of disability as reducing productivity and is a drain on the wealth of the community, the state and the nation as a whole. They may become maladjusted because of the feeling of inequality, lack of prestige and other outcome of not having a sense of belonging to the community.

Oyebola (1997) again said that if a person sees his handicap as an absolute reality, it means, he can not do anything to it and under its heavy load, but if he is educated against the physical limitation and forces his ways ahead in life, even if the physical problem is not reversed towards healing, he does not have to despair over it. He masters the situation and overcomes self-pity and apathy.

1.1 BACKGROUND OF THE STUDY

In the years past, the disabled persons in Nigeria were not formally rehabilitated as we have them today, instead, the disabled person like the physically impaired and sensory impaired e.t.c were referred to by our forefather as special people from the gods and goddesses so many of them were to stay with the herbalist who in one way or the other took care of their feeding, clothing and health. The herbalists make use of some of them to work for him such as roasting herbs on fire, mixing black soap with powdered medicine, pounding herbs in mortars. At times, the herbalist marry from the disabled under his care.

Ewuola and Atukun (1995) observed that before the advent of the Europeans to Nigeria, our society (Nigeria) took responsibilities includes feeding and counseling of the disabled member of the family. They went further in helping their disabled family to acquire skill in one or more vocations which the disabled is capable of learning to ensure that as much as possible, he is a contributing and responsible member of the family. The whole task providing a rehabilitation service in those days was family based and the whole members of the family takes responsibility for it.

In 1976, the United Nations organization decision declared 1981 as the International Year of Disabled persons 1983-1992 as United Nations Decade for Disabled persons (Designing with care, U.N. publication, 1981). This declaration was just a reflection of the already increased attention being paid to plight of Disabled persons all over the world.

The declaration defined a disabled person as someone who is "unable to ensure by himself or herself wholly or partly, the necessitations of a normal individual and / or society life as a result of a deficiency either congenital or not, in his or her physical and mental capabilities (U.N., 1981). Even this definition reflects the attitude that most people have had and still have towards disabled persons, who are seen as being abnormal (Goldsmith 1976), and have been relegated to a position of compatibility with the 'normal' able-bodied people. This segregation has resulted in disabled persons being handicapped not only physically, by their disability but also socially, culturally, politically, economically of neglect of disabled

persons such that governments and communities began to feel responsible for these disabled persons.

Armed with the information from these studies, various governments, organization began to put in concerted efforts to develop ways of integrating disabled persons in the economic and society life from which they had been hitherto exclude (U.N., 1981) The United Nations declaration was one of the efforts in that direction. Some of the key points in the declaration are:

- (1) That disabled persons have the right to medical, psychological and functional treatment, including social rehabilitation, education, vocational training and rehabilitation, counseling, placement services and other services, which will enable them to develop their capabilities and skills to the maximum, and will hasten the process of their social integration or re-integration.
- (2) That disabled persons have the right to participate in all society creative or recreational activities.
- (3) As in other countries, disabled persons in Nigeria have for a long time been denied some of these rights. They had been taken care of directly by their families or indirectly by the community.
- (4) Society has a collective social responsibility to help its less fit members to adjust to their individual disabling conditions.

This led to studies carried out in different countries of the world to determine the specific needs of disabled persons. One of such surveys was that organized by the Social Survey Division of the Office of population censuses and surveys (OPCS), Britain (Goldsmith, S. 1976). These surveys served as a means of estimating the disabled population in the world and individual countries, identifying the different types of disabilities that exist and how they can best be defined and categorized, characteristics of the various disabilities and the degree of handicap ness caused by each disability, developing anthropometrics data relating to each disability, especially for wheelchair users, identifying environmental

considerations and design requirement identifying the effect of social, physical, culture and economic barriers on both disabled and able-bodied person with a view to overcoming them. The study further revealed that there was a need to set up new centres that would take of this hitherto neglected aspect of rehabilitation.

It has also been realized that these centres, as well the general environment must be well designed to suit the larger number of users. This is where architecture comes into play because good design can go a long way to solving some of the problems of society. Generally, designs must aim at making ordinary housing and workplaces more accessible to, convenient for handicapped people (Odeleyee, w. 1987). A therapeutic environment helps achieve wholeness and well-being than a non-therapeutic environment as a result of poor designs which impedes or act as a barrier to the challenged persons e.g presence or absence of ramps with baluster rails etc.

1.2 MOTIVATION

Everyday on the streets of the large cities in Nigeria, one cannot help but notice the disabled beggars usually with a helper begging for money to take care of both of them. In their desperation to get money from passers-by they constitute an economic drain on society since they don't often put anything back economically. At the same time they constitute a general nuisance to the steady flow of both pedestrian as vehicular traffic and pose a safety risk.

Enquiries revealed that most of these disabled persons need not beg if they are gainfully employed, but they cannot be employed if they have not received some form of education and training. The centres meant to provide the needed training have often been not been functioning well in terms of design constraints in addition to other problems which make them unattractive to most disabled persons. The absence of full governmental support did not augur well for the development of rehabilitation facilities.

Various voluntary organizations, service club and philanthropic individuals, had tried to bring the gap, in the 60's, by setting up institutions to cater or, train and monitor disabled persons. All their efforts were like a drop in the bucket since they were able to cater for only a small proportion of the entire disabled population, since they have limited financial resources.

With the worldwide shift of attention, Federal and State Governments have begun to make provisions for disabled persons under their social welfare programmes and also to take over the funding of the existing institutions. The fact that Nigeria is a member of the United Nations Organization also meant that the country had to respond to the call for " full participation and integration " Existing facilities began to be upgraded and new ones were set up. Also efforts were made at collecting information about the disabled population but very little has proved conclusive.

Rehabilitation for disabled persons because one of the forefront objectives of the Social Welfare and Development sectors of the Federal and State Governments, especially vocational rehabilitation since it is a means of achieving economic security. It because rehabilitation centre poses challenges to the architect who must, provide solutions to the mobility problems posed by buildings, develop designs that emphasize the residential aspects, human scale and community experience within the centre and in relation to the wider community; take cognition of the cultural background of the people; design the building so it blends in with surrounding buildings. Embarking on this project is a response to the challenge laid down by the disabled beggars in our society.

1.3 STATEMENT OF PROBLEM

The rate at which the physically challenged always feel uncomfortable in the process of using the facilities and spaces provided is alarming. This consequently, has constituted to an architectural problem to be solved after a due process of studying the psychology and

physical limitations of the people to be rehabilitated before providing the peculiar functional spaces needed.

1.4 AIM AND OBJECTIVES

The main aim of the project is to create through design, an environment that will enhance all round development of the disabled trainees except the blind in order to achieve the larger aim of full participation and integration into the community.

Certain objectives were set out in order to achieve this aim:

- (a) To evolve a design that relates to the larger community in terms of function, Form and scale.
- (b) To evolve a design that is functional and would met the needs of all the users, as well as help the centre achieve the aims and objectives of its rehabilitation programme.
- (c) To ensure that all aspects of the projects are properly linked and organized.
- (d) To create an internal and external environment that is conducive and aesthetically pleasing to all and will help enhance the attitudes of people to disabled persons.

1.5 JUSTIFICATION FOR THE STUDY

Rehabilitation centre has been zone into the six geographical regions by then federal government in 1980. The aim is to cater for the needs of the physically challenged. This centres has not been able to meet the needs in full capacity because the building itself are not user friendly. Most of them find it very difficult to adjust in terms of functionality. Secondly, the buildings are too institutional not community based like which can easily integrate them into the larger community participation which is the main purpose of the rehabilitation.

All this prompted this design that will cater for the needs of the physically challenged architecturally in terms of function, aesthetics and enhance a good therapeutic environment. From table (1), evaluation of special education provision efforts in Nigeria 1986, Edo state is among the largest state in the South West, without rehabilitation centre.

1.6 SCOPE AND LIMITATIONS OF THE STUDY

1.6.1 SCOPE:

This thesis was conceived to design a rehabilitation training centre for the physically challenged which will include all forms of disabilities that is, the physically impaired and the sensory impaired except the blind. It will also look into historically background of all forms of existing rehabilitation centres. The field survey will cover the experience of government owned rehabilitation centres in the country.

1.6.2 LIMITATIONS:

In the course of this research some hindrances arises such as:

- Access to relevant architectural drawings were denied due to certain security reasons.
- Snap shots were not allowed on some areas of the building and the inmates.
- The delays in getting vital information from the ministries of women affairs youth and social development. All constituted limitations to this research

1.7 SIGNIFICANCE OF STUDY

This study is important in order to make the environment friendly for the physically challenged. Again, this will help in quick and functional rehabilitation of the people. And more also to make the society to be aware that there is **ability in disability**.

1.8 EXPECTED CONTRIBUTIONS TO KNOWLEDGE

- 1 I have been able to evolve a therapeutic environment with the design.
- 2 To discover relevance of good spatial organization when designing for the physically challenged
- 3 To discover the best way of integrating the physically challenged into the larger society

1.9 RESEARCH METHODOLOGY

A field survey will be conducted using questionnaires and mostly in addition to the use of personal interviews to research into guiding facts of existing, rehabilitation centres for the physically challenge of various locations, with a view to having a detailed comparative analysis upon which this new proposal would be based.

1.10 DEFINITION OF TERMS

Rehabilitation Centre: this is a place the disabled are put back into a good condition in order to enable them function at a more adequate and personally satisfying level.

Disabled Persons: this is a person who is structurally, physically or psychologically different from other person, he is not as a normal human being due to one malformation of any part of the body.

Disability: this is any chronic physical or mental incapacity resulting from injury, disease or congenital defect. It is a total or partial loss of a functional ability which could be temporary, permanent or intermittent.

Referral: this is the process by which a disabled person is sent to a rehabilitation centre for the purpose of bringing or restoring that person to his or her normal self.

Handicap: these are set persons who have problems and difficulty in living a normal life pattern within the society, thus depending on others for survival eg. Deaf and dumb, blind, the poor, aged adult e.t.c.

Rehabilitation: this is a process whereby a disabled person is restored to the fullest physical, mental, psychological, social vocational and economics usefulness of which the individual is capable.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 THE CONCEPT OF REHABILITATION:

The National Council on Rehabilitation (1944) defined rehabilitation as the restoration of the handicapped to the fullest physical, mental, social, vocational and economic usefulness of which they are capable. According to Marvin C et al, (1982) Rehabilitation services are typically viewed as a broad array of medical, psychological, educational and vocational services design to assist persons with handicaps to adjust physically, psychologically, socially, educationally or vocationally.

Giwa (1995) observed that rehabilitation services for the handicapped started in 1950 in Nigeria with voluntary organizations and religious groups the era of active government participation started after the civil war. By 1981, the Federal Government in association with six states of the Federation and the United Nations started a project titled 'vocational Rehabilitation of the Disabled persons. Hanks and Porter (1971) opined that rehabilitation is a process of restoring handicapped person to a good condition

Olukotun (1991) defined rehabilitation as the process of restoring handicapped person to the maximum usefulness of which he is capable physically, mentally and vocationally. Aboji and Ozoi (1955) further describe it as an activity to assist the disabled person shift from the position of dependency to independence, inadequacy and self-reliant members of the society

2.2 THE CONCEPT OF DISABLED PERSONS

The disabled person is one who is structurally, physically or psychologically different from the normal person because of accident, disease or development problems (Ladipo, 1988), Horby (1974) defined disable as "make unable to do something, especially take away the power of using the limbs". WHO (1981) defined disability as any restriction or lack of ability to perform an activity in a manner or within the range considered normal for a human

being. There are various causes of disabilities. World Health Organization (W.H.O. 1981), made observation on the state of health, the nature, as well as factors significantly associated with impairment and handicap as it relates to the disabled. As noticed, some of these disabilities are from the womb, some are as a result of disease at infancy as a result of negligence, poverty or medication, while some are as a result of accidents at home or through automobile or sickle cells. Some are a result of vitamins deficiencies for instance lack of vitamin A in the pregnant another will make her produce children with sight problems.

Olamuyio (1984) observed that incidence of neglected injury, accident or disease was significantly high among the poor in cases of their disabilities. About 10 – 15 percent of the physically disabled attributed their disabling predicament to environmental negligence and ignorance of the disease.

The disabled persons also have the self – concept of themselves Dunham and Dunham (1978) opined that an individual's self – concept is the way one appears to self personality theorist, behavioural scientists and the people rehabilitating the disabled are concerned with the development of this concept, how the body image influences it, the discrepancies between its ideal and actual versions and how social forces modify the picture that the person has of himself.

Every one has a constantly changing sense of his or her own worth and adequacy. Certain experiences build confidence and self – esteem, others arouse anxiety and feeling of self – doubt.

2.3 CLASSES OF DISABLES

Three groups of disabled people can be identified, each with corresponding requirements. First, disabled members of a family (husbands, wives, children) who go to work or school out side the home. Alterations in such cases relate to access to the house

apartment, furnishings a provision of sufficient freedom of movement in the living and sleeping areas, and specially adapted facilities in the bathroom / Water Closet.

Secondly, disabled person who carry house hold tasks. Additional alterations must be made to the kitchen and elsewhere to simplify work in the home. The third group is severely disabled persons who are only partially independent if at all, and thus requires permanent care. Extra space must be provided for maneuvering wheel chairs and facilities to aid the work of career should be added. Note that self [propelled wheel chairs require most space.

2.4 CAUSES AND CATEGORIES OF DISABLED PERSONS

2.4.1 CAUSES

The causes of disability are as varied as the disabilities. Social demands on individual are often responsible for functional psychiatric disturbance and chronic alcoholism and drug (narcotics) abuse, problems which are on the increase in Nigeria because of the fast pace of life economic difficulties.

2.4.2 CATEGORIES

Six categories of disabled persons can be identified within which there is a wide variation in the degree of disability. These are:

1. **Persons with moving difficulties:** often caused by congenital accident, disease and geriatric (aging) reasons. Such disabling conditions include parkinsons disease, hemiplegia – paralysis of one side of the body, paraplegia – paralysis of lower limbs warranting the use of calipers, crutches or wheelchair, quadraplegia – paralysis of all our limbs resulting in being wheelchair bound, Two sub-groups can be distinguished with this group; ambulant disabled person people (those who are walking aids or technical supports) and; those who are confined to wheelchairs or are bed-bound
2. **Person who have seeing difficulties:** These people have a level of vision which is insufficient for carrying out daily life. There are two types low-vision (partial) blindness which can be corrected with optical aids and; severe blindness requiring non optical adaptive aids e.g white cane for walking. This condition may be caused by accidents, aging, congenital factors or diseases such as measles, trachoma.

cataracts, leprosy, Glaucoma and granular conductivities. River blindness (onchocerciasis) and other water born disease are common to the tropics and appear to be more rampant in the Northern part of Nigeria.

3. Person who have hearing and/o special difficulties often referred to as deaf and / or dumb people. Deafness is an impairment of auditory function which comes in two different types in different degrees. There could be conductive deafness and, nerve (perception) deafness. Deafness may be caused by disease such as otitis and mastoiditis when not treated properly while speech difficulties may be accompany deafness or may arise from other causes.
4. Persons who have learning difficulties often have genetical or medical origins or area caused by malnutrition.
5. Persons who have strange behaviour often referred to as being mentally disturbed.
6. Persons who have fits generally caused by epilepsy. They have a tendency to fall and injure themselves sometimes in open-fire places in traditional houses. This condition is common in developing countries and estimate for Africa is given as between 4.1 – 4.7 percent.

Sometimes more than one disabling condition may affect an individual and this is referred to as multiple disabilities.

2.5 INCIDENCE OF DISABILITY

The number of people suffering some form or disability or another varies, from country to country depending on the preventives measures available, the technological advancement in the country and other environmental factors.

It is estimated that at any point in time, over 10% of the world population is affected by some type and degree of disability (Designing with care,1981). One estimate taken in 1975 gave the number as 12.3 percent and projected that by the year 2000, the number would

reach an estimated 13.5 percent (Noble, 1981). The estimate for developing countries can rise by 15 or 20% depending on the definition of disability and the conditions

The increase in incidence of disability on the International level can be traced to improved ante-natal care and obstetric and paediatric techniques resulting in more of the handicapped babies surviving through childhood and into adult life. The result is that a large proportion of handicapped children today have not just one, but multiple handicaps. (Toplise, 1975). Also, advancements in technology and medicine have resulted in more people surviving illnesses and accidents that would otherwise have killed them but instead remain a live with a disability.

Statistics on disabled persons in Nigeria are very limited. As yet, there has been no census of disabled persons but plans are in the pipeline to use the opportunity of the National Census (2005) to collect relevant data on disabled persons in the country.

Attempts have been made at getting some data together and in 1970, it was estimated that there were at least 3,650,000 blind persons in the country (The Nigeria Year book, 1970). In 1985, the Health Minister said that one million Nigerians were blind. Table:1 shows the estimated handicapped population of the different states, working on



Table 1: Evaluation of special education provision efforts in Nigeria 1986.

| | State | State population (m) | Estimate handicap population | Estimate scholaga handicap population | Number receiving special education | Number requiring special education |
|----|-------------|----------------------|------------------------------|---------------------------------------|------------------------------------|------------------------------------|
| 1 | Anambra | 6,629 | 662,000 | 165,725 | 1977 | 163,748 |
| 2 | Bauchi | 4,676 | 467,900 | 116,900 | 68 | 116,832 |
| 3 | Edol | 4,124 | 412,400 | 103,100 | 217 | 102,883 |
| 4 | Benue | 4,367 | 436,700 | 109,175 | 1300 | 107,875 |
| 5 | Borno | 5,026 | 502,500 | 125,625 | 12 | 125,613 |
| 6 | Cross-River | 5,031 | 583,100 | 146,776 | 197 | 145,578 |
| 7 | Gongola | 4,367 | 436,700 | 109,175 | 210 | 108,965 |
| 8 | Imo | 6,757 | 675,700 | 166,425 | 692 | 165,783 |
| 9 | Kaduna | 7,276 | 727,500 | 181,875 | 418 | 181,457 |
| 10 | Kano | 8,681 | 868,100 | 217,025 | 398 | 216,627 |
| 11 | Kwara | 2,872 | 287,200 | 71,800 | 249 | 71,551 |
| 12 | Lagos | 2,825 | 282,500 | 70,625 | 1147 | 69,478 |
| 13 | Niger | 2,01 | 201,000 | 50,250 | 21 | 50,229 |
| 14 | Ogun | 2,80 | 260,000 | 65,000 | 608 | 84,492 |
| 15 | Ondo | 4,676 | 457,600 | 114,400 | 451 | 113,940 |
| 16 | Oyo | 8,732 | 873,200 | 218,300 | 1624 | 216,676 |
| 17 | Plateau | 2,398 | 239,800 | 59,950 | 277 | 59,673 |
| 18 | Rivers | 2,883 | 288,300 | 72,075 | 24 | 72,051 |
| 19 | Sokoto | 7,409 | 740,900 | 185,225 | 23 | 185,202 |
| 20 | F.C.T | 609563 | 50,856 | 12,739 | - | 12,739 |
| | NIGERIA | 94,04 | 9,404,256 | 2,351,064 | 9813 | 2,341,251 |

Source: statistics of special education development in Nigeria. 1986 federal ministry of education

Table 2: ENROLMENT AND STAFF STRENGTH IN NIGERIA-1986

| STATE | TOTAL NO FACILITIES | CATEGORIES OF DISABILITIES | | | | | | | | | | | | | | STAFF-STRENGTH | | | | |
|--------------|---------------------|----------------------------|-----|--------|-----|----------|-----|-----------|-----|--------------------|-----|-----------------------|----|-------|-----|---------------------|-----------|---------|-----------|-------|
| | | AUDITORY | | VISUAL | | PHYSICAL | | EMOTIONAL | | MENTAL RETARDATION | | LEARNING DISABILITIES | | TOTAL | | ACADEMIC SUPPORTIVE | | | | |
| | | m | f | m | f | m | f | m | f | m | f | M | f | m | f | TRAINED | UNTRAINED | TRAINED | UNTRAINED | TOTAL |
| Anambra | 33 | 383 | 410 | 146 | 204 | 106 | 167 | 19 | 19 | 96 | 154 | 186 | 67 | 93 | 101 | 55 | 12 | 12 | 32 | 121 |
| Bauchi | 2 | 32 | 2 | 32 | 2 | | | | | | | | | 64 | 4 | 11 | 3 | | 26 | 40 |
| Edo | 6 | 94 | 50 | 10 | 10 | 35 | 18 | | | | | | | 146 | 26 | 8 | 29 | | 6 | 34 |
| Benue | 67 | 458 | 100 | 35 | 21 | 522 | 116 | | | | | 48 | | 100 | 28 | 26 | 20 | | 60 | 109 |
| Borno | 2 | | | 12 | | | | | | | | | | 12 | | 12 | | | 11 | 23 |
| Cross Rivers | 4 | 44 | 32 | 45 | 26 | 35 | 8 | | | 3 | 4 | | | 127 | 8 | 19 | 2 | 2 | 27 | 50 |
| Gongola | 2 | 75 | 25 | 61 | 31 | 9 | | | | | | 8 | 1 | 155 | 6 | 32 | 3 | 2 | 4 | 21 |
| Iburi | 37 | 783 | 104 | 77 | 43 | 123 | 88 | 5 | 5 | 44 | 19 | | | 432 | 260 | 50 | 16 | 1 | 90 | 168 |
| Kaduna | 8 | 148 | 104 | 151 | 15 | | | | | | | | | 299 | 160 | 21 | 12 | | 20 | 53 |
| Kano | 4 | 326 | 39 | 31 | 2 | | | | | | | | | 337 | 11 | | 13 | | 46 | 55 |
| Kwara | 1 | 144 | 71 | 15 | 4 | | | | | 9 | 6 | | | 168 | 57 | 73 | 3 | 7 | 21 | 104 |
| Lagos | 96 | 277 | 158 | 58 | 42 | 11 | 76 | 277 | 141 | 5 | 2 | | | 728 | 418 | 32 | 47 | 17 | 74 | 159 |
| Niger | 1 | 75 | 6 | | | | | | | | | | | 15 | 6 | 9 | | 12 | | 71 |
| Ogun | 4 | 195 | 132 | 13 | 2 | 2 | 3 | 12 | 2 | 89 | 58 | | | 314 | 107 | 27 | 27 | 2 | 2 | 58 |
| Osun | 4 | 134 | 87 | 41 | 18 | 67 | 49 | | | 45 | 10 | | | 267 | 164 | 19 | 13 | 3 | 60 | 104 |
| Oyo | 29 | 665 | 406 | 65 | 31 | 89 | 46 | 2 | 3 | 275 | 145 | 4 | 11 | 1010 | 514 | 96 | 97 | 4 | 63 | 260 |
| Plateau | 4 | 49 | 43 | 131 | 27 | 18 | 9 | | | | | | | 198 | 79 | 23 | 14 | 1 | 21 | 59 |
| Rivers | 1 | 4 | 4 | | | | | | | 12 | 4 | | | 16 | 8 | 3 | 1 | | 1 | 5 |
| Sokoto | 1 | 13 | 4 | 6 | | | | | | | | | | 19 | 4 | 3 | 1 | | | 4 |

Source: statistics of special education development in Nigeria

Federal ministry of education

TABLE 3: SUMMARY OF SPECIAL EDUCATION FACILITIES IN NIGERIA-1986

| STATE | | | | | 16-17 | | | | | 13-18 | | | | | 15-18-19-22 | | | | | | | | | | | | | | |
|---------------|--------------|----------------|------------------|-----------------|------------|----------------|------------------|---------|------------|----------------|------------------|-------|------------|----------------|------------------|-------|------------|----------------|------------------|-----------|-------|--------------------|-------|--------|-----|-----|------|-----|---|
| | Total number | Male enrolment | Female enrolment | Total enrolment | Preschool | | | Primary | | | Secondary | | | Post-secondary | | | Vocational | | | Untrained | Total | Special facilities | | | | | | | |
| | | | | | Facilities | Male enrolment | Female enrolment | Total | Facilities | Male enrolment | Female enrolment | Total | Facilities | Male enrolment | Female enrolment | Total | Facilities | Male enrolment | Female enrolment | | | | Total | Female | | | | | |
| 1 Anambra | 23 | 321 | 645 | 1977 | - | - | - | 3 | 584 | 701 | 1285 | 20 | 166 | 193 | 259 | 4 | 46 | 28 | 68 | 6 | 142 | 123 | 255 | 7 | 4 | 121 | | | |
| 2 Bauchi | 2 | 64 | 4 | 58 | | | | 2 | 64 | 4 | 68 | | | | | | | | | | | | | 14 | 25 | 40 | | | |
| 3 Edo | 5 | 139 | 78 | 217 | | | | 8 | 139 | 78 | 217 | | | | | | | | | | | | | | | 6 | 25 | 34 | |
| 4 Benue | 52 | 1063 | 237 | 1300 | | | | 2 | 79 | 21 | 100 | 51 | 852 | 195 | 1047 | 5 | 84 | 21 | 106 | 1 | 48 | - | 43 | 20 | 80 | 106 | | | |
| 5 Borno | 2 | 12 | - | 12 | | | | | | | | | | | | | | | | 2 | 12 | - | 72 | 12 | 11 | 23 | | | |
| 6 Cross River | 4 | 127 | 70 | 197 | | | | 2 | 47 | 36 | 83 | | | | | | | | | 2 | 80 | 34 | 154 | 21 | 29 | 50 | | | |
| 7 Gongola | 2 | 153 | 57 | 210 | | | | 1 | 142 | 56 | 198 | 1 | 11 | 1 | 12 | | | | | | | | | 14 | 7 | 21 | | | |
| 8 Imo | 37 | 432 | 250 | 682 | | | | 3 | 220 | 142 | 362 | 26 | 143 | 85 | 228 | 1 | 8 | - | 8 | 7 | 61 | 33 | 64 | 60 | 108 | 168 | | | |
| 9 Kaduna | 8 | 290 | 119 | 409 | | | | 3 | 270 | 119 | 389 | 5 | 29 | - | 29 | | | | | | | | | | 21 | 32 | 53 | | |
| 10 Kano | 4 | 257 | 41 | 298 | | | | 3 | 322 | 38 | 360 | 1 | 33 | 3 | 38 | | | | | | | | | | 3 | 55 | 65 | | |
| 11 Kwara | 1 | 168 | 81 | 249 | 1 | 21 | 14 | 25 | 1 | 87 | 45 | 132 | 1 | 50 | 22 | 82 | | | | | | | | | 30 | 24 | 104 | | |
| 12 Lagos | 7 | 728 | 419 | 1147 | | | | 6 | 728 | 419 | 1147 | | | | | | | | | | | | | | 43 | 120 | 166 | | |
| 13 Niger | 1 | 15 | 6 | 21 | | | | 1 | 15 | 6 | 21 | | | | | | | | | | | | | | | 9 | 12 | 21 | |
| 14 Ogun | 4 | 311 | 197 | 508 | | | | 4 | 311 | 197 | 508 | | | | | | | | | | | | | | | 29 | 29 | 55 | |
| 15 Ondo | 4 | 287 | 164 | 451 | | | | 4 | 287 | 164 | 451 | | | | | | | | | | | | | | | 22 | 82 | 104 | |
| 16 Oyo | 20 | 4010 | 614 | 4624 | | | | 18 | 752 | 441 | 1193 | 8 | 161 | 102 | 263 | | | | | 3 | 97 | 71 | 157 | 100 | 160 | 200 | | | |
| 17 Plateau | 4 | 158 | 79 | 237 | | | | 3 | 188 | 79 | 267 | 1 | 10 | - | 10 | | | | | | | | | | | 24 | 35 | 59 | |
| 18 Rivers | 1 | 16 | 8 | 24 | | | | 1 | 16 | 8 | 24 | | | | | | | | | | | | | | | 3 | 2 | 5 | |
| 19 Sokoto | 1 | 19 | 4 | 23 | | | | 1 | 19 | 4 | 23 | | | | | | | | | | | | | | | | 3 | 1 | 4 |
| Nigeria | 21 | 5310 | 3483 | 8813 | 1 | 21 | 14 | 35 | 64 | 427 | 2738 | 6828 | 117 | 1465 | 601 | 2068 | 10 | 123 | 40 | 181 | 21 | 440 | 261 | 701 | 573 | 886 | 1430 | | |

The rehabilitation center which "an agency which may be independent or part of a hospital and provides an integrated programme of medical, psychological social and vocational services for rehabilitative purposes", (Gellman W. 1973).

Formerly, rehabilitation centers were austere institutional buildings and the programmes were highly custodial in nature (Redstone, 1980). This explains why disabled persons in such centers are often erroneously referred to as "inmates" by the general populace. However, the trend is now towards increased interaction between the trainee and the trainer and programmes are becoming more community related. The new centres now attempt to create a normative environment with emphasis on residential aspects and human scale. The trend is towards creating zones of activity i.e spaces which could be used for a multitude of purposes and blending these with the structured programmes of some aspects of the centres.

2.6.1 VOCATIONAL REHABILITATION

Vocational rehabilitation deals with preparing the disabled person for a particular vocation suited to his ability. The rehabilitation in this case can thus be defined as "the process of improving adequate role behaviour in work settings" (Gellman W. 1973). Thus limiting the rehabilitation problem mainly to vocational handicaps and the rehabilitation goal to vocation achievement i.e employment.

Vocational rehabilitation is usually carried out in special training centers or technical colleges. The argument in favour of these special provisions is that a person who, by reason of school, ought to be able to achieve more in the environment of a special school geared to his abilities and with special facilities (Topliss E. 1975). Without these compensatory provisions which ordinary schools are not equipped to give, the general intellectual development, psychological adjustment and maturity of the individual may likely be affected (Topliss E. 1975).

It must be recognized however that attempt to provide for the needs of these disabled persons is faced with the dilemma that special provision for them, while going some way to compensate for their disability may at the same time by virtue of being special wide range of services that exist the world over. Another point in favour of rehabilitation is that the rehabilitant will be free from being cared for by second individual who may thus fill a more valuable role. The being economic rehabilitation for the family (Phelps M/W, 1941).

the assumption that the handicapped population constitutes 10% of the total population. This is too low an estimate considering the fact that Nigeria is developing country still struggling to provide basic health facilities, portable water and having high accident rate. In 1986, it was estimated that the average annual accident victims equals 26,182 a large proportion which would experience temporary or permanent disability (Annual abstract of statistics, 1986).

Table 3 gives the summary of special education facilities in the different states in Nigeria, level in the educational system and the staff strength (trained and untrained).

Table 2 gives a breakdown of the information in table 3 according to categories of disability. These are part of the statistics presently being used by the Federal Ministry of Education to take decisions, but a glance at the tables shown that the information is terribly inadequate and probably incomplete especially when one compares the data in Table 3 with an earlier statistic on rehabilitation facilities compiled in Nigeria as shown in Table 1. The total number of facilities in each state in former should be greater than the latter, considering the time lapse, but for some states this is not the case e.g Rivers, Gongola, Cross River and Borno States.

Despite these lapses, it can be seen from table 3 that vocational training facilities are lacking in almost all the states of the Federation. Also from table 2 it can be seen that there are more facilities for persons with auditory, visual and physical disabilities which can be seen as an indication that group comprises a larger proportion of the total disabled population and they need the education or training more.

All in all, it is clear that existing facilities are grossly inadequate thus justifying the need for more facilities which is what the Federal government is working towards as will be explained later. It is hoped that by the time the census which is carried out, there will be more detailed information with which to make proper programmed to care for the large proportion of disabled persons in the country.

2.6 TYPES OF REHABILITATION

Several types of rehabilitation exist and the type applied is dependent on the individual situation and as is often the case, several types have to be combined in each case. Rehabilitation could be physical psychological, occupational or vocational, sociological.

2.6.3 REHABILITATION PROCESS

The fundamental objectives of the social development policy as it relates rehabilitation services are:

- (1) To guarantee Nigerian handicapped persons conducive environment and opportunities for the total development of their human potentials.
- (2) To develop their capacity to meet the challenges of disability contemporary living and to ensure the attachment of satisfactory and overall quality of life which would allow them to be designed to help physically challenged handicapped individuals make maximum use of residual capacities and to enable them to obtain optimal satisfaction and usefulness in terms of themselves and their families and their communities" (Yesner H. Y., 1971).

From all these definitions, it is clear that the rehabilitation process aims at independence and integration into the community. In order to achieve this aim certain guidelines must be followed which include the following:

- (a) The approach must be multidisciplinary, rehabilitant centered, and comprehensive. (Gellman W., 1973).
- (3) Treatment must be highly individualized.
- (4) The patient, his family and community must be considered

The rehabilitation process generally involves four stages

- initiating the process
- Vocational evaluation
- treatment/training
- adjustment to the community

- (1) **Initiating the process** – the rehabilitation process can start after realization of the fact that the person is disabled in one way or another and may therefore need rehabilitation. The process could be initiated by family, health authorities etc. it involves the collection of background information on the individual, the case history, family background and all their information that may be deemed necessary.
- (2) **Vocational evaluation:** since the aim of rehabilitation is to enable the individual make maximal use of his residual capacities (Yesner H. Y., 1971), the next step is to identify and evaluate these residual capacities. This will help to dispel any wrong

Self employment

- (1) individual employment whereby the rehabilitant runs his own business providing his services directly to his customers as well as taking care of managements aspect of the business.
- (2) Sheltered workshops are usually set by organizations or government bodies to finish vocationally disadvantaged persons who cannot compete in the market with paid work which they can do and which will maintain their capacity to work (Gellman, W., 1973). Each rehabilitant has his own work area or room with equipment and has a high level of independence in terms of the kind of work he wants to engage in, and his time schedule. He often deals with the customer directly and is paid directly.
- (3) Production workshops have more controlled work environment with higher level of supervision and the work experience is meant to facilitate the rehabilitants progress to other forms of employment.
- (4) Co-operatives of or for Disabled people are sometimes set up to present a unified front through which Disabled persons can market their services.

Self employment has been proved to be more suitable in developing countries.

Rehabilitation is one aspect of the care for Disabled persons that has gained ground in recent times (especially because of the problems of rehabilitating disabled war veterans) as evident in the fully implemented. In fact cultural and religious influences have contributed to the delay in legislations against begging (Olaajiga, 1990).

The main components of the social welfare divisions are:

- (i) Family and child-care
- (ii) Rehabilitation
- (iii) Counseling and corrections and
- (iv) Care of the elderly

December 1989 saw a reshuffling of the Social Development Sector such that Rehabilitation services now under the umbrella of a newly created Ministry of culture and Social welfare but until new policy guidelines are developed for the new Ministry, the existing policy remains effective.



2.6.2 REHABILITATION SERVICES IN NIGERIA

The development and use of rehabilitation is conditioned by cultural dispositions to disability (Gellman W, 1973). The cultural dispositions in Nigeria has been a combination of the traditional view that the immediate family has a responsibility to cater fore the needs of its disabled members and often leading to confinement of the individual, the Christian view that ministering to the disabled leads to acquisition of moral virtue and the Islamic view which though similar to the Christian view has in practice taken the aspect of begging to a stage where the disabled person is totally depending on the community throughout his lifetime.

All these views do not seriously consider or emphasized the aspect of helping the individual achieve independence or integration into the community, and as such have resulted in the relatively slow development of rehabilitation services in the country. Even where they existed, they usually paid more attention to physical rehabilitation after which the patient is released to a life economic dependence.

Provision, emphasize the isolation of the disabled persons. A workable balance has to be aimed at on the part of the specialists in charge of the rehabilitation in collaboration with the architects and building experts involved in the design of all such facilities.

In order to cater for the different handicaps possible, these vocational centers offer a wide range of options in terms of training with different level of specialization.

Obviously, this means that they have a higher staff/student ration than ordinary schools. Some of these staff will be able-bodied and their own needs have to be taken into consideration as they sometimes clash with the needs of the disabled trainees and staff.

Various forms of employment exist and they are:

Paid employment:

1. Competitive employment in which the rehabilitation competes with able-bodied people for jobs for which he is not handicapped e.g a lower-limb amputee working as an architect.
- (2) Home-bound employment which is similar to competitive employment except that the rehabilitant does his work at him rather than in a normal office environment.

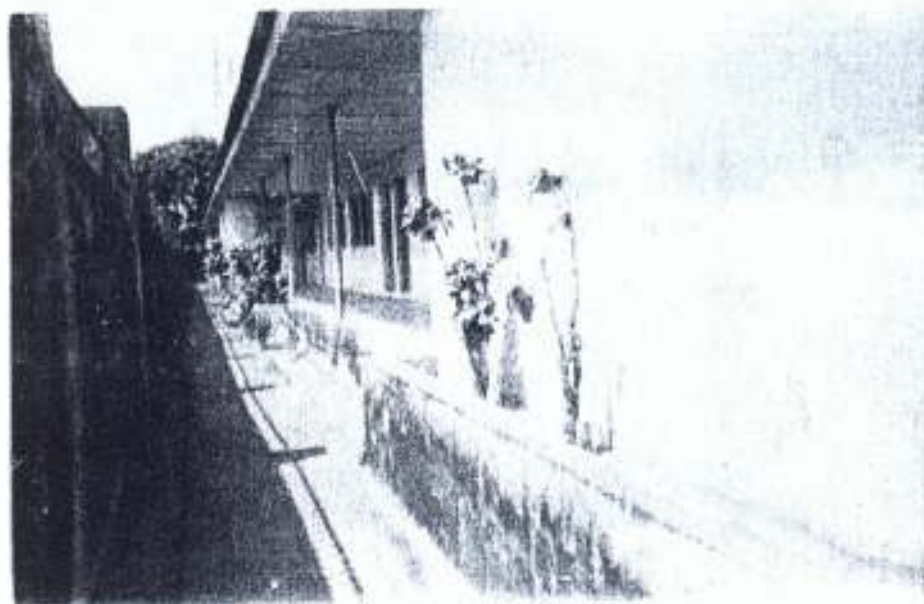
CHAPTER THREE

3.0 VOCATIONAL REHABILITATION TRAINING CENTRE (OWUTU (I) IKORODU, LAGOS) FOR THE DISABLED PERSONS.

GENERAL INFORMATION

The centre was established in April, 2nd 1997 by Lagos State government. It provides a two year vocational training course for the physically handicap youths in shoe making, sewing and typing. Facilities include student dormitories for 39 trainees, staff quarters, dining facilities, kitchen , principal lodge.

The centre was built to accommodate 80 capacity of physically challenged. Spaces are organized haphardly with conversion of class rooms to staff quarters.



Platel: Work shop for vocational

Source: Researcher's Field Survey



Plate2: Hostel

Source: Researcher's Field Survey



Plate3: Principal's House

Source: Researcher's Field Survey

3.1 LOCATION

The centre is situated along Ikorodun Road, (Agric bus stop) off Owutu in Lagos state.

3.2 PURPOSE OF VISIT

I investigated into the centre to avail myself of better planning of rehab centres, innovations in their designs and their ways of life.

3.3 STAFF STRENGTH: The staff strength for trainees staff is on ratio 1:3 that is three trainees to a staff.

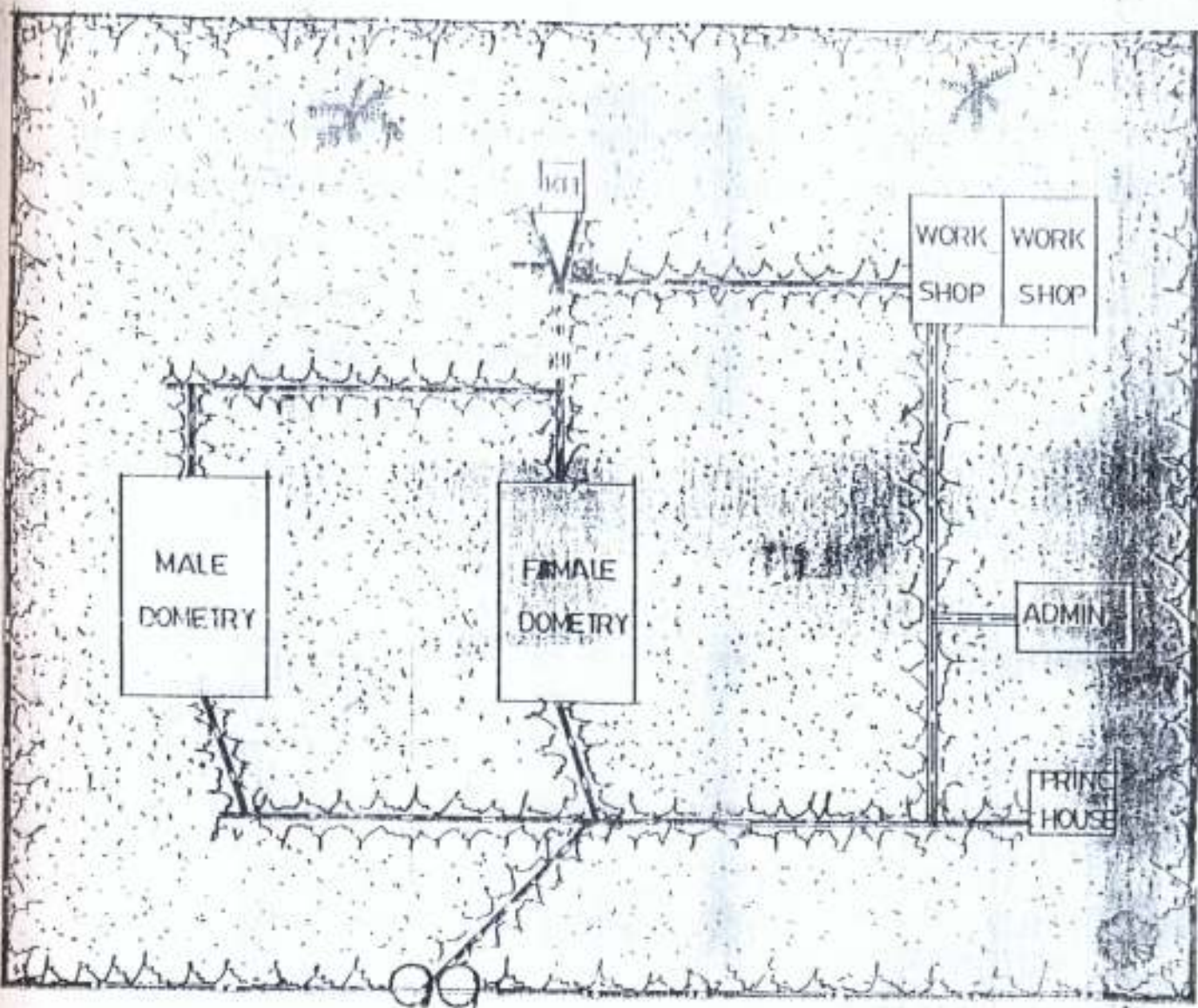
3.4 EVALUATION

Merits

- The buildings are aesthetically Good
- There is provision for Ramp.
- There is no accommodation problem for the trainees.
- It is well land spaced with trees and shrubs

Demerits

- No good parking space due to improper planning.
- The toilets are not functioner because they are not plan for the Disables.
- The entrance to the rooms are too small.
- There is no staff Quarters.
- No worship Ground.



PROJECT SITE PLAN

Source: Researcher's Field Survey

3.5 ARCHITECTURE OF THE CENTRE

The architecture of this centre will be discussed and analysed via the following sets of parameters:

- (i) **Walling System:** Sandcrete block walls were used to erect and support roof structure. Walls are painted with milk colour except the dormitory that is painted with dark green colour. See; plate (1), (2) and (3).
- (ii) **Flooring System:** Oversight in-situ mass concrete floor finished with granolithic paviers is noticed on centre floors and terrazzo floors on the principal house.
- (iii) **Roofing System:** Simple gable roof with high pitch were used. Zinc materials were used as roofing sheets.
- (iv) **Accessibility:** the centre is easily accessible from the main arterial along Owutu road. Although set back is about 20m from the edge of the road to the fence line.
- (v) **Landscape:** the only lot enjoying soft landscaping is the little narrow stretch behind the fence. All other space is on a grassland.
- (vi) **Zoning:** the high decibel zone is located at the western axis site while places of low decibel are located close to the main gate.
- (vii) **Future Expansion:** the site is surrounded by residential buildings which makes it very difficult for future expansion.
- (viii) **Site Plan:** planning is more compact, circulation is highly defined.

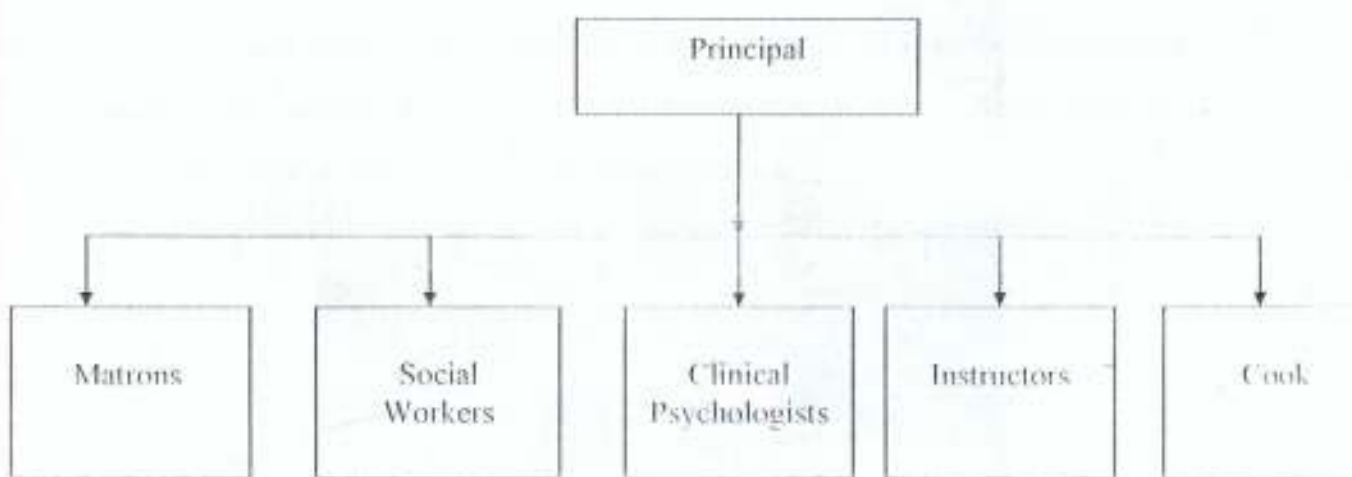


Figure 2: Organization chart of Owutu (1) Rehabilitation centre

Source: Researcher's Field Survey

3.6 REHABILITATION/TRAINING CENTRE OWUTU LAGOS

GENERAL INFORMATION

The Rehabilitation training centre, Owutu Lagos started in 1980 but did not begin formal operation until 1986 when the Lagos State government through the Ministry of Social Development Youth, sports and culture, Lagos State took over the responsibility for running the project. The centre is accommodating both the Social miserate, destitutes, physically challenged and the mentally retarded.



Plate 4: Administrative Building
Source: Researcher's Field Survey

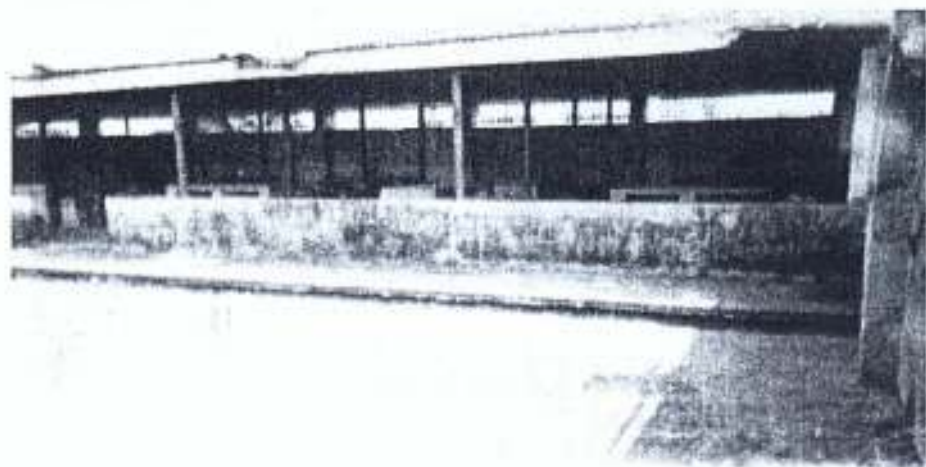


Plate 5: Dining Hall
Source: Researcher's Field Survey



Plate 6: Religious Ground

Source: Researcher's Field Survey

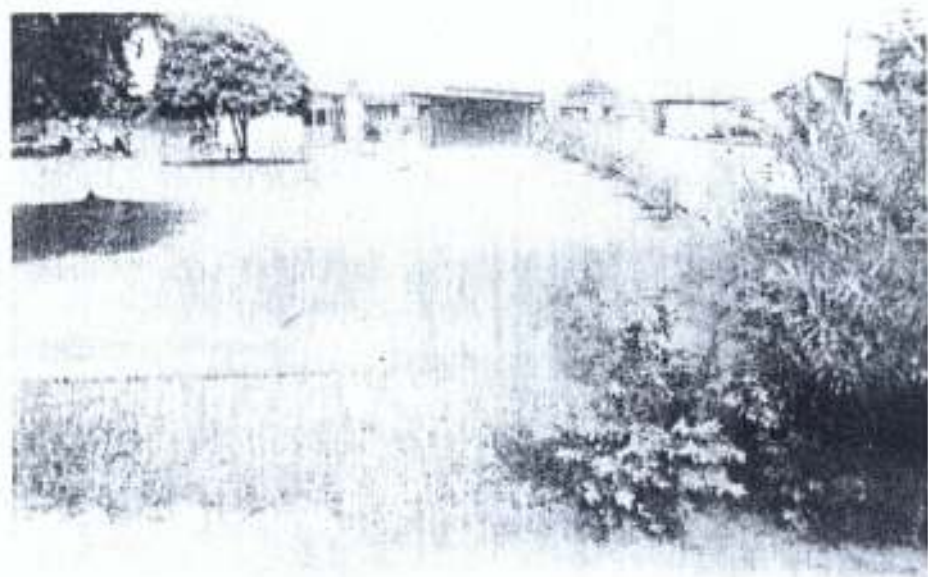


Plate 7: Playing Ground

Source: Researcher's Field Survey

3.7 LOCATION

The centre is situated along Ikorodu Road (Agric bus stop), off Owutu ,opposite police station in Lagos State.

3.8 PURPOSE OF VISIT

To acquire myself with new innovations of the design of centres for the physically challenged and to avail myself with the different forms of technical aids they use. More also to understand their ways of life.

The centre at present is accommodating 742 trainees without proper care because of the large trainees. The Centre is finance by Lagos State government, and non governmental organizations.

3.9 STAFF STRENGTH: The staff strength tot trainees is on 1:30. That is thirty trainees to a staff

3.10 EVALUATION

Merits

- The buildings are aesthetically Good
- They have playing Ground for Hand ball
- It is well fenced round with Blocks
- It is well land scaped

Demerits

- No good parking space due to improper planning
- The entrance to the rooms are too small without ramps
- There are no covers for walk ways
- No Distinction Between walkways and vehicular

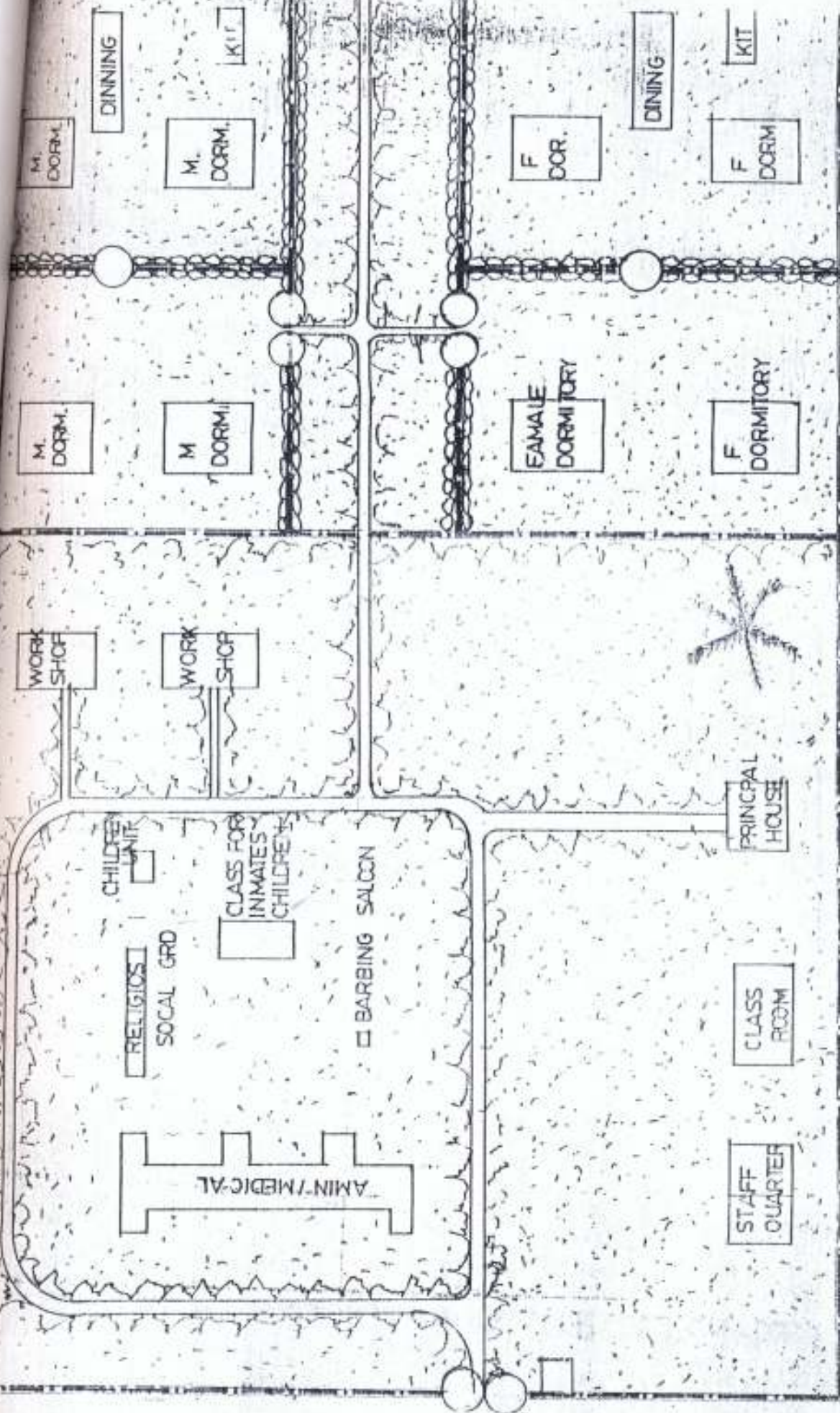


Fig: 3 SITE PLAN

Source: Researcher's Field Survey

3.11 ARCHITECTURE OF THE CENTRE

— This centre has a very residential outlook and buildings are well laid out thus allowing easy movement for the residents, many of whom are in wheel chairs. The residents were broken-down into units or houses, each with dormitories for males and females. Ramps were used in some places, and low windows were used in order to give the chair bound residents good view. The sanitary facilities were also well designed in terms of provision of support rails and finishes. All the units are focused around a central court which functions as the main activity area of the centre.

Some of the buildings stands on iron stanchion without partitions and external walls. e.g. Religious ground, Dining Hall (See plate 5). Load bearing walls serves as external walls with non-load bearing used in partitions. The floors have rough surfaces to grip the tyres of the wheel chair users. The roofs are gable with high pitch which allows run off water easily. Light yellow sandtex paint colour was used in the administrative building giving it a good aesthetic view. (See plates 4). The design exhibits a high degree of rigidity and compactness. The boundaries enjoy soft landscaping with a species of shrubs and green area that makes the environment appealing.

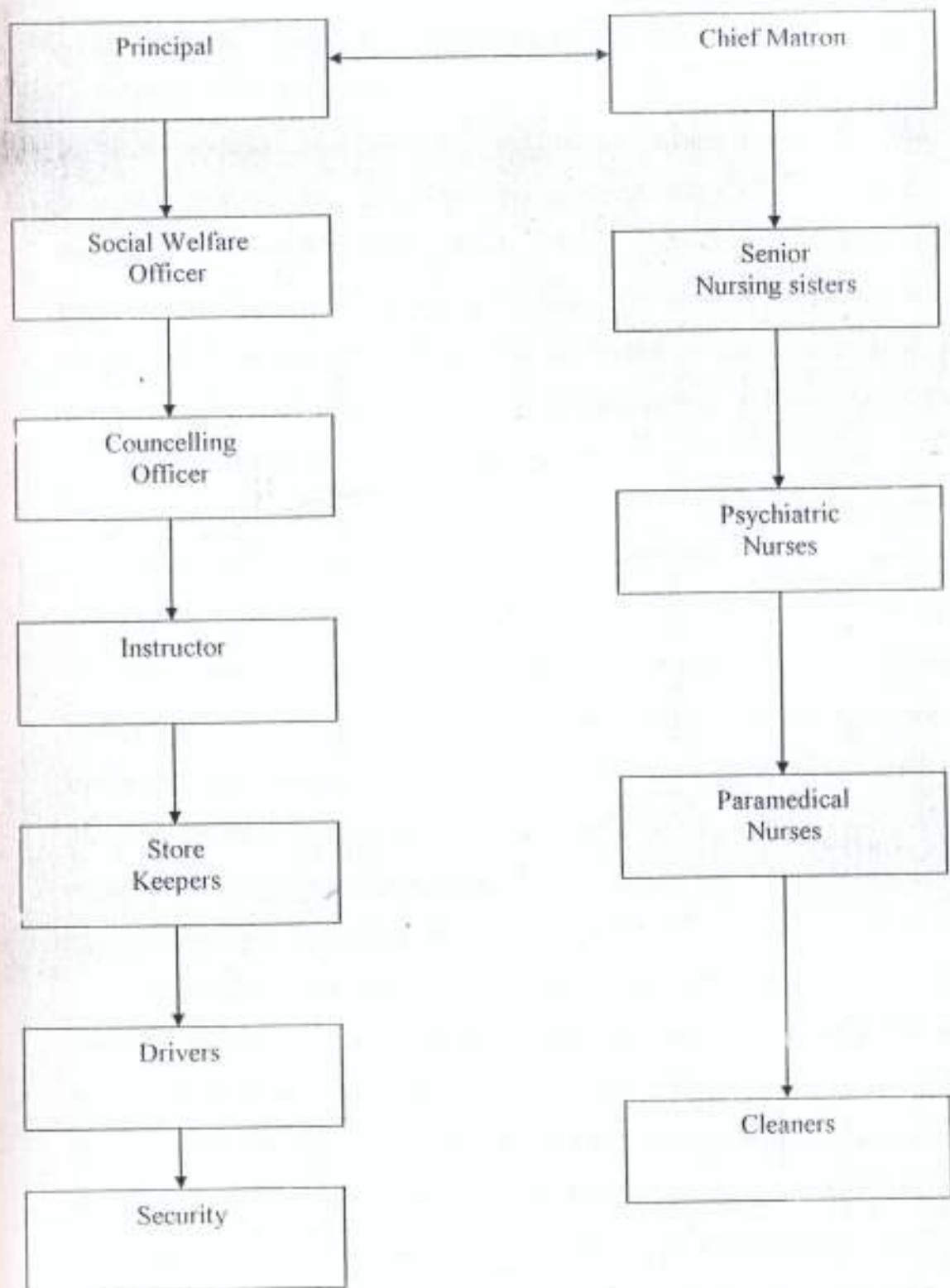


Figure 4: Organization chart of vocational rehabilitation Training centre Owutu (2)

Source: Researcher's Field Survey

3.12 REHABILITATION TRAINING CENTRE FOR THE DISABLES (MONIYA IBADAN)

The Rehabilitation Centre for the Disabled, Moniya-Ibadan, Oyo State came into being in 1980 but did not begin formal operation until 1989 when the Oyo State Government through the Ministry of Social Development Youth, Sports Culture, Ibadan, Oyo State took over the responsibility for running the project. The government decided that a disabled person should head the centre because he will be able to know the needs of the disabled, therefore, Prince P. A. Adelabu, a physically disabled person who had been in public service for a decade was appointed in 1990 as the principal.

As at 1990, most of the building in the centre were not completed and was without water, toilets, access roads and electricity. But in 1991, Oyo State government and members of the public provided the initial deep wells, V.I.P. toilets, tarred roads and electricity. It was officially commissioned by the then President of the Federal Republic of Nigeria General Ibrahim Badamasi Babangida on the 3rd August, 1991. As at 1992 till date, a board of trustees was appointed headed by Chief E.L. Osunkunle with some philanthropists as members and the principal as the secretary. Through contact with the members of the public, many of the uncompleted buildings were completed e.g. two staff quarters, two boys quarters, one Clinic, one dining hall etc.

In addition, many structures were added as donations e.g. one church building, one mosque building and two livestock buildings. The State government also provided one borehole water while major General Gumel also donated another borehole. The Oodua investment assisted the centre in running the pipes from the borehole to all the buildings in order to avoid carrying of buckets by the handicapped. The IITA- a non governmental international institution started maintenance of the centre environment since 1990 till date hence the neatness, standard and clean environment just like their own compound. NGO's Rotary clubs and individuals also contributed to the success of the centre, hence some blocks

were named after individuals who have contributed in one way or the other to the development of the centre, e.g. Oba Emmanuel Adesemo Opeyinde I block and Moji Oyebola block.



Plate 8: Fish Pond
Source: Researcher's Field Survey

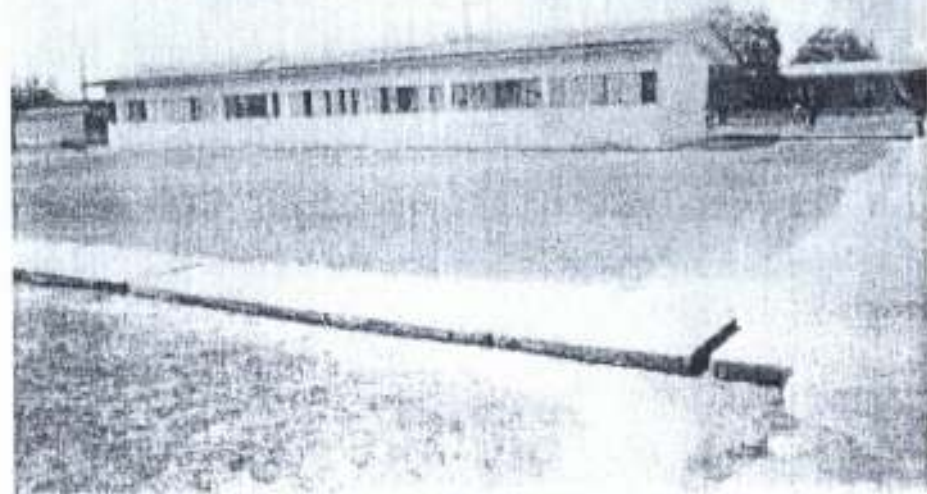


Plate 9: Administrative Building
Source: Researcher's Field Survey



Plate 10: Kitchen Area

Source: Researcher's Field Survey

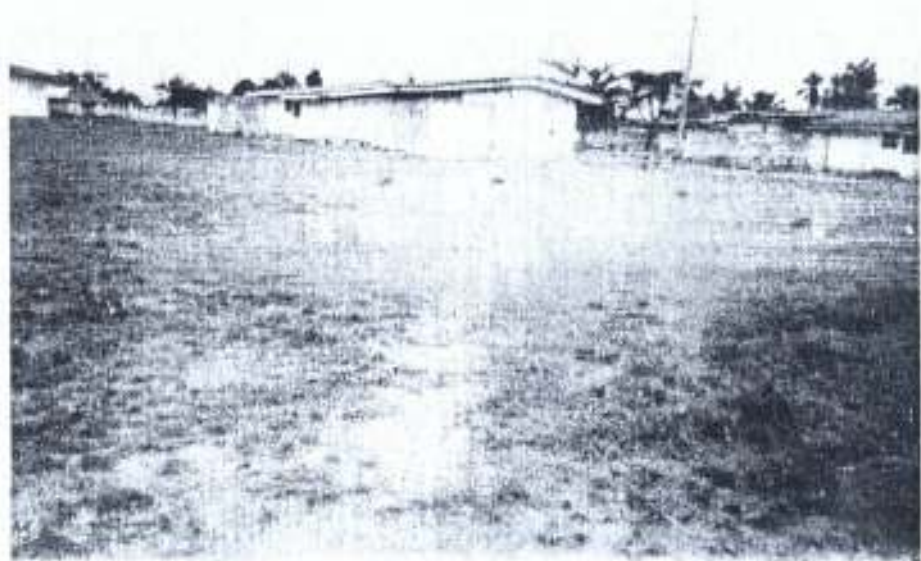


Plate 11: Hostel

Source: Researcher's Field Survey

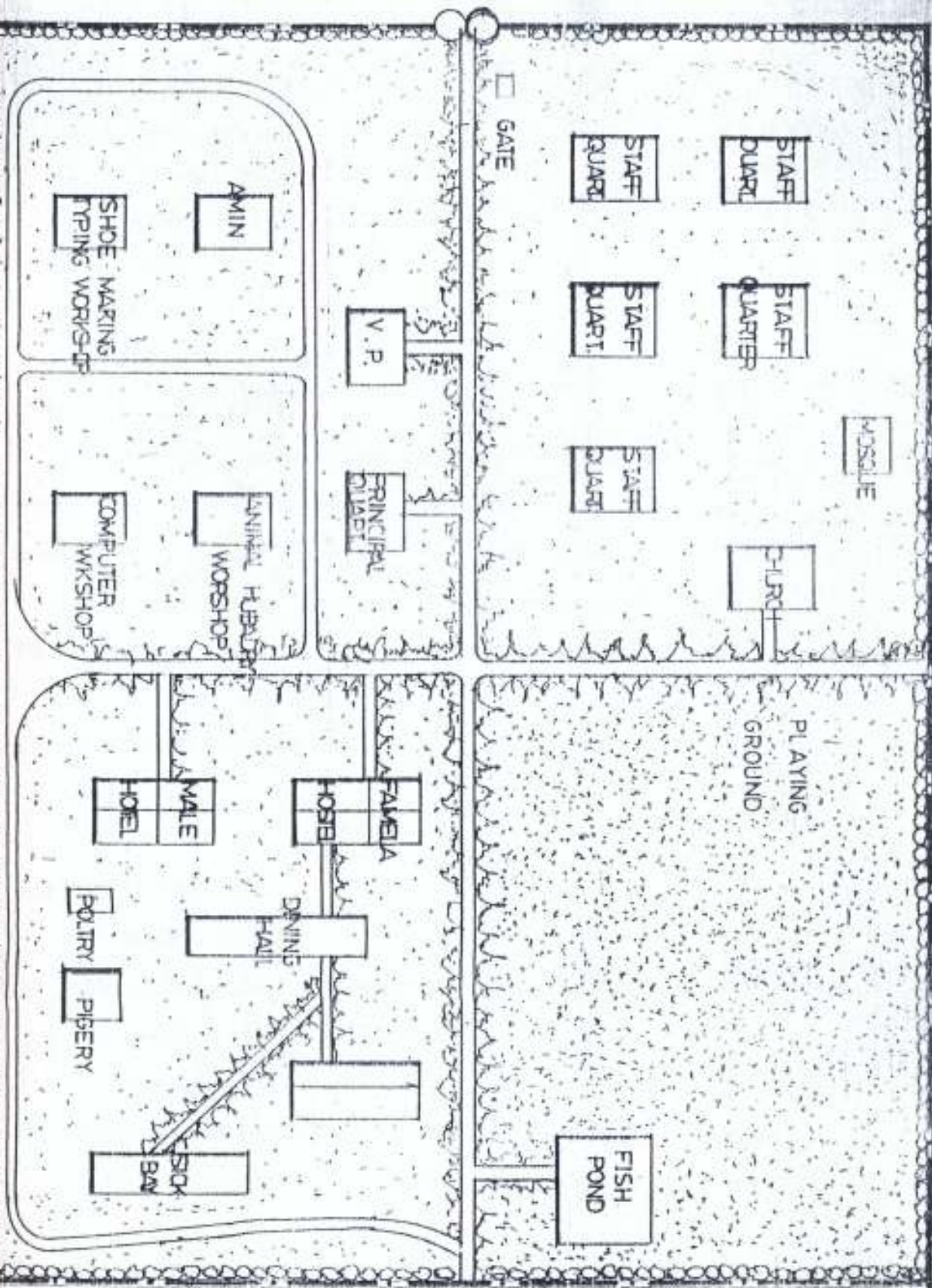


Figure 5: SITE-PLAN

Source: Researcher's Field Survey

The following trades are presently being offered in the centre.

- (i) Typing
- (ii) Weaving of cloth
- (iii) Tying and Dyeing
- (iv) Poultry
- (v) Piggery
- (vi) Fishery
- (vii) General Agric

Trainees enjoy indoor games e.g. table tennis and other sport activities on the standard field of the centre every Friday afternoon.

Religion: The trainees are given the opportunity to practice their own religion, thus Christians go to churches on Sundays and Muslims go to mosques on Fridays.

The Centre at present is accommodating 106 trainees.

3.13 STAFF STRENGTH : The staff strength for trainees to staff is on ratio 1 : 5 that is five trainees to a staff.

3.14 EVALUATIONS

MERITS

- There is provision for Church and Mosque which promotes Religious training
- The buildings are aesthetically pleasing
- There is good Road Net work.
- There is enough accommodations for the staffs and trainees.
- The vocational centre are well equipped which foster vocational Learning.

DEMERIT

- No provision for parking space which results to disorderliness in parking within the environment.
- Entrance to rooms are too small.
- The centre is too far from town which prevents disabled trainees from integrating into the larger community easily.
- Poor Administrative office not define and not easily accessible
- Playing Ground, Mosque and Church too far from the Dormitory.

3.15 ARCHITECTURE OF THE CENTRE

- Walling System:** same as Owutu (1) Rehabilitation centre
- Flooring system:** Same as Owutu (1) centre, the only difference is that ramps were provided to meet all floors at a convenient gradient. (See plate)
- Roofing System:** sane as Owutu (1) centre
- Accessibility:** The centre is easily accessible from the main arterial along Ibadan Oyo Road. Set back is about 25m from the edge of the road to the fence.
- Landscape:** Sane as Owutu (1) centre. The pond acts as a natural lanscping element. (See plate)
- Zoning :** same as Owutu (1) centre
- Future Expansion:** There is room for future expansion

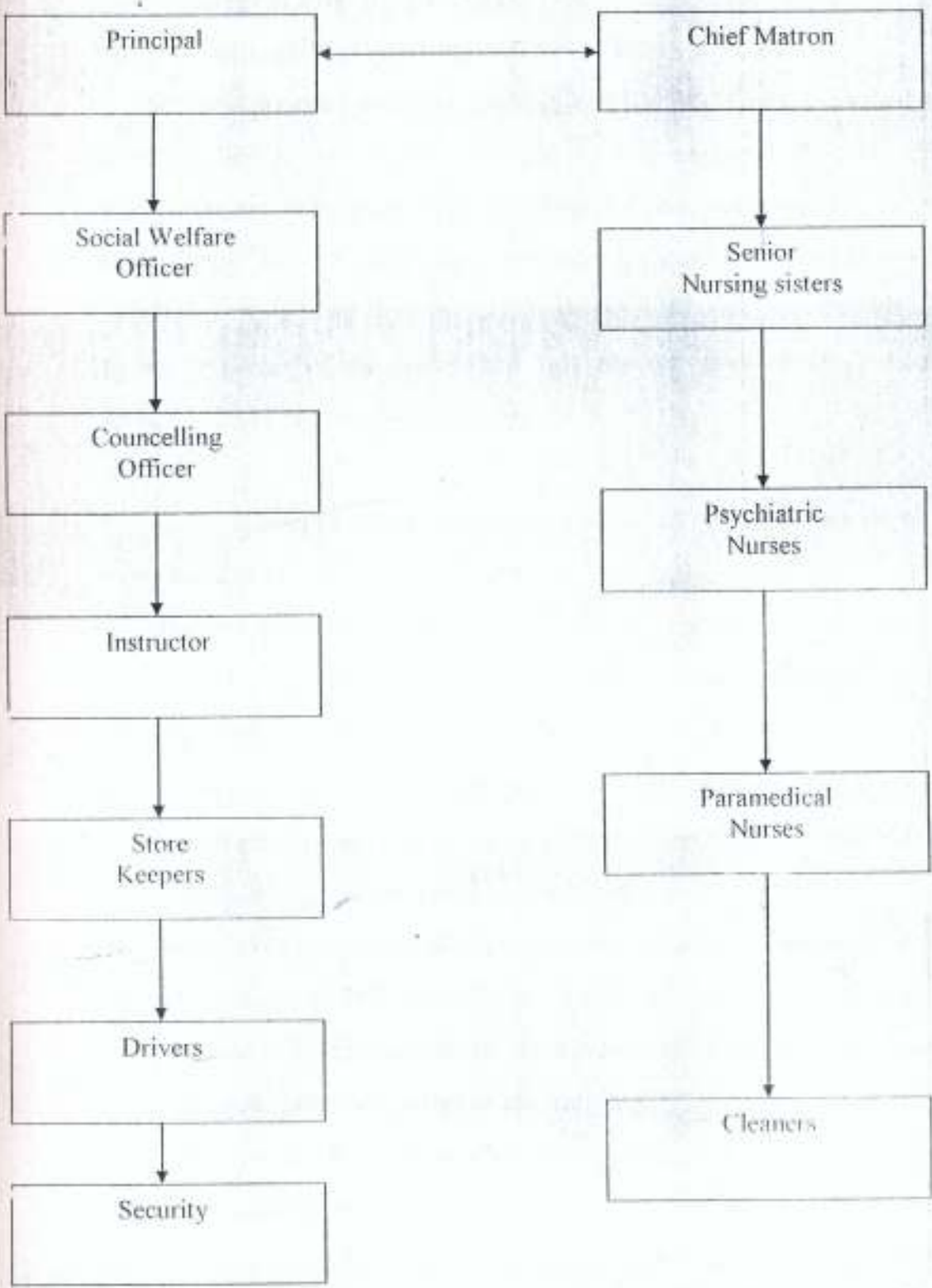


Figure 6: Organization chart of vocational rehabilitation Training centre for the disabled, Moniya.

Source: Researcher's Field Survey

3.16 FINDINGS AND DISCUSSION

3.16.1 BUILDINGS AND DISABLED PERSONS

Physical barrier created by building and the whole of the planned environment have identified as one of the areas that need to be removed in the drive for full participation and integration. These buildings are designed essentially for normal able-bodied people and are not always convenient for people who happen to be disabled. Ambulant persons adapt more easily to these awkward and uncomfortable environments but the problems of the wheel-chair user are not easily resolved because of the characteristics of the wheelchairs (Goldsmith S, 1975)

These physical barriers can group according to their relative position in the built environment.

- (i) Barriers encountered outdoor in the spaces between buildings and they include: unclear orientation of entrances, projecting building elements, interruptions in footpath network, obstacles and holes, uneven surfaces.
- (ii) Barrier to entering buildings which include: narrow entrance openings with inadequate spaces around them, differences between outdoor and indoor floor levels, poorly designed door handles.
- (iii) Indoor communication links should be easy to find well dimensioned and lighted
- (iv) Unnecessary differences in levels, should be avoided and where necessary must be clearly marked, adequately dimensioned and equipped with suitable handrails. A graded ramp is a preferable alternative.
- (v) Internal rooms should be spacious enough to allow for wheel chair users and others with mobility aids.
- (vi) All fixtures and fittings should be appropriately designed and correctly positioned.
- (vii) Good illumination and appropriate acoustics should always be aimed at in all spaces.

(viii) Appropriate signposting should be used. It must be pointed out however that other factors come into play in determining how buildings are designed and these may be in conflict with one another and the attempt to reconcile them may lead to compromises in several areas. These factors include:

- technical factors e.g. structure and materials
- geographical and climatic factors: topography, altitude, orientation, humidity, rainfall etc.

Social factors – kind of people using the building, the type of activities they perform and whether they want to be together or apart.

Other considerations in favour of designing with disabled persons in mind is that all of us were at one time clumsy toddlers; that almost half of us have had our mobility restrained by permanency; that nearly all of us will at some stage in life have a temporarily crippling accident or disease and, all of us can therefore claim handicappedness and will benefit from having buildings suitably organized for wheelchair users and others who are disabled. (Goldsmith, S, 1971). It will be convenient for all if there are no steps at building entrances, no awkward threshold sills to trip over, if doors are wider, if window openers are lower, if staircases have gentle slopes, if door springs are lighter, if door handles are grip able and if floors are not slippery.

Some general design requirements to eliminate or alleviate the problems posed by these physical barriers are listed below:

- (i) Pedestrian routes in the build environment should be easy to find, continuous, easy to use, free from unexpected obstacles, have a firm surface and be properly dimensioned.
- (ii) At least, one entrance to the building should be easy to find and usable by any persons irrespective of whether they are disabled or not. All doors should be well dimensioned and positioned.

- (iii) Barriers in internal communication (horizontal and vertical) which include long and narrow corridors, narrow doorways, badly designed or steep staircase with projecting nosings or sloping treads, improper or badly positioned symbols, signs or controls e.g. in lifts.
- (iv) Barriers in individual room which include: slippery floor surfaces, poor room acoustics, inadequate space for activity, poorly designed and positioned equipment.

If the aim of integration is to be achieved, then it is clear that no part of the built environment should be designed in a manner which excludes disabled persons". (Designing with care, 1981). Rather, architects and urban planners need to look into the possibility of creating good environments that present solutions to the problems of physical barriers. This can be done through the removal and avoidance of these known physical barriers, through simple layouts and careful design and also by remodeling and renovation works. The former usually ends up being cheaper than alterations and is usually recommended specially in places with limited financial resources as the case in Nigeria.

CHAPTER FOUR

4.0 SITE ANALYSIS

Project State (Benin city, Edo State)

4.1 HISTORICAL BACKGROUND OF THE STUDY AREA

Benin City is a famous ancient town. Dating as far back as to 10th century A.D., it was the seat of government of one most ancient and powerful West African Kingdoms. In its heyday in the 16th century, the Kingdom of Benin extended westwards to include Lagos and Dahomey (the present Benin Republic) and eastwards to the banks of the Niger river. The kingdom of Benin had a unique political system, centred round the Oba, king or traditional ruler. The Oba, the central figure around whom the cultural and sociopolitical system revolved, was at once the head of the kingdom and the religious leader. The throne was passed down through primogeniture, a system according to which the eldest surviving son succeeds his father. Even before its contact with the European colonialists, the city had enviable urban structures and was well fortified by mud walls, some of which are still visible today. By 1897, Benin City fell victim to a British punitive expedition, which reduced its political and economic influence drastically.

The creation of the Midwest State in 1963, with Benin City as its administrative capital, partially restored the administrative functions of the city. Today, Benin City still remains the capital of Edo State, and the cultural centre of the Edo – speaking peoples, comprising the Benin people and all those who speak closely-related dialects. Most of the Edo people live in the present Edo State, with a minority living on the fringes of the State. The domination of Benin City as a political and socio-cultural centre has prevented the development of large urban settlements in the immediate surroundings. In addition to this national road link between Benin and the other parts of Nigeria, some good secondary surroundings. These secondary roads have been stimulated food surroundings. These secondary road have been developed between the town and it rural crop

production and inter-and intra-regional food export. Benin City is known to be one of the few Nigerian cities where food crops are gathered for local consumption as well as export.

The historical importance of Benin City, together with its easy access other parts of the country, has led to a rapid increased of its population. Compared with other Nigerian cities, however, the rate of population growth of Benin City has not been particularly impressive. From 53,000 in 1952 and 100,000 in 1963 the population grew to 201,000 in 1972. indeed, at the end of the Nigerian civil war in 1970 of which Benin region was partially a theatre, a sudden inrush of people flowing to the town was observed and the Benin City had absorbed some of its surrounding rural settlements. The 1991 Nigerian population census recorded a population of 730,000 for Benin City and by the year 2000, the estimated population was 850,000. the creation of the three Local Government Areas of Oredo, Egor and Ikpoba Okha out of the former single local government area with Benin City as headquarters gave a new impulse to the expanding urbanization and the issuing population increase. The population has mainly been drawn to Benin City as a result if increased employment of opportunities following the establish of many more government departments and the expansion of retail trade. Before then, the industrial development had been relatively slow. The impact of the educational institutions in building the population of Benin City is particularly remarkable. The city is known to be one of the Nigerian cities with the largest number of educational institution both for secondary and tertiary levels. The city itself has two universities. the Federal University of Benin, with its teaching hospital, and a private university, Benson Idohosa University. Within the environs there are two other universities and two research institutes. There is a State university, Abrose Alli University at Ekpoma, and another private university, Igbinedion University at Okada. The Nigeria Institute For Oil Palm Research is located close to Benin City as well as the Rubber Research Institute of Nigeria. these educational establishments and research institutes affect the lives of the

people in Benin City and its region positively. They generate employment and the employees spend some of their disposable income locally.

Benin City and its region have not been practically noted for industries. Although the infrastructures and incentives that could facilitate industrialization such as abundant land, good transportation facilities, and skilled manpower are available, the low rate of industrialization could be blamed on inertia, the slow pace of moving from mainly primary processing industries to major manufacturing establishments. The industries in Benin City were meant to process products from the vast agricultural and forest resources of the region. Early in its history, Benin had big rubber processing factories and timber sawmills. More recently, some modern industries have sprung up, with the bottling and brewing industries in the lead. The Guinness Brewery and the Nigerian Bottling Company are establishments employing a good number of urban residents. Outside Benin City, but within Edo State, the major industries are the cement industry at Ukpilla and the flourmill at Ewu on the northern fringe of the Benin region. Though large industries are few, Benin is noted for small scale industries and crafts. Furniture making by small scale entrepreneur, wood carving and bronze casting have given Benin City a special identity. The products of Benin City blacksmiths, wood and ivory carvers, leather workers, brass smiths and bronze casters constitute a tourist attraction. Some of these carving and artifacts, have been thriving long before the colonial period, are on display in the famous National Museum located at the city centre.

The foundation for the growth of Benin City was laid by its rich rural black ground. The Benin City region occupies a low lying plain in the south and rises slowly to the Esan plateau in the north. This region is endowed with fertile soil and enjoys abundant rainfall resulting in luxuriant forest vegetation and good agricultural land. The abundance of good timber species such as mahogany, walnut and opepe (tropical hard wood) was the basis for Nigeria being an important timber exporting country in the colonial period and even after the country's independence in 1960. The over-dependence on oil industry

however, has reduced the importance of timber for export. Perhaps the most important forest product in the Benin region was rubber. Rubber tree grew wild in the forest before some plantations were established. The trees were recklessly tapped for both export local use. Today, the number of rubber trees has declined and the importance of rubber as an export crop from Benin region has reduced drastically. Attempts to have rubber plantations developed by indigenous farmers have not been quite successful. Besides, the young rubber tapers have left for urban employment. However, other agricultural products mainly foods crops such as yam, plantain and the drift of farmers from rural to urban centers have led to a noticeable shortage of some food crops. Or example, the yams produced in the region last for months after harvest, and for the rest of the year, Benin City depends on yams from other parts of he country. The development is disturbing because the earning capacity in the Benin region is low and high cost of basic food products may worsen the plight of the residents. The attention of government is focused on solving the urban problems, while agriculture and rural development are receiving minimal attention. Yet the natural endowment of the Benin region out to promise a balanced urban and rural development.

4.2 LOCATION OF THE PROPOSED SITE

The Rehabilitation centre is to be located along Benin Auchi road in Edo State. It is surrounded by Roads linking to each others. On the right hand side by Benin bye pass while at the back by a minor road to Orio Village. It is about 20 kilometers from Aduwawa market and about 20 meters from the Benin Auchi express road. The whole area is surrounded by trees and shrubs being a vigil land. Still on the right hand side there is a proposed railway line while on the left hand side there is an existing Oil pipe line underground as seen from the Benin Master Plan.

4.3 SITE LOCATION CRITERIA

Apart from being a chosen location by the state government on the master plan, it still enjoys so many other influence factors, such as:

COMMUNICATION ROUTES – The site is about 30m away from the main Express road with a boundary with Benin Bye pass which makes transportation problem minima to the disabled workers and visitors.

WATER SUPPLY – Though, there is no trace of river or stream on the site. Bore hole will be dug on the site.

LARGE AREA OF FUTURE EXPANSION – The site is surrounded by vast land which can be used for future expansion if the government planned to acquire the extension since the whole of that area is owned by government.

TERRAIN – The site is flat in Nature with even slope downward the Road.

GOVERNMENT POLICY – There is no any government policy against the land. Rather, the state governments have been canvassing for investors / voluntary organizations to participate in NGO in Edo State to improve on the life of the physically challenged.

AVAILABILITY OF REQUIRED PERSONNEL – Edo State is know as the Heart beat of the Nation. That is to say they have work force and Labour in surplus.

CAPITAL REQUIREMENT – The project will be finance by the state government, donations from NGO and federal government.

ACCESS – The site is directly linked to the major service routes that travels from Benin to Auchi impress and egress point of the proposed rehabilitation shall be linked to the service route.

VEGETATION – With special consideration of the site encroachment into tropical rainforest zone, every green broad leaved trees of luxuriant growth forms the background scene with central part of the site with tufts growth and grass lands.

4.4 CLIMATIC DATA

The weather charts have been prepared on the basis of climatic data collected from the department of meteorological services, Edo state, Nigeria. The charts supplied information on the following.

- (a) Temperature
- (b) Relative humidity
- (c) Rainfall
- (d) Direction of winds
- (e) Precipitation

Temperature

Influences the actual amount of water vapour present in the air and thus decide the moisture capacity of the air. It decides the rate of evaporation and condensation and therefore govern the degree stability of the atmosphere. It is expressed of stability of the atmosphere. It is expressed in degree Celsius. For each month, the average monthly variations are recorded of period between 1980 – 1994

Relative Humidity

This is the actual amount of water vapour in the air compared with the amount of water vapour the air could hold if it were saturate. It is expressed in percentages. For each month the average monthly relative humidity observed over the period considered is outline.

Rainfall

The predominant type if rainfall in this forest region is convectional the amount of which is measured in millimeters. The average monthly rainfall (mm) is recorded on the subsequent graphs

Wind Direction

The most prevalent wind is the southwest monsoon wind, however in the harmattan it is greatly subdued by the Northeast trade wind effects.

Precipitation

The most outstanding feature of an equatorial climate is its great uniformity of temperature throughout the year. The mean monthly temperatures are always around 27 (80F) with very little variation. Cloudiness and heavy precipitation help to moderate the daily temperature, so that even at the equator itself, the climate is not.

4.5 DESIGN IMPLICATION

Orientation will be in the West – East arrangement so that buildings might enjoy 50% wind, 25% sun, 75% shade to reduce glare discomfort around and within the building interior spaces. This is considered the best building orientation for the tropical setting.

4.6 DESIGN CONSIDERATIONS

In order to achieve the aim of creating a good environment for the centre, a number of guiding Principles or requirements has to be identified and referred to throughout the planning and design process to ensure the high degree of adaptation desired by the trainee.

4.6.1 BASIC PHYSICAL REQUIREMENTS

They are as follows:

- **Accessibility** – the whole of the built environment must be designed so that it is accessible for all people
- **Usability** – the whole of the built environment must be designed so that it can be used and enjoyed by all people
- **Orientation** – the built environment must be designed such that it is easy to orientate and find one's way in and around the centre. This is especially important to the disabled trainees who will not have individual helpers to take them around.

- **Safety** – the built environment must be designed so that people can move around without undue hazard to life and health. This requirement is of particular importance in the vocational training facilities and the residential areas where the trainee would be most of the time.

SUB-TOPIC

4.7 EFFECTS OF DISABILITY TO THE PHYSICALLY CHALLENGED

4.7.1 Effects of disability on individual behaviour

The effect of the disability on the individual can better analyzed under 4 groups.

- (1) The physiological effect
- (2) The social effect
- (3) The psychological effect
- (4) Environmental effect

4.7.2 The physiological effect

These are the problems that arise as a result of the loss of a particular physical attribute without which the individual becomes handicapped or mentally impaired. The effect varies from disability to disability and between individual having the same disabling conditions. Some of these physiological effects can lead to other social and psychological effects.

- (i) Impairment of mental faculties which could be intellectual impairment, emotional disturbance, loss of memory or a combination of two more things. This means that the person may not be able to find his way around complex buildings or may easily injure himself where projecting building elements abound or where enough safety are not provided
- (ii) Incontinence whereby the individual is being able to properly control all his excretory functions and may need to use special incontinence appliances. This problem appears to be more prominent among the females because male incontinence appliances are much easier to wear, conceal and employ. Even

among those who use normal sanitary equipment, it is much disabled woman to use a W.C.

- (iii) The individual may experience unpredictable day conditions such as on and off pain and joint stiffness.
- (iv) Communication problems may also arise as a result of the disability and these are more prominent with persons with hearing or speech difficulties.
- (v) Impairment of vision such that the individual tends to lack orientation especially in buildings where signs and symbols used are suited to people with normal vision.
- (vi) Bodily deformity which may affect coordination. This effect is among the most obvious and tends to seriously limit the individual's attitude as well the attitudes of others.

It also limits their access to many buildings. Other physiological effects which have little association with the use of buildings include progressive physical deterioration, loss of sensation, and lack of coordination and impairment of sex function.

In summary they are effects caused as a result of physical deformities in any part of the body. They have been resolved in the design by creation of ceiling hoist in toilets, separation of vehicular movement from pedestrian, wide corridors, avoidance of steps within the building, wide door etc.

4.7.3 SOCIAL EFFECTS

As mentioned earlier, the physiological effects are responsible for some of the social effects because the individual is often not able to socialize as freely as he/she would want to. A female disabled person with an incontinence problem will not easily want to go on a camping trip knowing that it is most unlikely for there to be suitable sanitary facilities for her use. This is true also for other physiological effects which warrant the use of special equipment which the individual needs to be close all the time. Also the disability may result in an occupational handicap thereby limiting the individual's social life, e.g. a bus driver who loses

his limbs will have to leave his job and the tendency is for his financial status to fall such that the little he has must be spent on personal care rather than on social activities.

In the design there is a creation an auditorium for social gathering like wedding, birthday celebration, creation of access ways to all the offices. All these promote social interactions.

4.7.4 PSYCHOLOGICAL EFFECT

Where the disability has been accompanied by negative social or physiological effects, there are bound to be psychological effects on the individual because he will tend to feel abnormal and left out leading to emotional instability. Though there is no firm evidence to support it, it is very likely that the effect will be worse with people who became disabled in adulthood and since majority of disabled people acquire their disability in adult life (Toplise, 1975), this is very prominent and must be considered in caring for disabled persons.

They can also be considered as effects that emanated from the mind which are stigma to the physically challenged.

In the design there is provision for out door games where they can participate in competitions within and outside the state. Vocational training centres provided where they can also learn and show their works for exhibitions denoting the facts that there is 'ability' in disability.

4.7.5 ENVIRONMENTAL EFFECTS

The disables are faced with different effects from the environment which could also be referred to as physical effects. E.g. transportation problem, steps e.t.c

They can also be considered as effects caused by the environment they find themselves. In the design Ramps with Balustrades were provided, open walk ways to all the hostels were covered with roofs.

4.8 ATTITUDES TO DISABILITY

Attitudes to disability can be treated under 3 categories:

- (1) The attitude of disabled person
- (2) The attitude of the immediate family
- (3) The attitude of the community

(1) The attitude of the disabled persons to their disabilities was studied as part of the survey mentioned earlier and it was revealed that, contrary to the generally accepted opinion (that disabled people want to be treated normally), majority actually tend to be unneurotic about their disability and refer for people to recognize their inabilities so that they will not be burdened with trying to do what they are not capable of. The survey also suggests that "there may be a tendency among people who are most severely disabled to have fewer inhibitions about perceiving themselves as disabled than those who are less handicapped".

(Goldsimth, S., 1976). A large proportion of wheel chair user did not indicate any inclination to deny their situation as disabling people. Of course, it must be realized that in a country like Nigeria where they are still being looked down upon, the individual's attitude may not as wholesome.

(2) The attitude of the immediate family: family attitude cover a wide spectrum from compassion right through to revulsion depending on the degree of disability. In Nigeria in addition to all these attitudes, there is often the belief that the disability is a course from an enemy and so rather than seek proper medical attention, the disabled person is taken to a herbalist which often worsens the situation. Families also try to hide the person away from public view as much as they can. Although this appears to be more common among the elite class (Olajiga, 1990). These attitudes are beginning to change through with increased awareness to the truth about disability and should get better when the government embarks

on the public enlightenment programmes that form part of the social development programmes.

- (3) The attitude of the community; community attitudes are often very negative because of ignorance about disability and they include revulsion, intolerance, impatience, superiority whereby the disabled person is treated with condescension, pity and aversion.

All these negative attitudes have worsened the plight education. Such programmes will need to bright the public into personal contract with disabled people but in a positive and meaningful way (McConkey and McCormack, 1983). Also the society tends to be more neurotic than the disabled persons themselves, believing that since they suffer from one disability or another, they are totally handicapped. They are not often given the chance to prove themselves especially in the area of employment. This attitude too has to change in order to achieve any progress towards complete acceptance and integration of disabled people into every facet of daily life.

4.9 WAYS OF ELIMINATING EFFECT OF DISABILITY TO THE PHYSICALLY CHALLENGED

- FEDERAL GOVERNMENT POLICY ON REHABILITATION.
- ROLE OF STATE AND LOCAL GOVERNMENT
- ROLE OF FEDERAL GOVERNMENT
- ROLE OF VOLUNTARY ORGANIZATION
- EDUCATIONAL OPPORTUNITIES
- EMPLOYMENT OPPORTUNITIES

4.9.1 FEDERAL GOVERNMENT POLICY ON REHABILITATION

Rehabilitation services in Nigeria come under social Welfare Division of the Social Development sector which was established by the Nigeria come under the social welfare Division of the Social Development sector which was established by the National Social Development Policy. Other division under the Social Development Sector include: Community Development Youth Development; Sports Development; and Women and Development.

The National Social Development Policy flows from:

The concern of the communities for the overall well being of their individual members and sub-group rooted in the various cultures of the people

The realization that the welfare and capacity of the nation depends very much on the contributions of the people who must have been prepared for the role

A commitment to the observance, protection and advancement of the democratic/fundamental human rights of all citizens. The policy through laudable in its objectives and programmers does not yet have the backing of enabling laws and so cannot or demonstration or in respect of special programmes it may consider to be of strategic importance at the national level. It was in pursuance of this that the Federal Government in collaboration with the United Nations Development programme (UNDP) and the International Labour Organization (ILO) plans to set up six (6) vocational rehabilitation centers to be located in Lagos, Ibadan, Kaduna, Sotoko, Enugu and Kano

Also a National Social Development Fund has been established to ensure a reasonable and stable level of contribution from the organized private sector, to which organizations will be required to contribute voluntary each year. The Fund is yet to go into full operation since it still lacks proper enabling laws.

4.9.2 THE ROLE OF STATE AND LOCAL GOVERNMENTS

The organization and direct delivery of social development services in the public sector is the responsibility of the state government in collaboration with the local governments especially in relation to community awareness, appropriate training, diligent followed up effective co-ordination of all the initiatives of the public and private sector, provision of health – care facilities; involvement of mass media in promoting the image and dignity of disabled persons, the Local Governments and Voluntary Organizations all in consultation with the beneficiaries. (Append B)

4.9.3 ROLE OF FEDERAL GOVERNMENT

The Federal Government is mostly involved in the formulation implementation, coordination and period reviewing of policies and legislations. One of such policies recommends the 2% (two percent) of the labour force should be reserved for trained disabled persons. It is also primarily responsible for the funding of the sector, a responsibility which it discharges through regular budgetary allocations to the sector in support of its programmes.

The Federal Government is not involved in the direct delivery of services except for the purpose of standard – setting, some form of vocational training I meant to be taught at the three earlier levels although this is yet to be fully implemented. Simple handicrafts are to be taught at the primary level, prevocational training at the junior secondary level and full vocational training at the technical colleges.

In recognition of the fact (1) some categories of disabled persons need to be taught using different methods from those used with their able – bodied counterparts and (2) the education and training received during childhood and adolescence can play a vital part in equipping them to deal with their adult life (Topliss, E. 1975) p. 29) special schools have been set up such as schools for the Blind and schools for the deaf. These special schools have been concentrated at the primary level since it is assumed that by the student reaches

the higher levels, he would be better equipped physically and emotionally to compete with his counterparts despite his disabled.

However, at the level of the technical colleges, because training is activity oriented, there is a need to separated the training for disabled persons from that the able-bodied persons since the physical activities which they are capable of engaging in differ greatly. These vocational which they are provide some amount of formal education in addition to the technical training.

4.9.4 THE ROLE OF VOLUNTARY ORGANIZATIONS

Voluntary organizations and service clubs have been largely responsible for most of the rehabilitation centre in the country today. Even some of those being run presently by the Federal or State government originally founded by some of these organizations. Such organization include the Federal Nigeria Society for the Blind, the Red Cross Society, the Church Missionary Society and several other religious organization and well as philanthropic individuals.

4.9.5 EDUCATIONAL OPPORTUNITIES

Literacy for all is one of the objectives of the government of Nigeria and as a result of this, educational opportunities for disabled person have increased in recent times.

Education for disable persons more or less lines up with that available to the able-bodied persons i.e the 6-3-3-4 system as laid down by the National Policy on Education. The "6" represents six years of primary education, followed by "3" years at the Senior Secondary school or Technical College followed by "4" years of Higher education. At the first two stages, all students take the subjects offered but the last two stages involve some specialization whereby the students takes subject he has been assessed to be capable of coping well.

Another level in the educational framework in the country is the adult education programme through which adults who were unable to get the basic formal education will be taught enough at least to be considered literate.

4.9.6 EMPLOYMENT OPPORTUNITIES

Gainful employment is one of the ultimate aims of rehabilitation and the different types of employment available to disabled persons have discussed earlier.

In Nigeria, employment opportunities for disabled persons are grossly inadequate, even though all the different types of employment are available in theory. The practice has been

- (1) For those who are educated among them to compete for paid employment but with the general employment problem and negative society attitude, employer prefer to avoid employing them they resort to a life of dependence and frustration or take on jobs that are not commensurate to their educational achievement.
 - (2) For those who are uneducated to take on very menial- jobs or trades which cannot support them financially considering the higher cost of living for disabled persons which in effect means partial or total dependence.
- With the shift in attention to rehabilitation services, the social welfare sector has started encouraging self-employment for the disables who learn different trades in vocational homes while the Federal government policy on employment for the disables is being enforce on every sector of the economy.



CHAPTER FIVE

5.0 PROJECT ANALYSIS

5.1 DESIGN CONCEPT

The facility is planned as a centre for disabled persons which aims to enhance their full participation and integration socially and otherwise into the community. For them to be able to do this, they must learn to interact with themselves on a micro level and then increase their scope of integration to higher levels, the community.

The entire scheme is therefore conceived as a micro community based on

- (a) the creation of a hierarchy of social interaction points created by open and closed courtyards, trellised outdoor spaces, outdoor relaxation areas and indoor lounges all acting as foci for activities.
- (b) Maintenance of a high level of physical and visual contact through the provision of open courtyards which linked together, spatially, low and high partition walls and easy movement between spaces

5.2 SITE PLANNING CONSIDERATION

The Site Analysis revealed that vehicular access would be best taken from secondary roads bordering the site since this is closer to the central road area as well as the fringe of the housing scheme, making it easier for user from the community to come into the centre. The site was then zoned taking into consideration environmental factors and hierarchy of the different units in terms of public and non – public space. This zoning was also so that the trees, shrub would act as a buffer against traffic noise from the Benin bye pass road and the main axis road.

In the master plan, 30 (thirty) meter-setbacks had already been given between the road and the fence line but addition setbacks of not less than 15m were given on the sides bordered by roads.

5.3 SPECIFIC DESIGN REQUIREMENTS

Some general design requirements have already been mentioned in an earlier chapter but other specific requirements had to be considered in the design of centre. These include:

- (1) Total separation of pedestrian movement from vehicular movement such that trainees could move from their residence to almost anywhere without having to cross any major vehicular movement.
- (2) Ensuring adequate setbacks from the major roads and the pipe-line
- (3) Provision of covered walkways to most buildings as well as shaded sitting areas.
- (4) Ensuring adequate ventilation to combat the high humidity levels experienced in the area.

5.4 BRIEF DEVELOPMENT

CLIENT: Ministry of Woman Affairs, Youth and Social Development, Edo State

PROJECT: Proposed Rehabilitation / Training Centre for the Physically Challenged

RESIDENTIAL

- Double bedrooms for 108 trainees
- Dining facilities
- Kitchen / stores / service parking
- Provision store

VOCATIONAL

- Shoe Making
- Weaving
- Computer Training
- Tailoring
- Stores

- Craft Show Room
- Sales Shop

RECREATION

- Playing Ground
(Hand Ball)
- Swimming Pool/ Changing Room

ADMINISTRATION

- Principals office with Secretaries office and meeting room
- Instructors Office to Accommodate (8) instructors, clients
- Social Workers office to accommodate (4) social workers
- Counseling office to accommodate (4)
- Matron's office/ Visiting Doctor's office
- Auditorium
- Nurses office / client
- General store
- Parking to accommodate
- Pharmaceutical store.

OPERATIONAL HOUR:

6AM – 8PM (Monday – Sunday)

CONSIDERATION:

Physically impaired

Sensory impaired (except the blind)

POPULATION: 108

Physically challenge youth (Adult / Adolescent)

5.5 SCHEDULE OF ACCOMMODATION

TABLE 4: ADMINISTRATION

| FACILITY | DIMENSION | AREA (m ²) | FUNCTION | NATURE |
|-----------------------|-------------|------------------------|---|---|
| Counseling office | 4.0 x 8.0 | 32.00 | Private office where they accommodates client | Semi-formal atmosphere with provision for relaxed seating |
| Social workers office | 5.2 x 5.2 | 27.04 | Private office where they accommodates client | Semi-formal atmosphere with provision for relaxed seating |
| Instructors office | 5.2 x 5.2 | 27.04 | Private office where they accommodates client | Semi-formal atmosphere with provision for relaxed seating |
| Principal's office | 4.5 x 8.0 | 36.00 | The principal private office where he works and receives visitors. | Semi-formal atmosphere with provision for relaxed seating |
| Secretary's office | 4.0 x 6.0 | 24.00 | Contains the secretary's work area and seating for visitors waiting to see the principal. | Semi-formal atmosphere with provision for relaxed seating |
| Waiting room | 9.0 x 12.0 | 108.00 | Where receptionist attends to visitors | Semi-formal atmosphere with provision for relaxed seating |
| Computer room | 5.0 x 5.4 | 27.00 | Contains area for browsing and doing computer work | Semi-formal atmosphere with provision for relaxed seating |
| Photocopier room | 5.0 x 5.4 | 27.00 | Contains area for making Photostat, spiral binding etc. | Semi-formal atmosphere with provision for relaxed seating |
| Nurses general room | 4.0 x 8.0 | 32.00 | Private office where they attend to patients. | Semi-formal atmosphere with provision for relaxed seating |
| Ward | 6.0 x 8.0 | 42.00 | Private bedroom where they accommodate patients for treatment | |
| Auditorium | 15.0 x 25.0 | 375.00 | For large group meetings, | Accessible from the two longe |

| | | | | |
|---------------|------------|-------|---|---|
| | | | film shows, plays, religious activities as well as wedding receptions, launching etc. | sides with the stage and changing rooms occupying one of the blank walls. |
| Cou.tyard | 4.0 x 10.0 | 40.00 | Main activity space for ventilation/lighting | Informal grassed/paved area |
| Kitchenette | 2.4 x 4.8 | 11.52 | For minor cooking and heating up food brought from the main kitchen before it is served | |
| Changing room | 4.0 x 4.0 | 16.00 | For male and female service staff | |

TABLE 5: RESIDENTIAL

| FACILITY | DIMENSION | AREA (m ²) | FUNCTION | NATURE |
|----------|------------|---------------------------|--|---|
| Lunge | 7.2 x 9.0 | 64.8 | A lunge space for interaction within the sub-unit. Activities include TV watching, table games and reading. | Relaxed interior with pleasant furnishing |
| Bedroom | 4.2 x 5.2 | 21.8 | The basic living unit providing facilities for sleeping and storage personal effects. The rooms are dimensioned so they are all usable by wheelchair users and yet are not oversized | The atmosphere must be informed and homely, with sturdy, pleasant furnishing and finishes. Share rooms and designed to ensure a measure of territorial privacy. |
| Dining. | 9.6 x 10.0 | 96.0 | Interaction space for all the forms of disables for all meals. | Flexible space to accommodate various room arrangement. High ceiling used to enhance quantity of space. |
| Toilet | 2.1 x 3.0 | 6.3 | A large space for bathing | Flexible space to |

| | | | | |
|---------|-----------|-----|--|--|
| | | | | accommodate the used of ceiling hoist for the wheel chair users. |
| Terrace | 1.5 x 4.2 | 6.3 | A space for viewing outside | |
| Store | 3.0 x 3.0 | 9.0 | To store toiletries line and other materials in the custody of the house mother. | |

TABLE 6: VOCATIONAL

| FACILITY | DIMENSION | AREA (m ²) | FUNCTION | NATURE |
|--------------|-------------|---------------------------|--|--|
| MOULDING | 10.0 x 14.0 | 14.0 | To provide adequate space for all equipment related to each of these activities. | The entire space was divided into basic grid with walls partitions separating the spaces for flexibility and semi-covered outdoor spaces were also provided for relaxation and for outdoor activities. |
| SHOE MAKING | 10.0 x 14.0 | 14.0 | | |
| SEWING | 10.0 x 14.0 | 14.0 | | |
| COMP RM | 10.0 x 14.0 | 14.0 | | |
| MULTIPURPOSE | | 72.0 | | |
| SHOP | 8.0 x 9.0 | 48.0 | To provide points of interaction and sedusion as well as being resting places for those with mobility problem who can't walk long distances at a stretch | Demarcated using landscaping elements such as tress or shrubs. chairs also provided. |
| SNACKS SHOP | 6.0 x 8.0 | 80.0 | | |
| SHOW ROOM | 8.0 x 9.0 | 180.0 | | |
| LIBRARY | 10.0 X 18.0 | 180.0 | | |
| | SIT-OUT | 5.1 x 6.5 | | |

CHAPTER SIX

6.0 PROJECT APPRAISAL

The buildings for the physically challenged consist of an administrative block, hostels, vocational buildings and a building for the principal. The design focused on interaction between the different aspect of the building which brings interaction among them.

6.1 THE PROPOSED CENTRE

The new centre has an expanded scope as required by the Federal Government agreement. It is to cater additionally for:

- (1) Three categories persons: the Deaf and Mute and the physically handicapped. This kind of mixing though objected to by some people is supported by a large group of experts e.g. Frank H. Krusen who says that it is often advisable to have the units for rehabilitation of the mute deaf combined with the units for rehabilitation of other types of psychiatric illnesses" (Krusen F.H, 1971). It is believed that there are many advantages in having such a large centre where a variety of experts (social workers counselors etc.) can be provided. Already, such facilities exist in Nigeria e.g. Majidu Rehabilitation Centre for the Deaf and Mute/Physically Challenged in Lagos.

6.2 PURPOSE OF STUDY.

- (1) To educate and train disabled persons in order to achieve a high level of independence physically as well as economically.
- (2) To provide training facilities for placement and after-care workers as well as providing internship training for social workers and nurse-in training.

6.3 REHABILITATION PROGRAMME

The Rehabilitation programme can be spilt up into several areas:

- (a) Vocational training
- (b) Adjustment education

- (c) Community development
- (d) Social development
- (e) Sports development



Vocational Training

- Tailoring
- Computer Training
- Shoe making
- weaving

Adjustment and mobility training involves helping the disabled individual to adapt to his disability physically and emotionally. Physical adjustment involves; teaching him how to use recommended prosthetics, certain household equipment, toilets how to overcome physical barriers; special therapy and physiotherapy. Emotional adjustment involves counseling and guidance on social problems that may impede resettlement.

Remedial education involves (1) the teaching of some the academic subjects taught in other technical colleges (for those with the educational background) e.g. Agricultural Science, Home Economics, Basic Mathematics, English Language, Accounts, Commerce as well as Braille (2) adult education for those with out the basic primary education

- (1) Disabled youths mixing with able-bodied children of similar ages.
- (2) Neighbours being invited to meals
- (3) Physical education activities of co-operative games among teenagers.
- (4) Interaction through indoor games
- (5) Organized talks in which the disabled person talk comfortably to others about his disability.
- (6) Organized tours which emphasized that the disabled persons can do for themselves, rather than what needs to be done for them.

(7) Social development involves helping the disabled persons to develop a sense of community through social activities within the centre.

(8) Sports development involves participation in sporting activities especially swimming which also helps physical adjustment.

6.4 DESIGN PHILOSOPHY

To have a design that is flexible, pragmatic in Nature that has functions that can stand the test of time.

6.5 MANAGEMENT AND FINANCE

The centre will be managed directly by a principal with the help of other administrative staff. The principal will report to the Director of the Rehabilitation Section of the Federal Ministry of Culture and Social Welfare at Government Office G.R.A., Benin City.

6.6 USER REQUIREMENTS

Three categories of user can be identified,

- (1) the person in training
- (2) the staff
- (3) The community

(1) The trainees who are full residential need to feel very much at home through-out their stay in the centre. There-fore all activities that have to do with day-to-day Living have to be catered for. These include eating, sleeping and resting, social interaction, storage laundry / toiletries, formal and informal recreation, reading.

Feeding is to be catered for by he management of the centre although trainees will be to bring in a few provisions. Bedrooms and lounge spaces have been provided

for sleeping and resting respectively and the number of person for each room was limited to a maximum of two for adolescents and a maximum of one Adult. This is to allow for privacy and at the same give room for companionship especially among adolescents who need the peer-group influence to help them build a sense of community. (Bolton and Kammeyer, 1967).

6.7 CONSTRUCTION METHODOLOGY AND MATERIALS

6.7.1 STRUCTURAL SYSTEM

Concisely the structural to be embarked upon is an important aspect in the proposed design. For this rehabilitation centre a bulk active structural system will be adopted.

Bulk Active structural Systems:- short rigid element monolithically connected and spanning space by redirecting loads through their bulks e.g. column and beams.

6.7.2 FOUNDATION SYSTEM

The foundation system is that part of a building's sub-structure which transmits the building loads down to the supporting soil. These loads include the dead load of the building weight and the live load of its occupants and contents. It may have to resist ground pressure as well as anchor the building's super structure against uplift or racking due to lateral wind or earthquake forces.

Due to the firmness and compacted substrata component of the site's soil the suggested foundation type is normal strip foundation.

6.7.3 FLOOR SYSTEM

The floor system is the building primary horizontal plane which must support both live loads, people, furniture and movable equipment and dead load- the weight of the floor

itself. The floor system must transfer its loads horizontally across space to both beams and columns or to bearing walls.

Rehabilitation centres floors are designed to be resilient, non slippery, of good appearance, easy to maintain, comfortable and appraises users safety. Based on this terrazzo floor was adopted.

6.7.4 LIGHTING AND VENTILATION

Adequate natural lightning and ventilation were the top priorities in this design and this was achieved in all the rooms/offices etc. though air conditioner will eventually be used.

6.7.5 BASIC CIRCULATION

The positioning of the design is at towards the outskirts of the master plan of Benin which gives it advantage of large area for expansion. It is also by the major road which makes accessibility easy.

Parking spaces are provided and pedestrian covered walkways are designed to avoid rain, lawn and vehicular road crossing.

Horizontal form of circular was used throughout in all the building except the principal office building because of the forms of disability.

6.7.6 SERVICES AND CONVENIENCES

The building will be provided with important utilities and amenities such as water supply, sewage disposal, storm water drainage, fire protection and electricity.

CHAPTER SEVEN

7.0 RECOMMENDATIONS AND CONCLUSION

7.1 RECOMMENDATIONS

- The design should be flexible with greater consideration of daily technological advancement.
- Appropriate zoning of function within the centre should be maintained
- Colour schemes and textural details of both the exteriors and interiors spaces should satiate workstation comfort requirements.
- In case of power failure, a ready made specified stepped down transformers with a correlating generating sets should be provided for.
- The microclimate of proposed design should be taken into consideration while preferring a design solution as this can affect or dictate construction materials to be employed.
- Government should make sure that the physically challenged are given equal opportunities in areas of employment, politics etc.
- The society should not see them as second class human being, knowing fully well that there is ability in disability.
- The society should encourage philanthropist to cater for their needs

7.2 CONCLUSION

This thesis presents the evolvement of a design proposal for the Vocational Training Centre Edo State (Benin city). The aim was to create through design an environment that would enhance the all round development of the disabled trainees in order to achieve the

larger aim of full participation and integration into the community, which also helped to curb the effects of disability. The proposal that was developed took cognizance the training programme of the centre, the needs of all users. By so doing, the centre was developed on a residential scale sympathy to the context in which it was situated.

It can only be hoped that the proposal has been able to achieve the set objectives and that once again, the design of the environment can to reduce a social problem.

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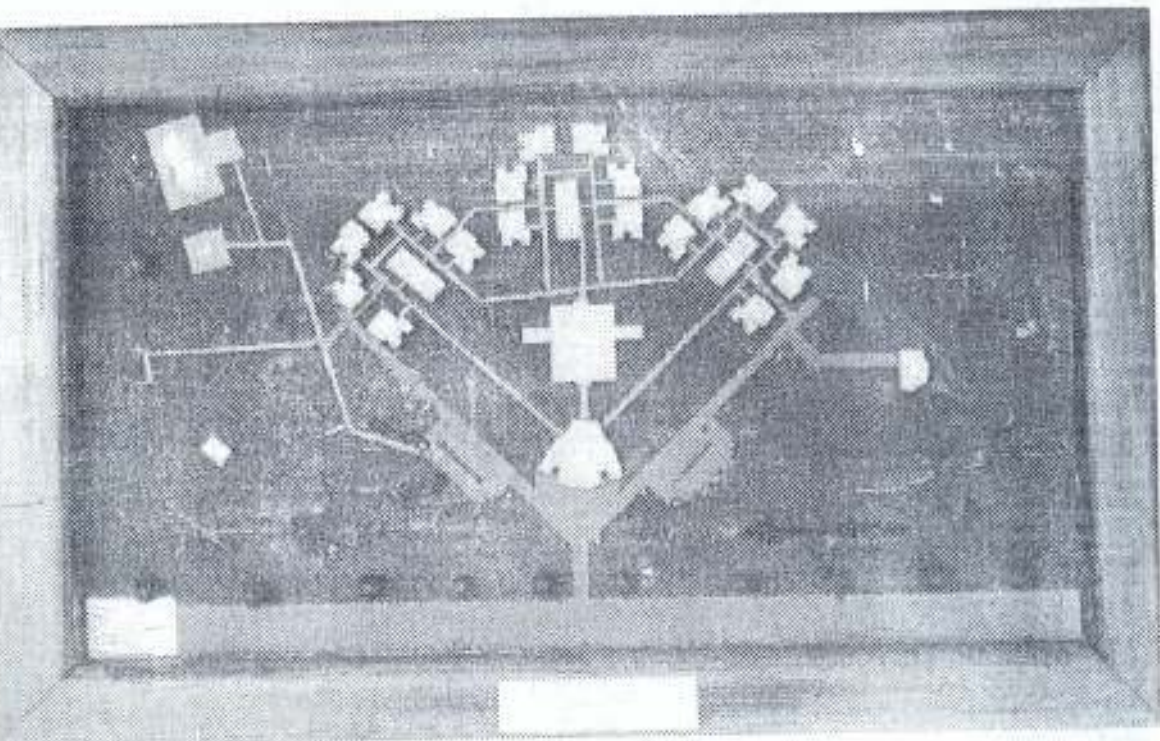
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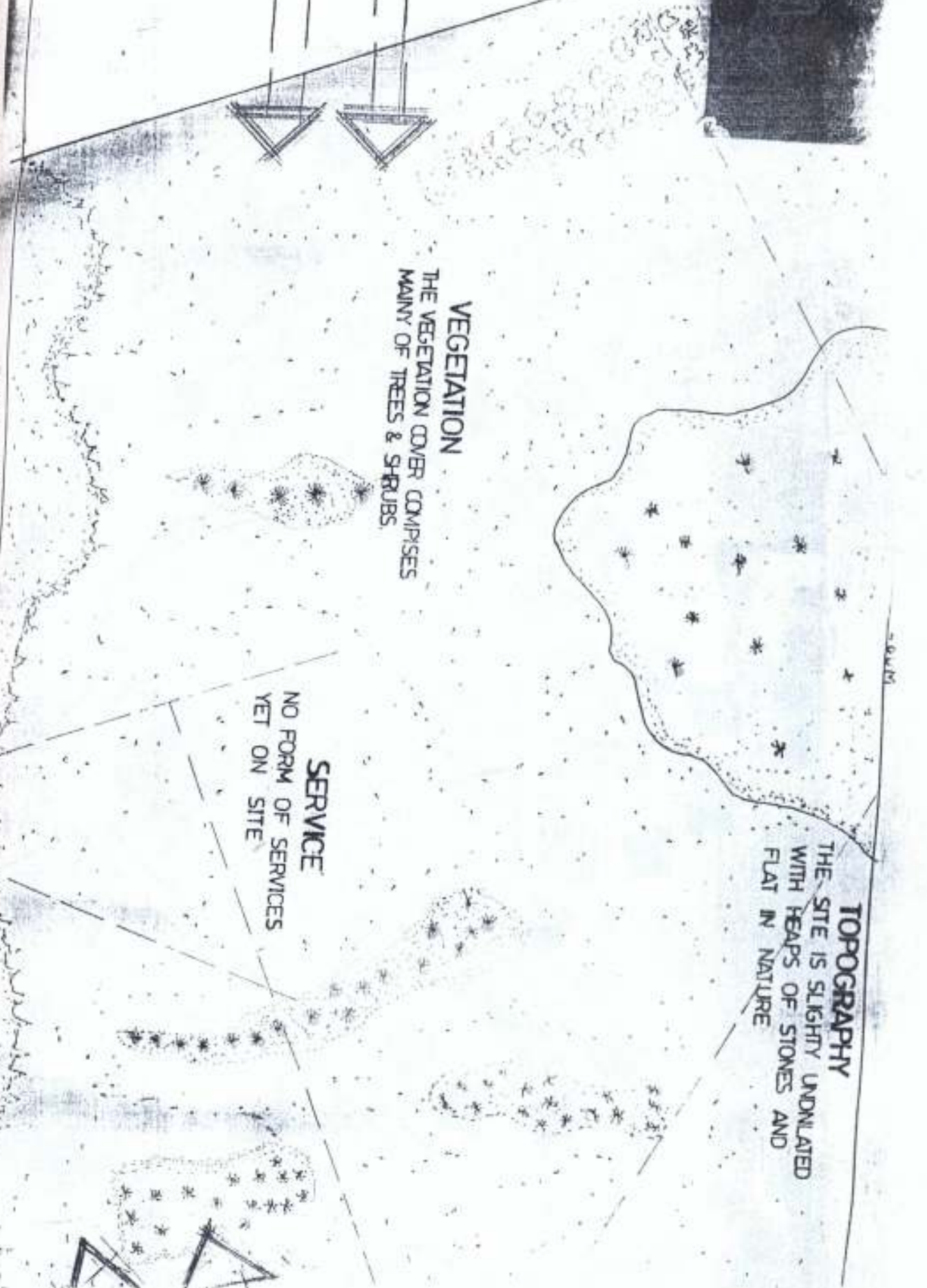
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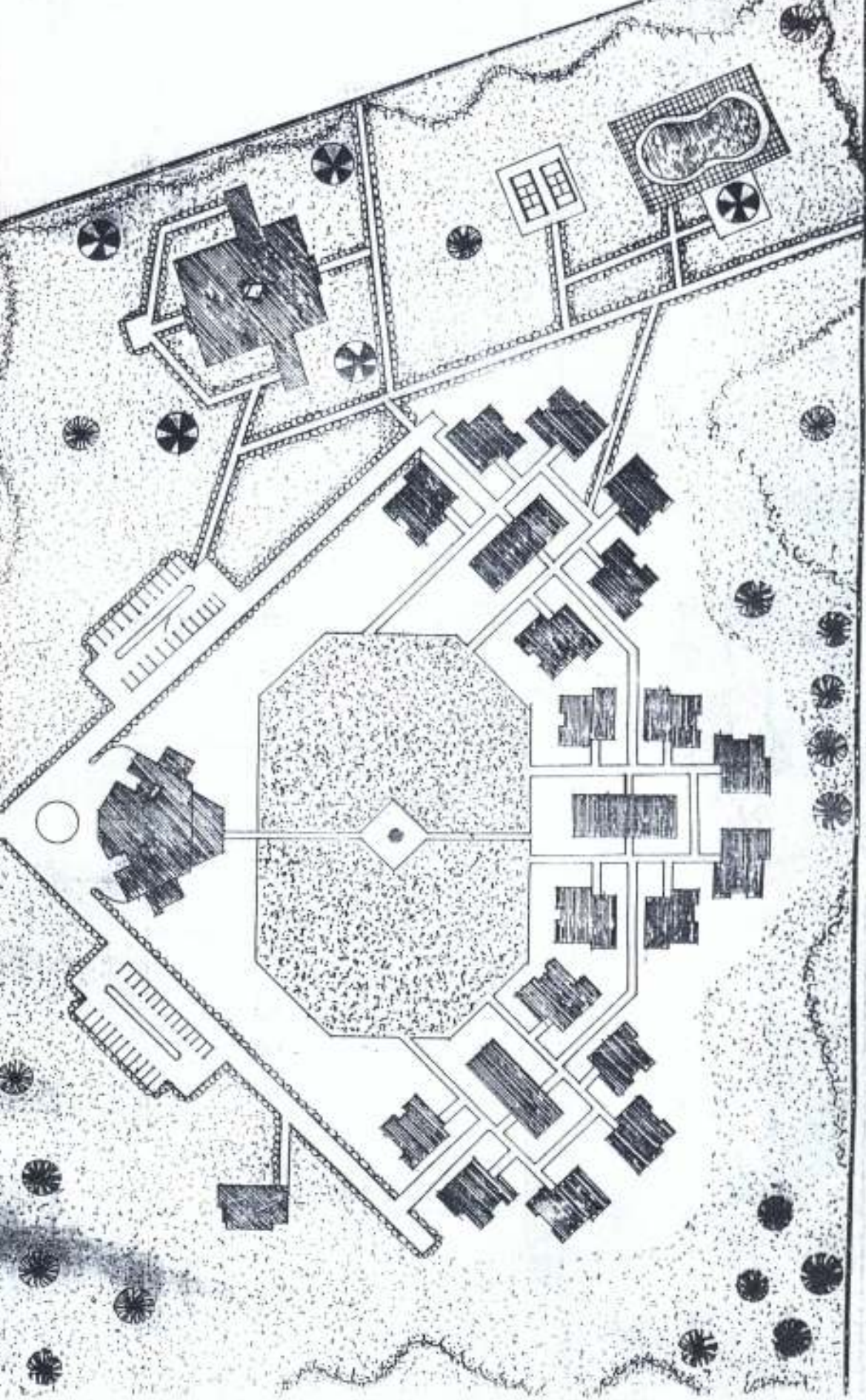
APPENDIX 1 : MODEL OF PROPOSED
REHABILITATION CENTRE

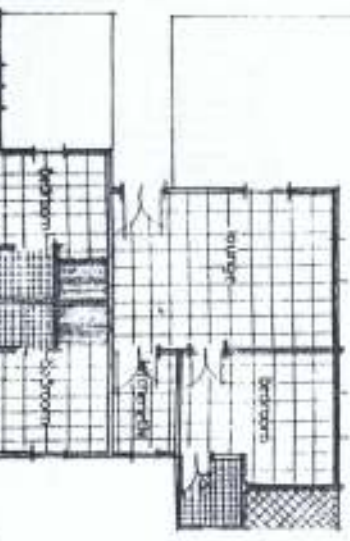
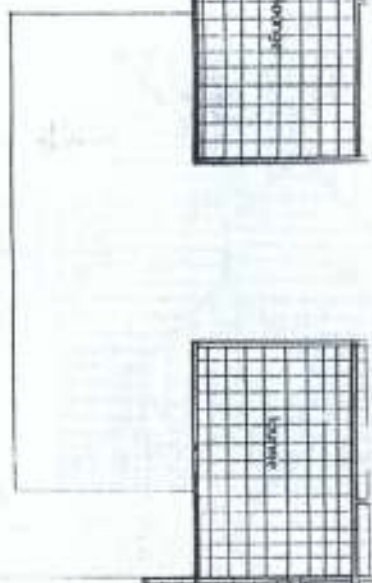
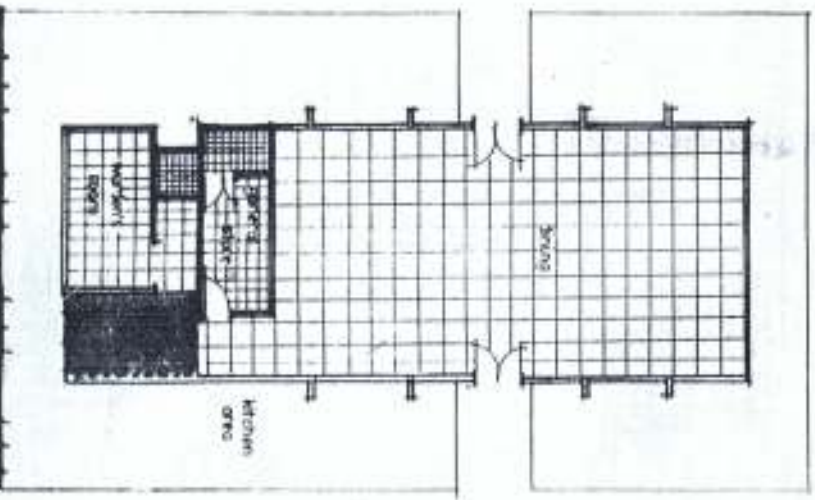
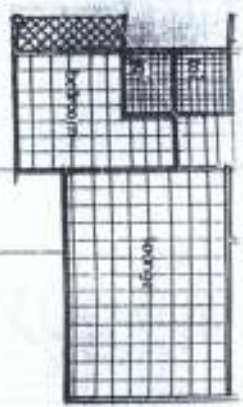


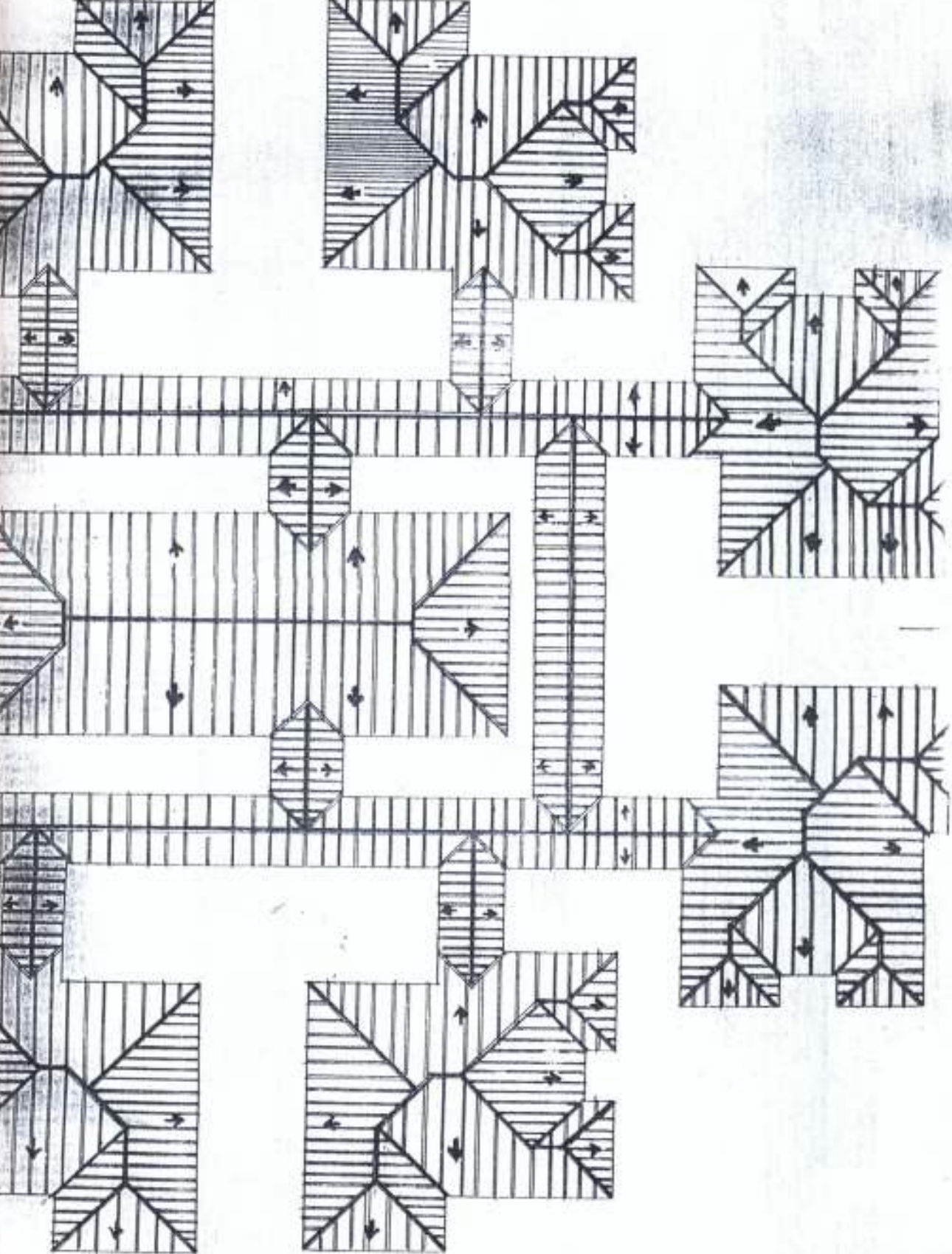
VEGETATION
THE VEGETATION COVER COMPRISES
MANY OF TREES & SHRUBS.

TOPOGRAPHY
THE SITE IS SLIGHTLY UNDLATED
WITH HEAPS OF STONES AND
FLAT IN NATURE

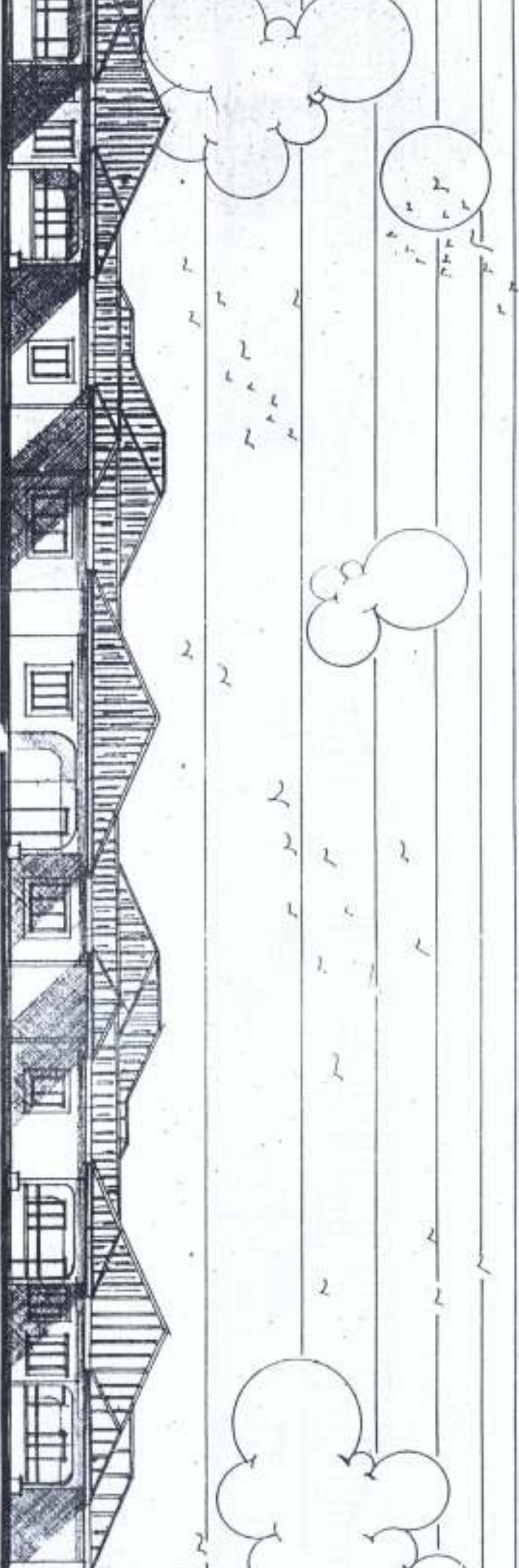
SERVICE
NO FORM OF SERVICES
YET ON SITE





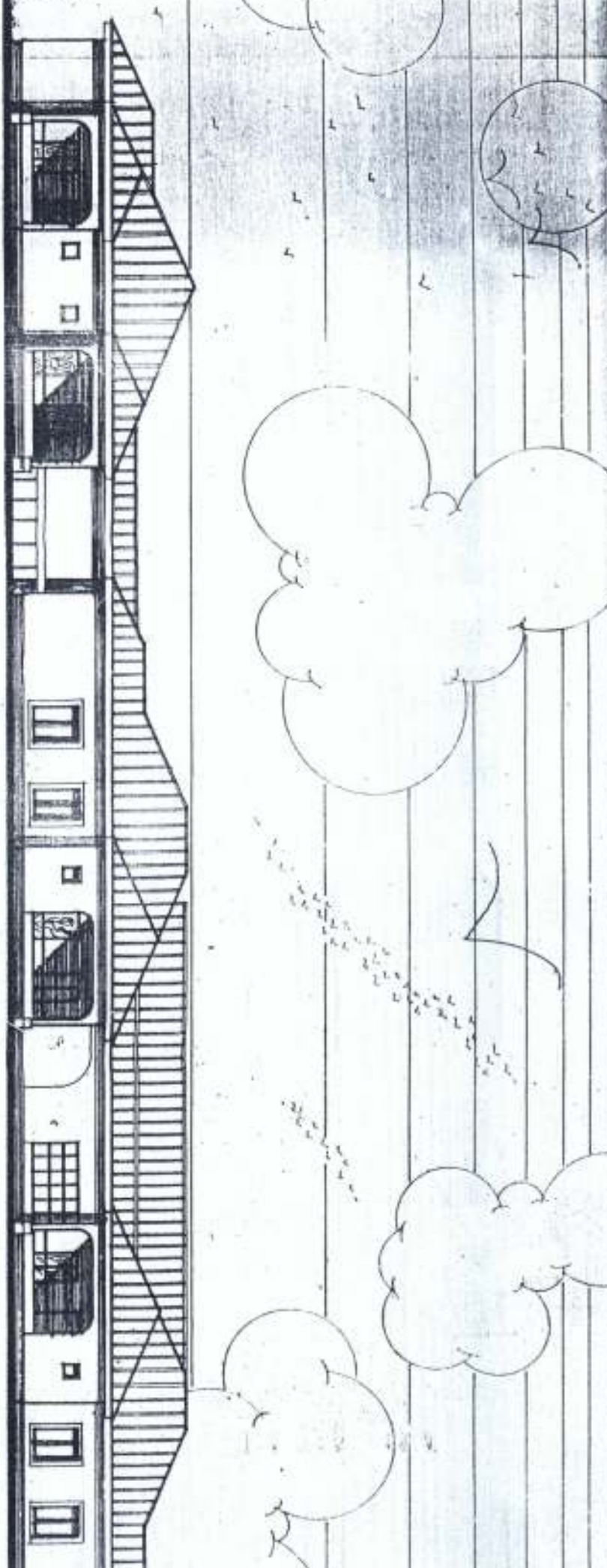


APPENDIX v : ROOF PLAN OF HOSTEL



APPROACH VIEW

APPENDIX VI : APPROACH VIEW OF HOSTEL

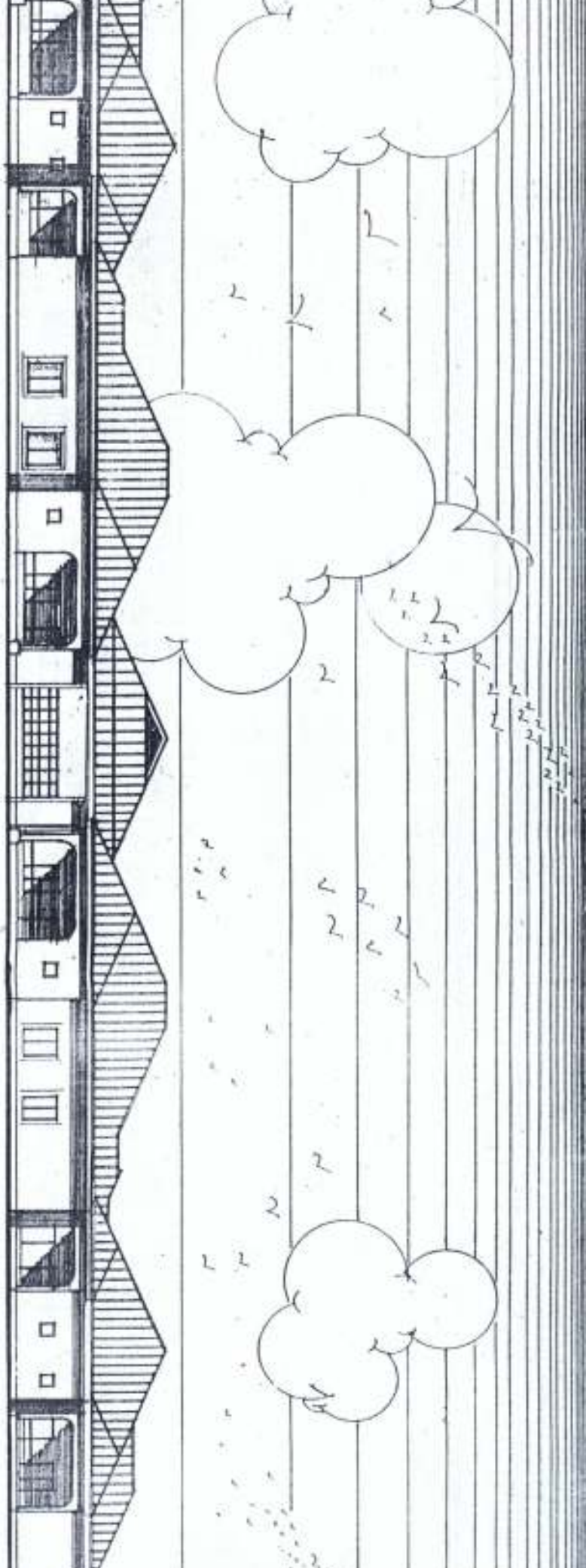


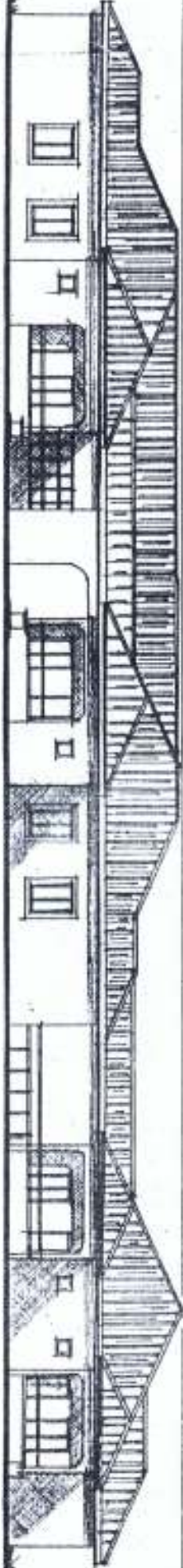
APPENDIX VI I

RIGHT SIDE ELEVATION.

APPENDIX VII

REAR ELEVATION.

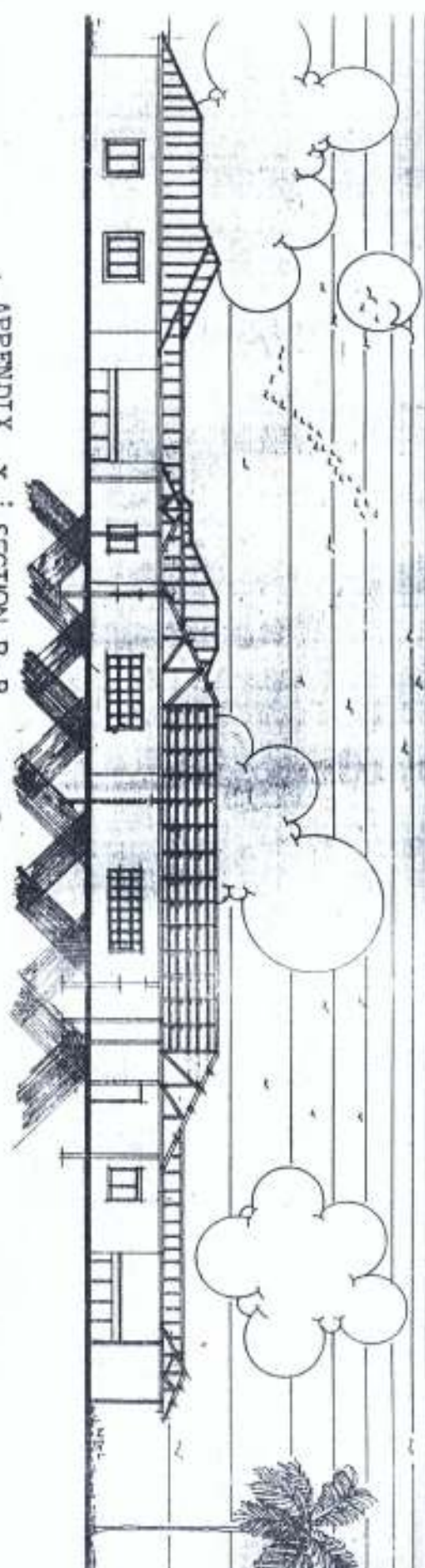


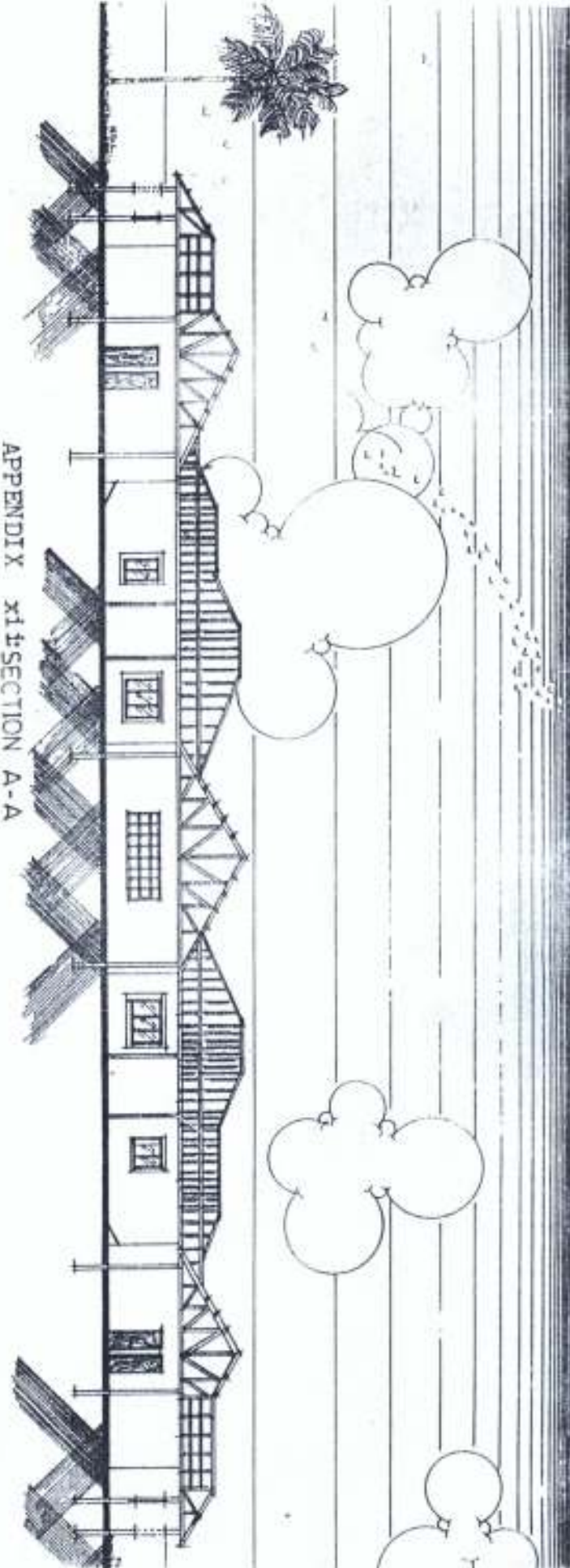


APPENDIX 1x
LEFT SIDE ELEVATION

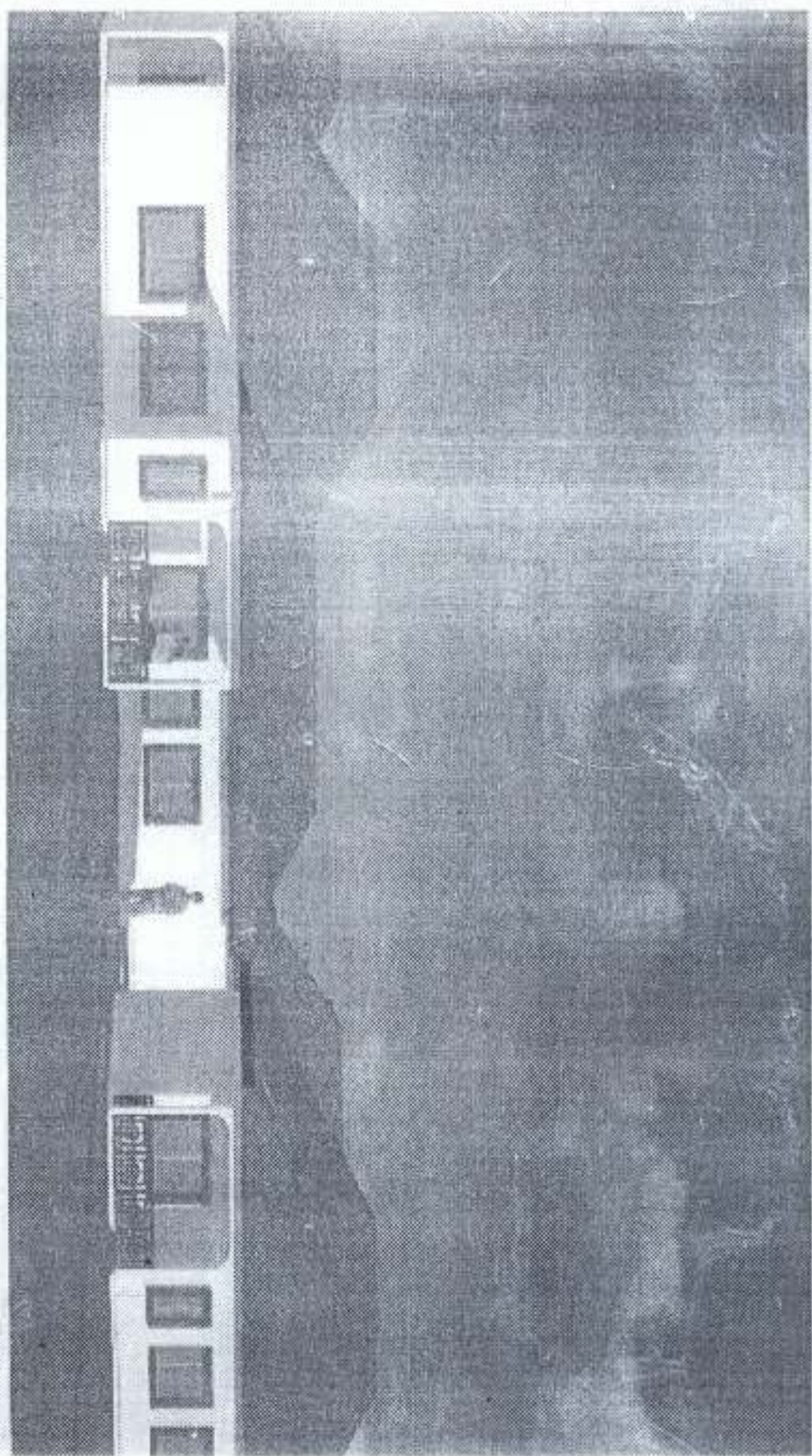


* APPENDIX X : SECTION B-B

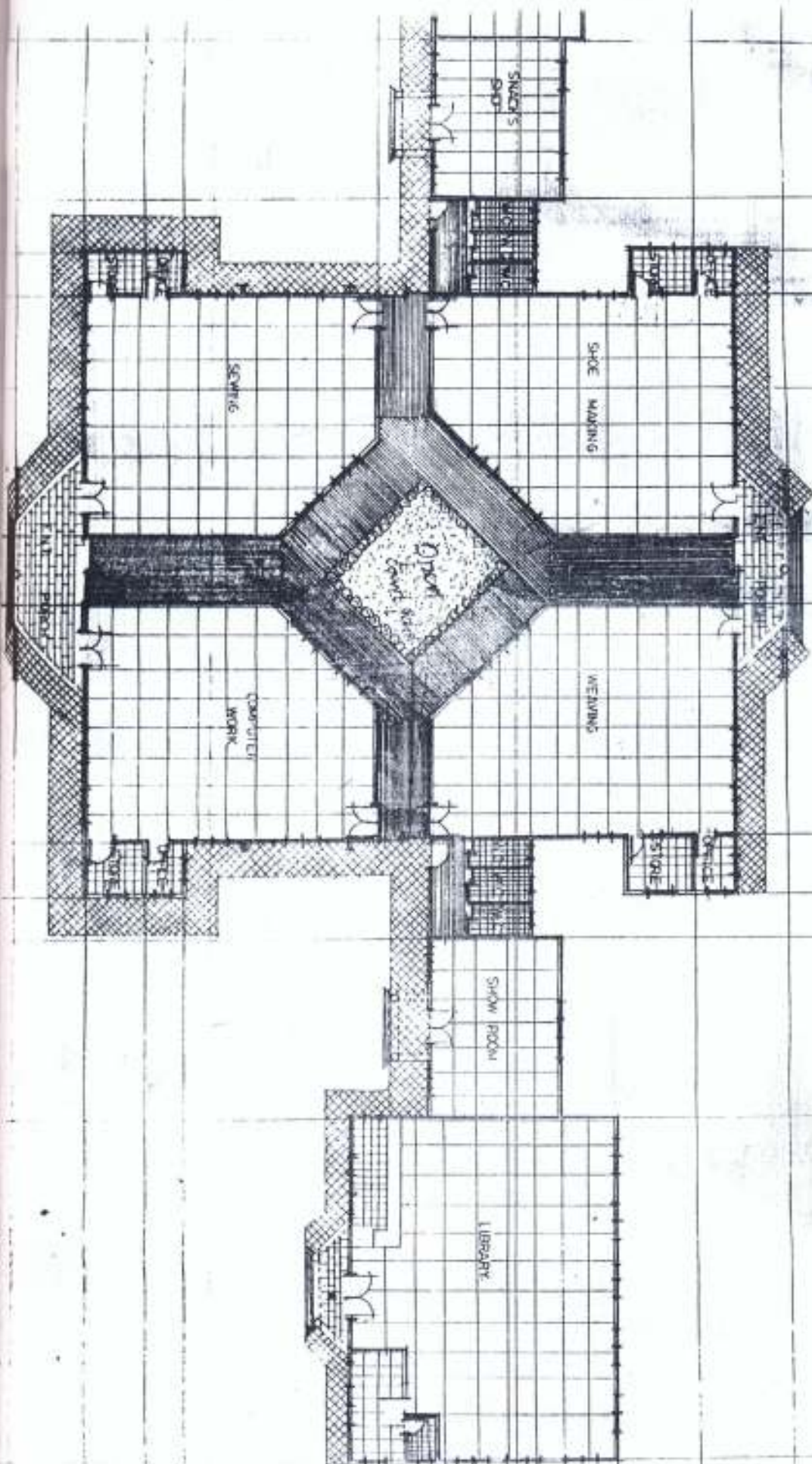




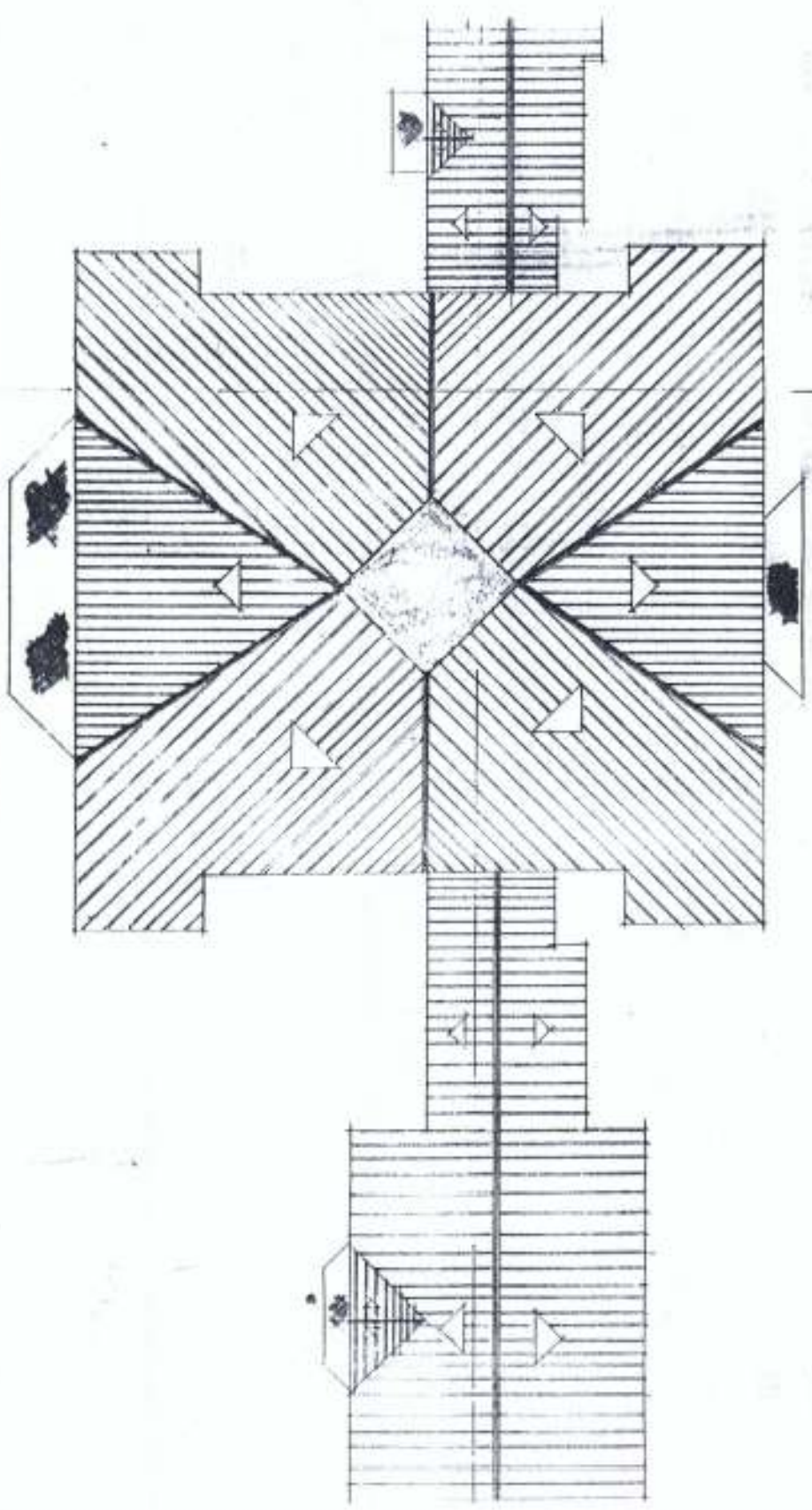
APPENDIX XI SECTION A-A

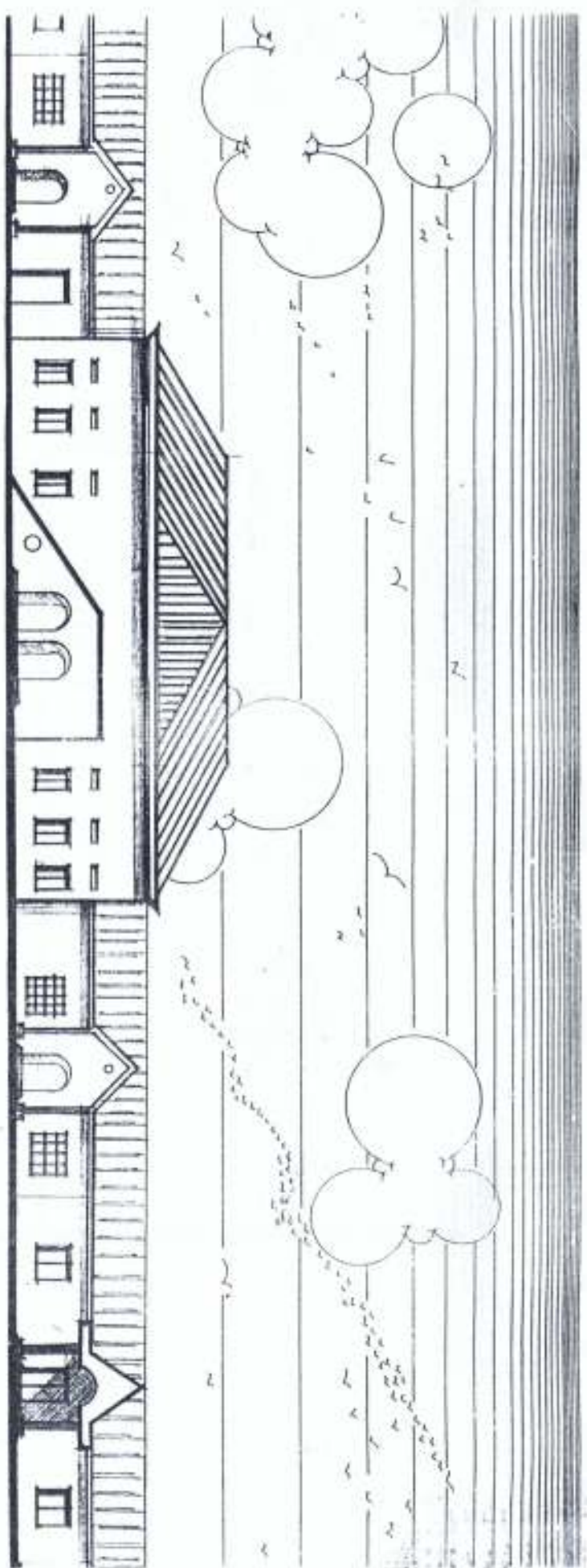


APPENDIX x11 : **PERSPECTIVE OF THE HOSTEL UNITS**

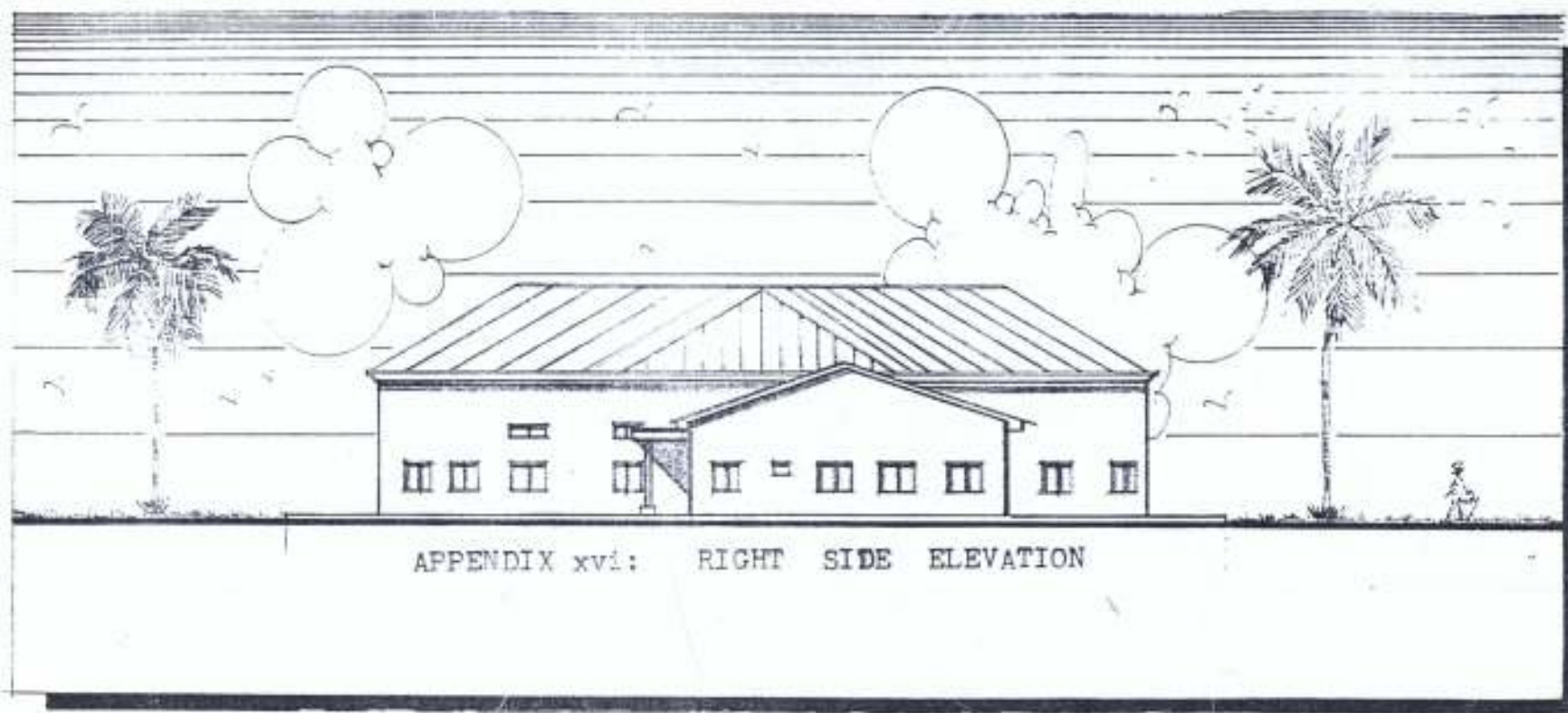


APPENDIX xiv : ROOF PLAN OF VOCATIONAL





APPENDIX xv: FRONT VIEW (VOCATIONAL)

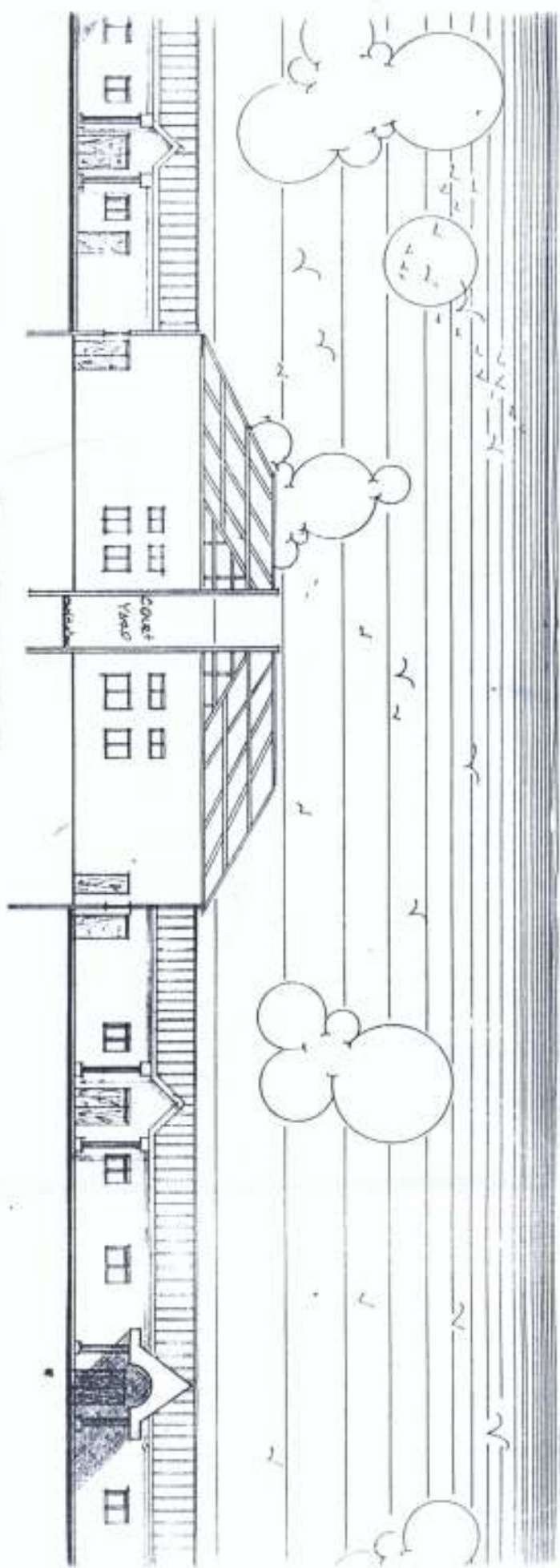


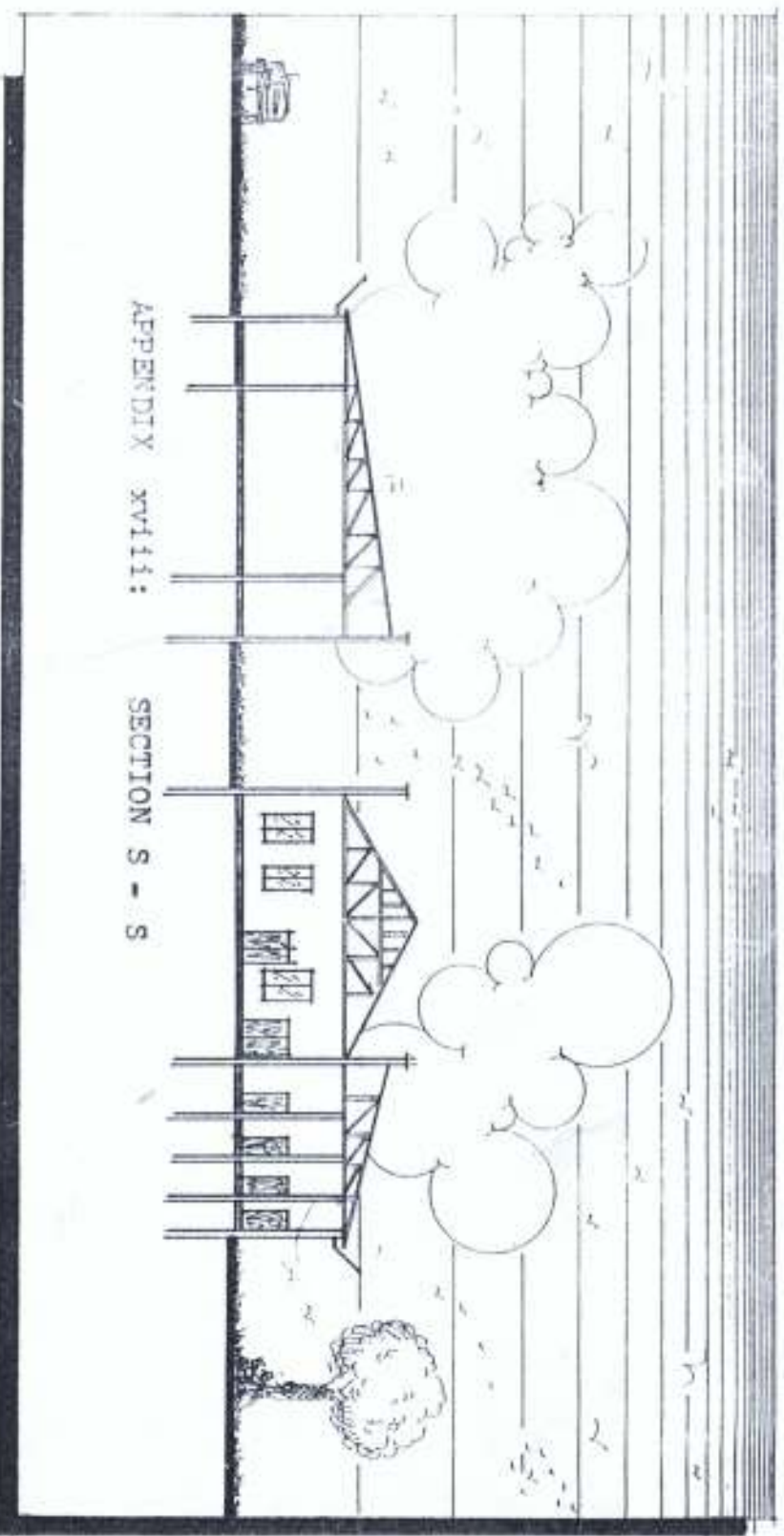
APPENDIX xvi: RIGHT SIDE ELEVATION

REHABILITATION / TRAINING CENTRE FOR THE PHYSICALLY CHALLENGE

A DESIGN ENVIRONMENT TO REDUCE EFFECT OF DISABILITY

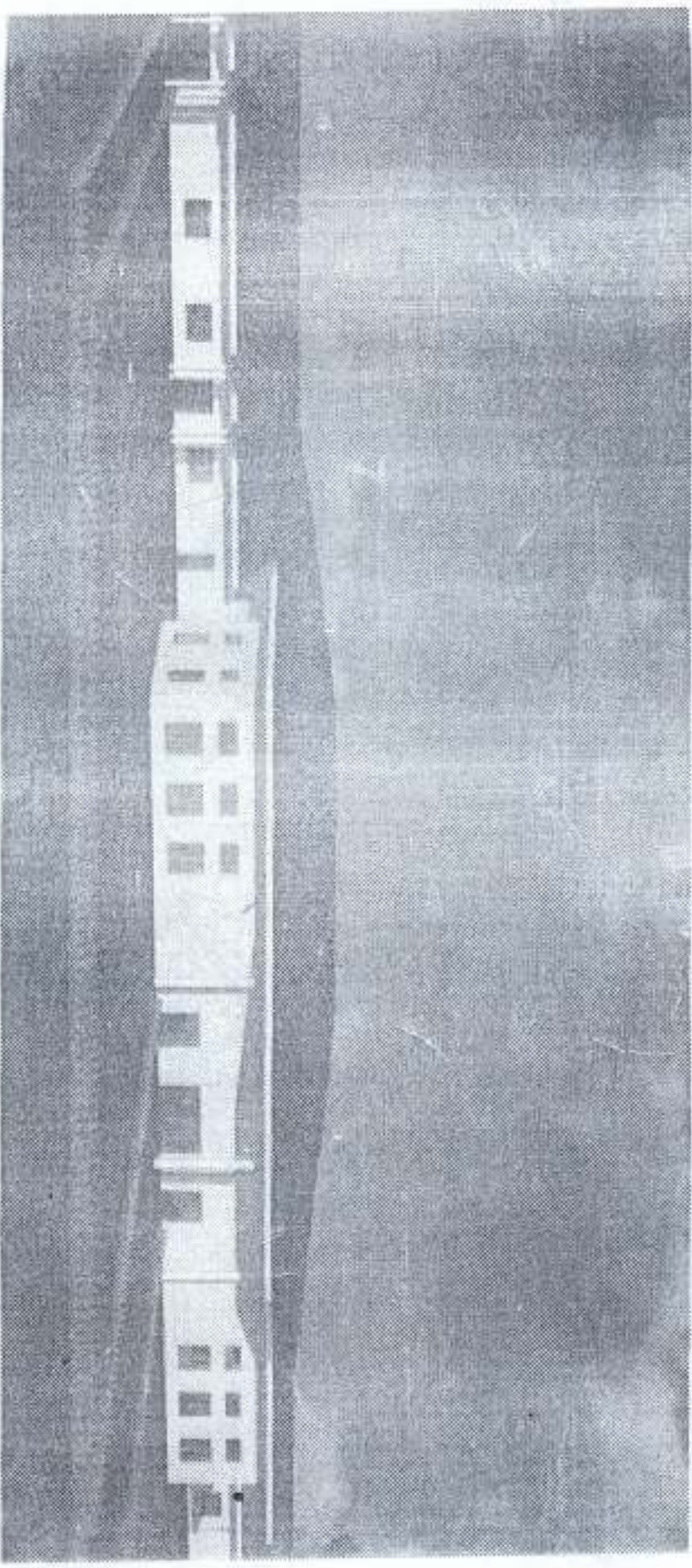
APPENDIX xvii : SECTION R-R.



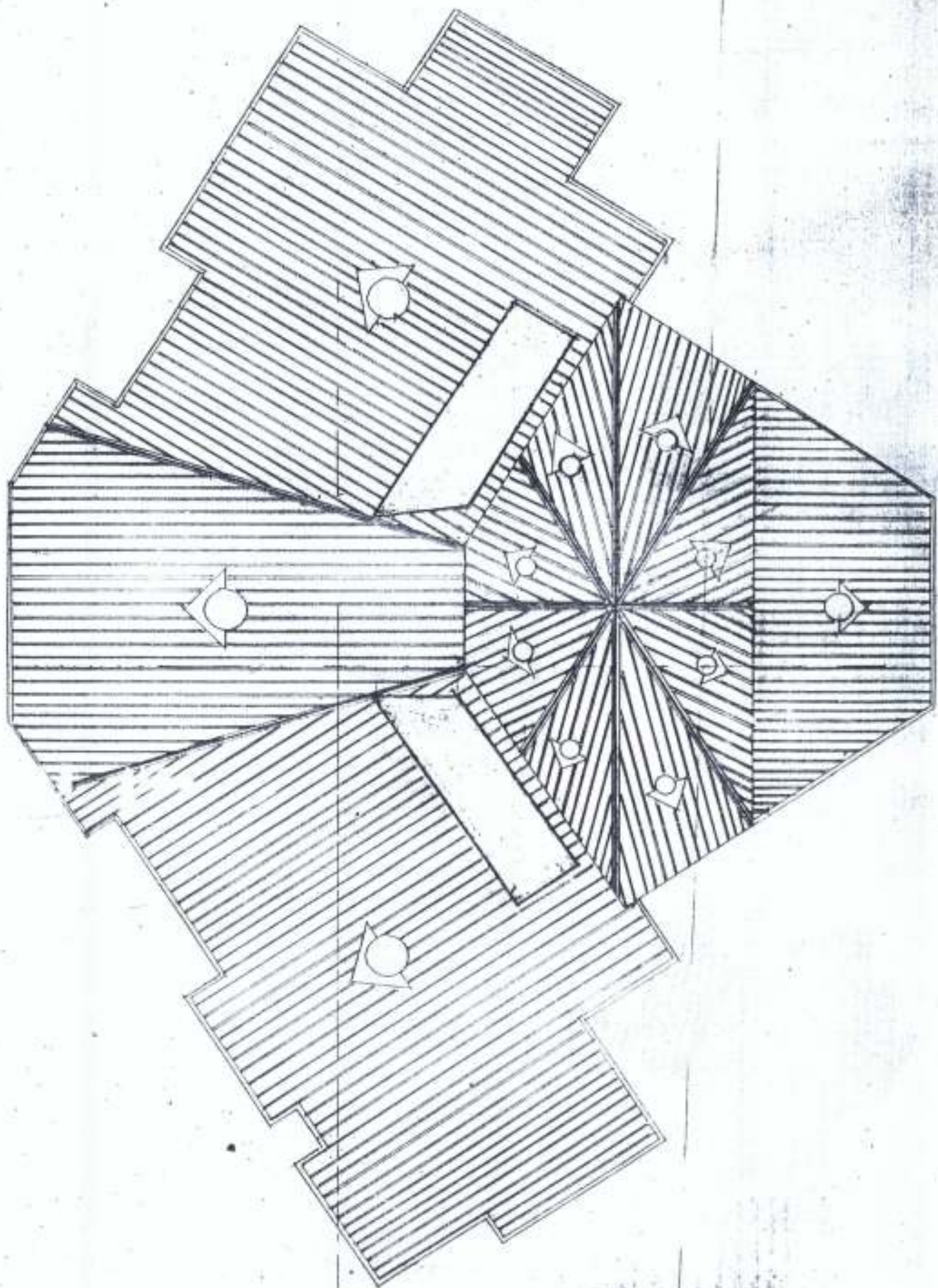


APPENDIX xv111:

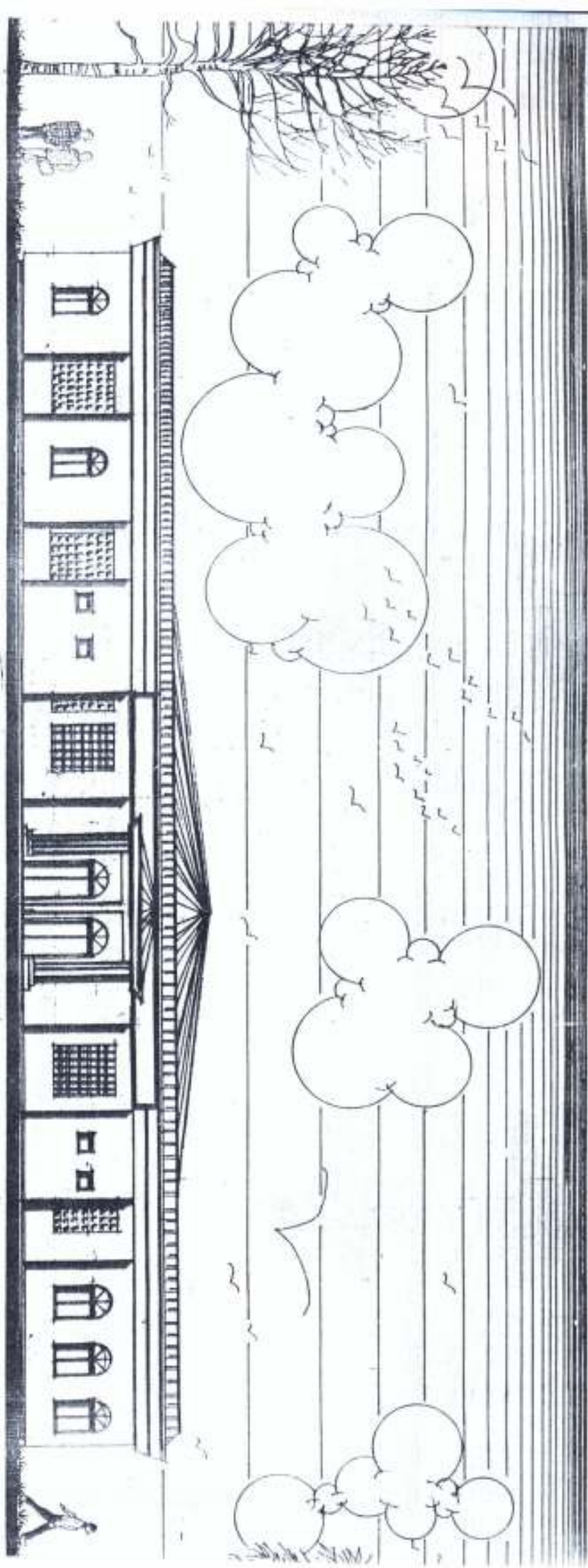
SECTION S - S



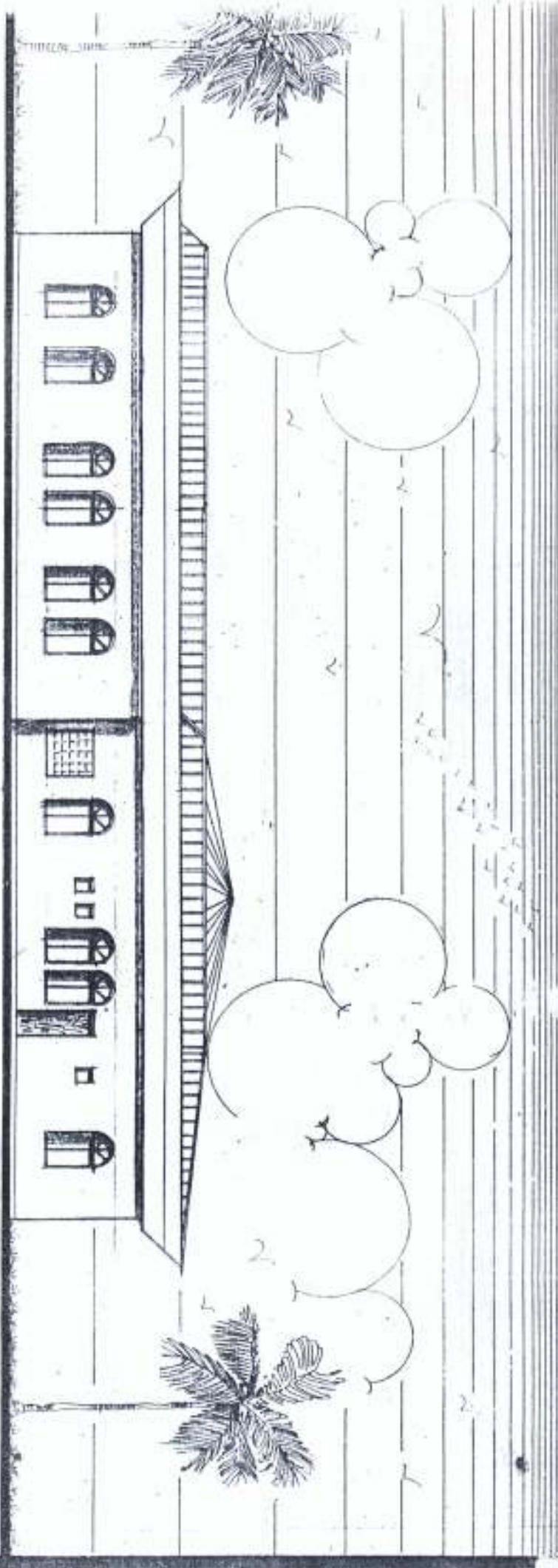
PERSPECTIVE OF THE VOCATIONAL BUILDING

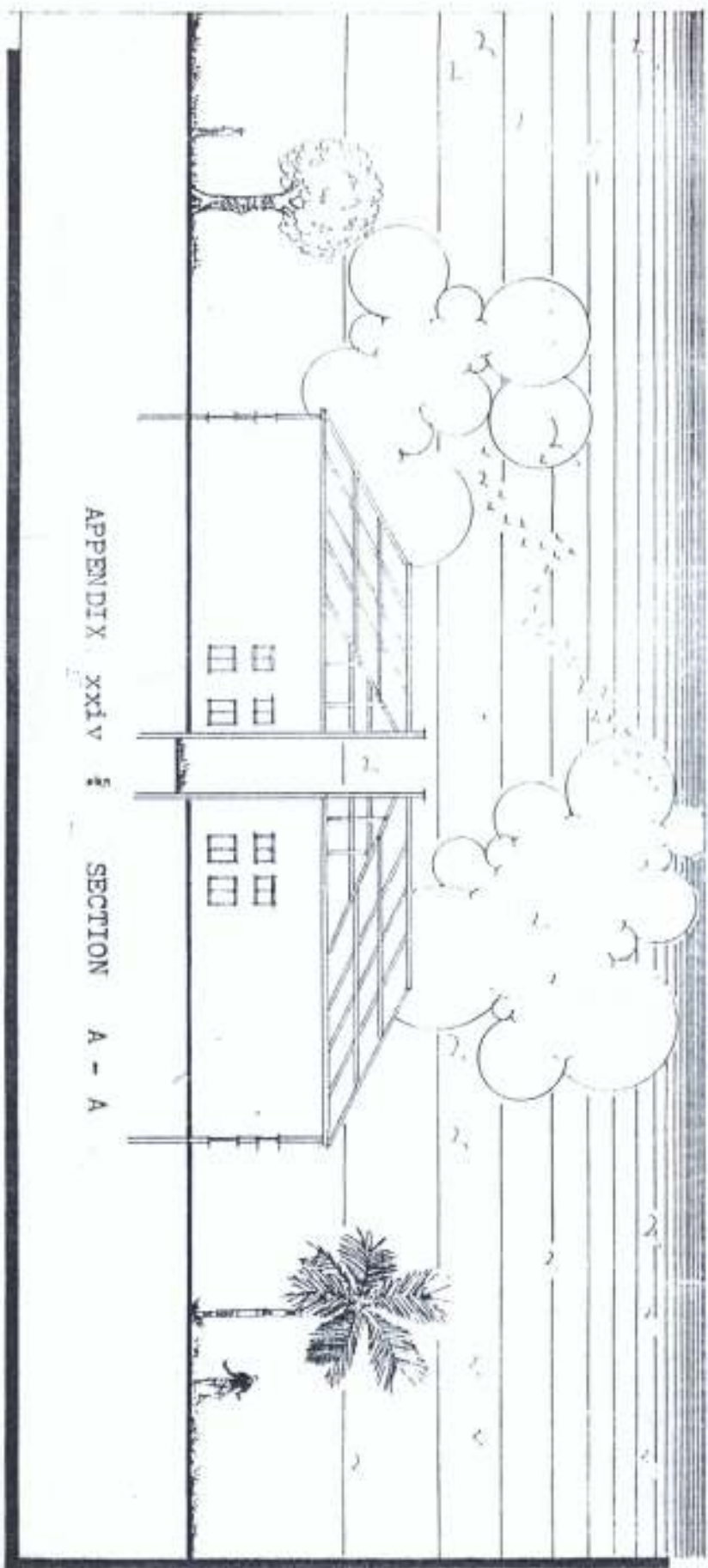


APPENDIX XXI : FRONT ELEVATION (ADMIN BUILDING)



APPENDIX XXIII : RIGHT SIDE ELEVATION

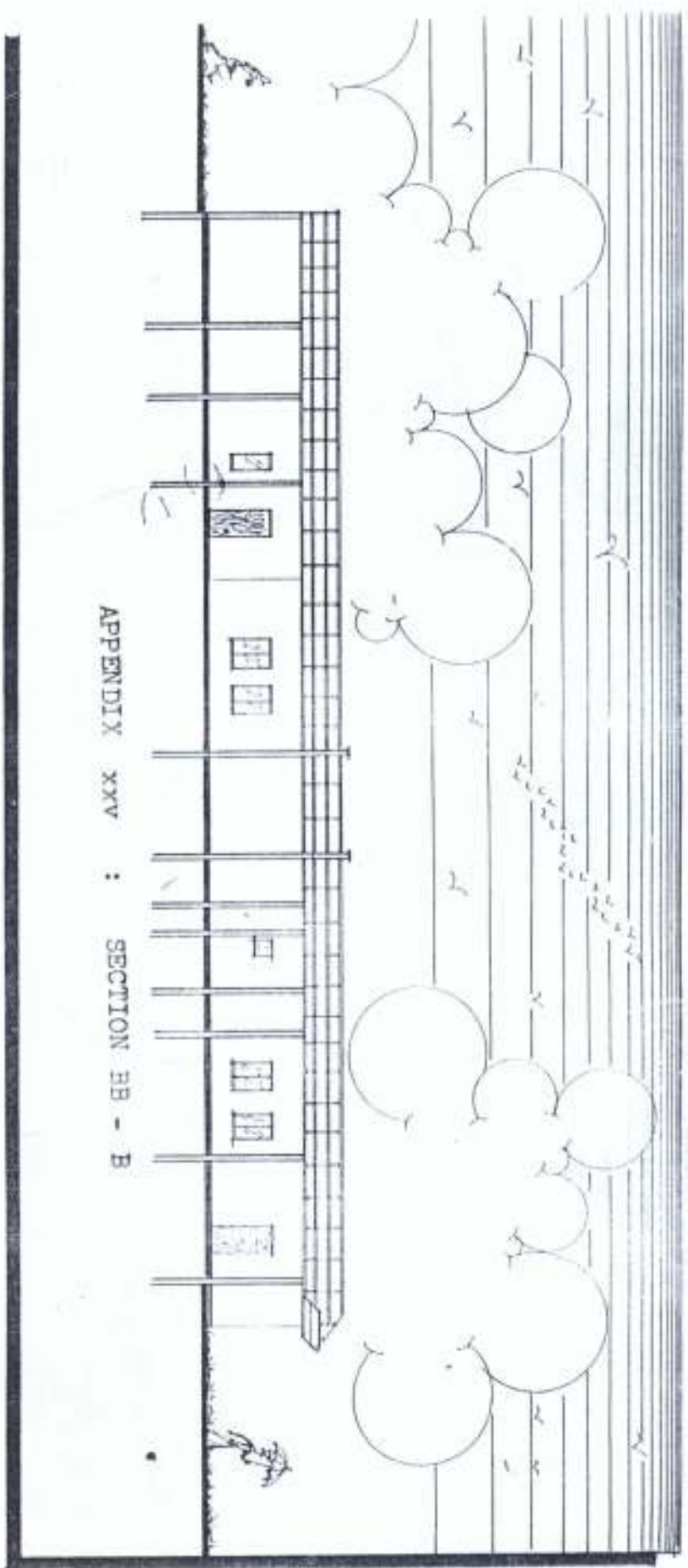


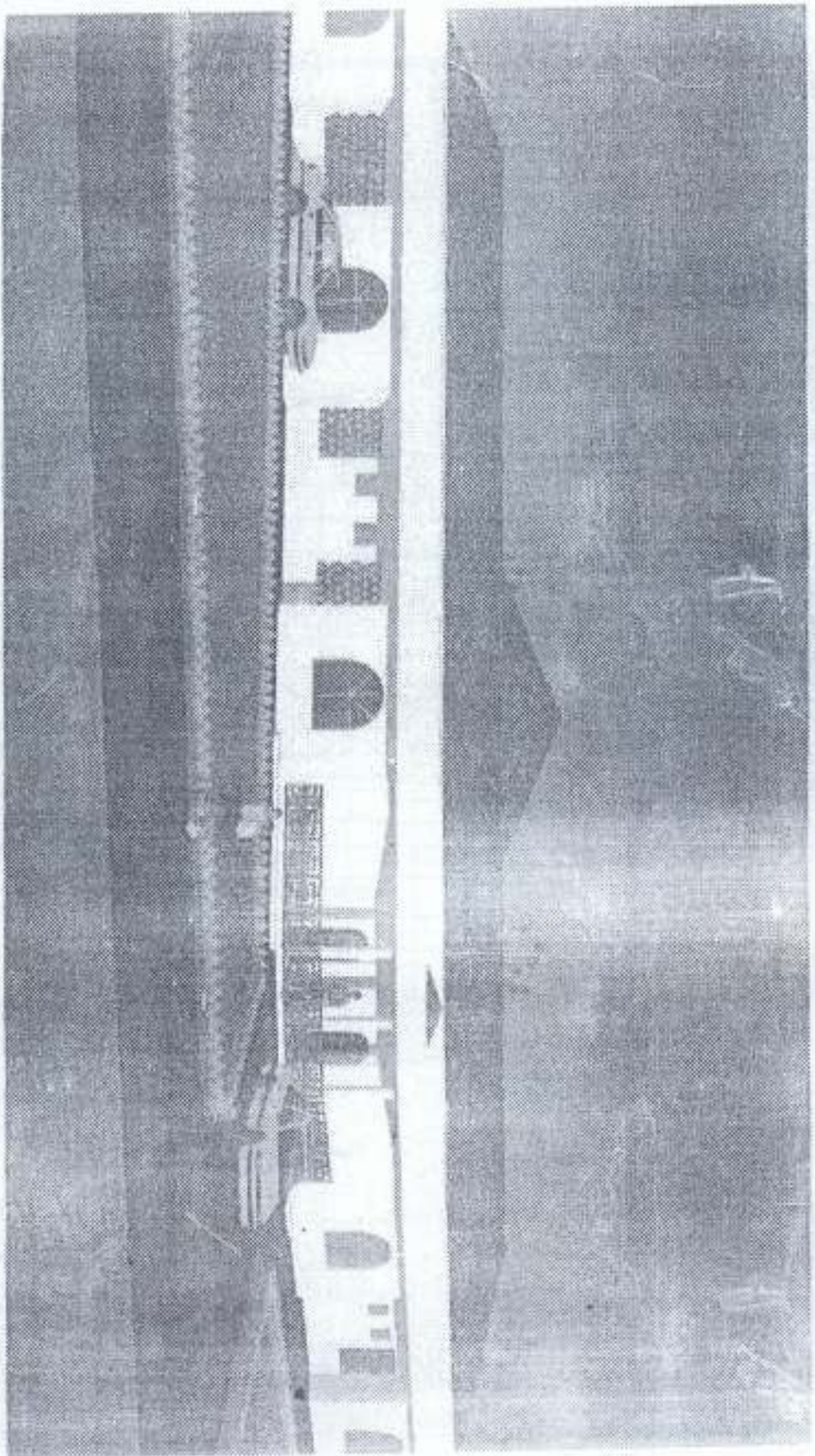


APPENDIX XXIV § SECTION A - A

SECTION A - A

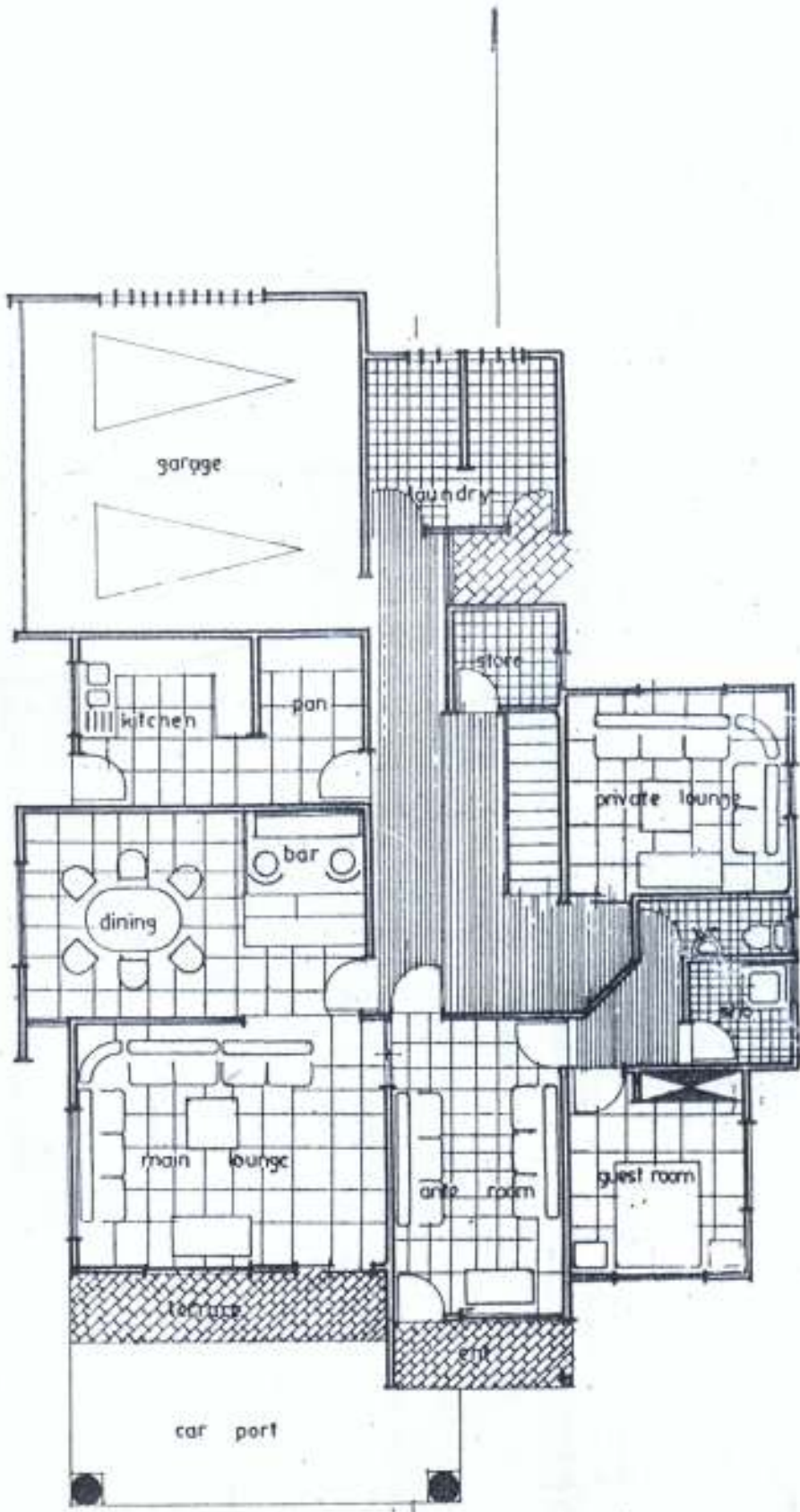
APPENDIX XXV : SECTION BB - B





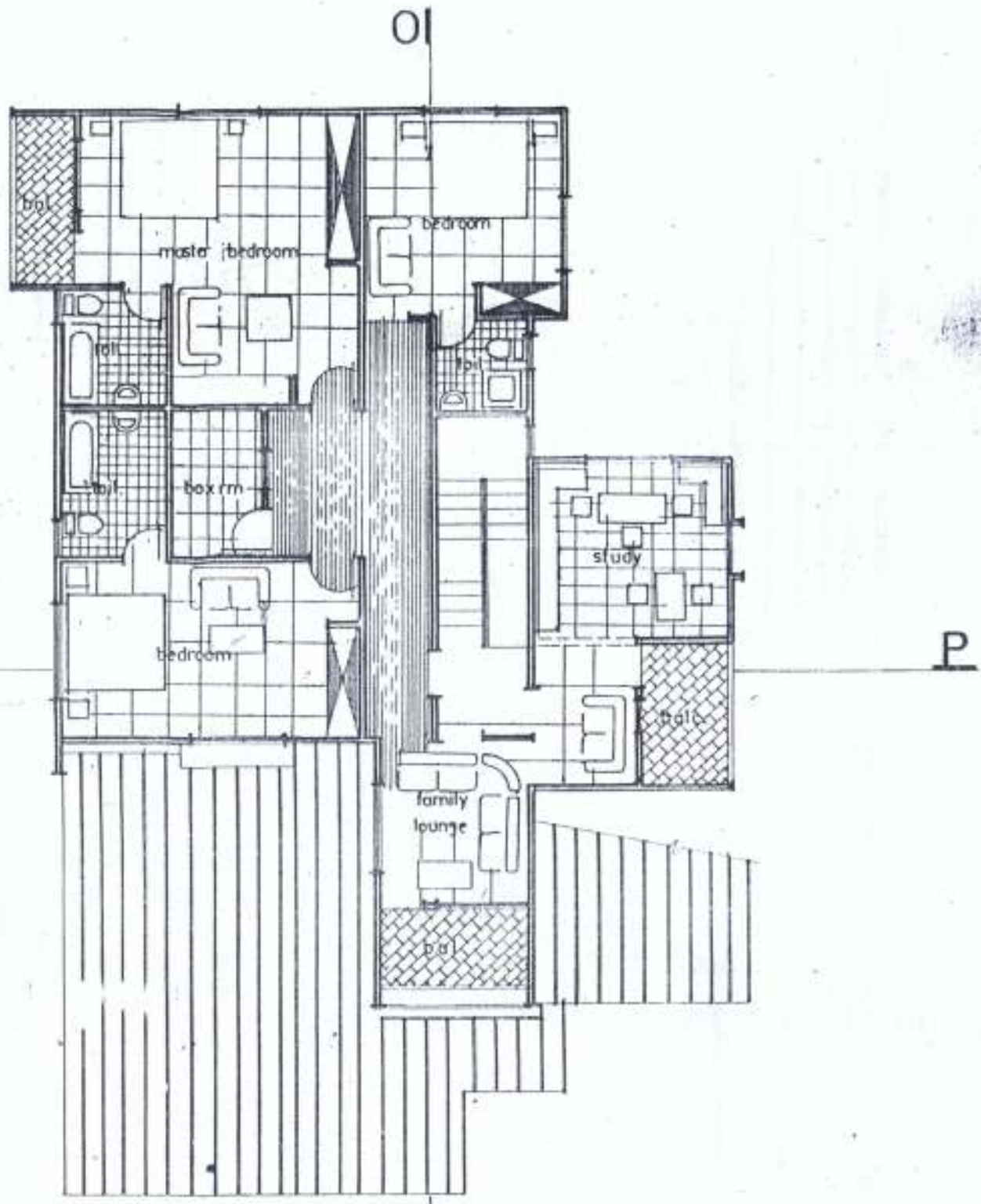
APPENDIX xxv1 : PERSPECTIVE OF THE ADMINISTRATIVE BUILDING

APPENDIX XXVII: GROUND FLOOR PLAN PRINCIPAL

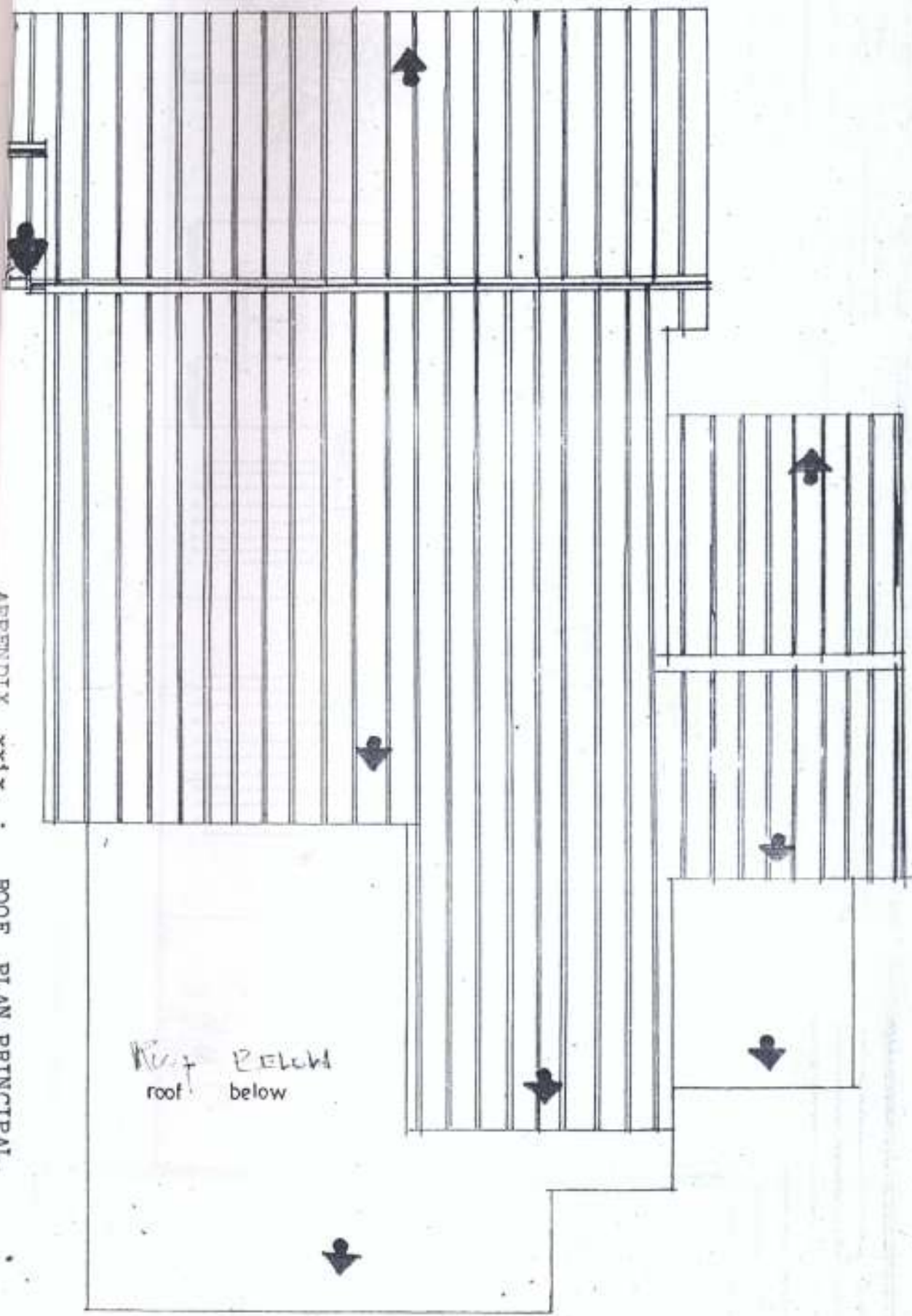


GROUND FLOOR PLAN
GROUND FLOOR PLAN

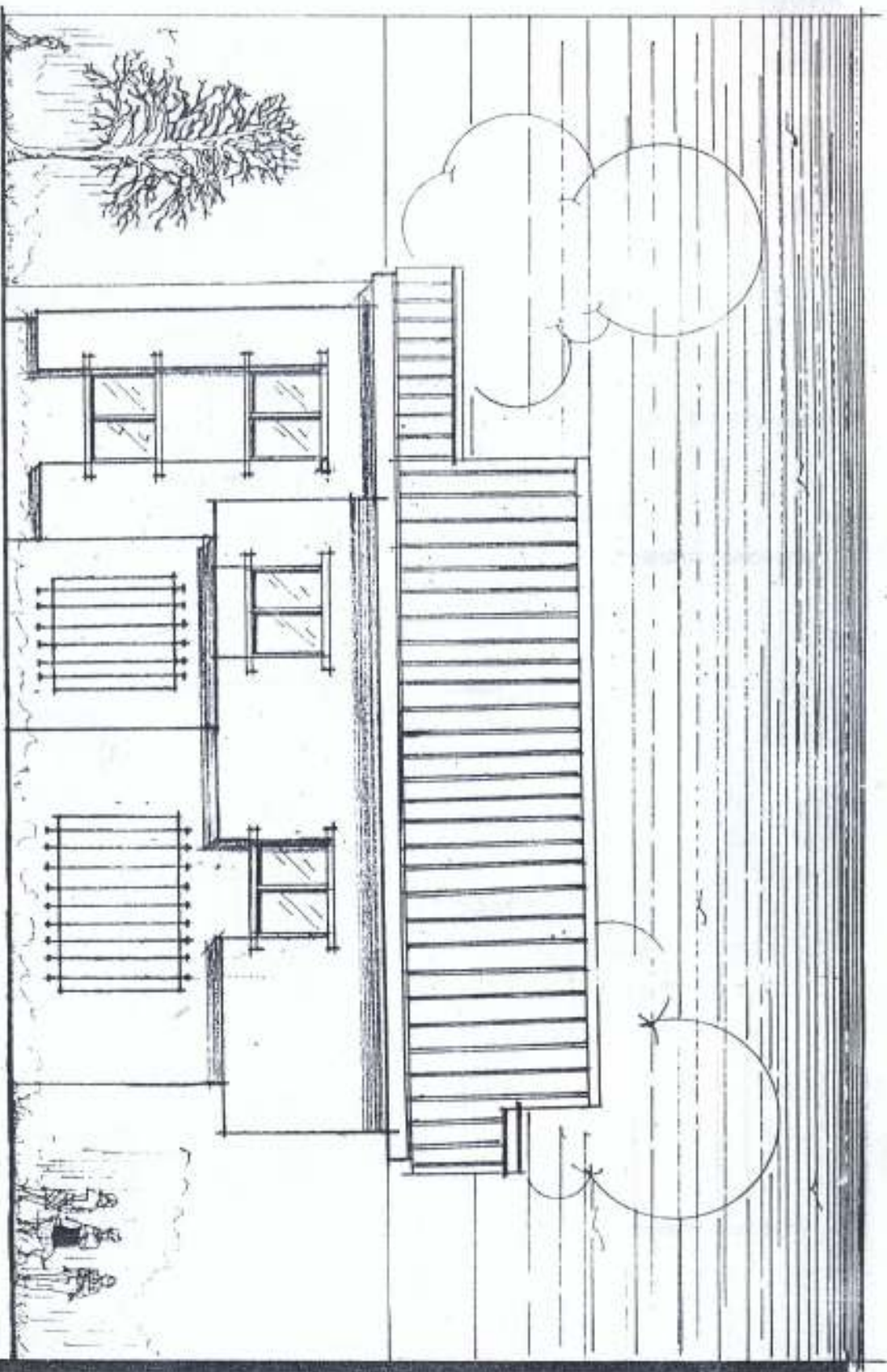
APPENDIX XXVII: FIRST FLOOR PLAN PRINCIPAL.



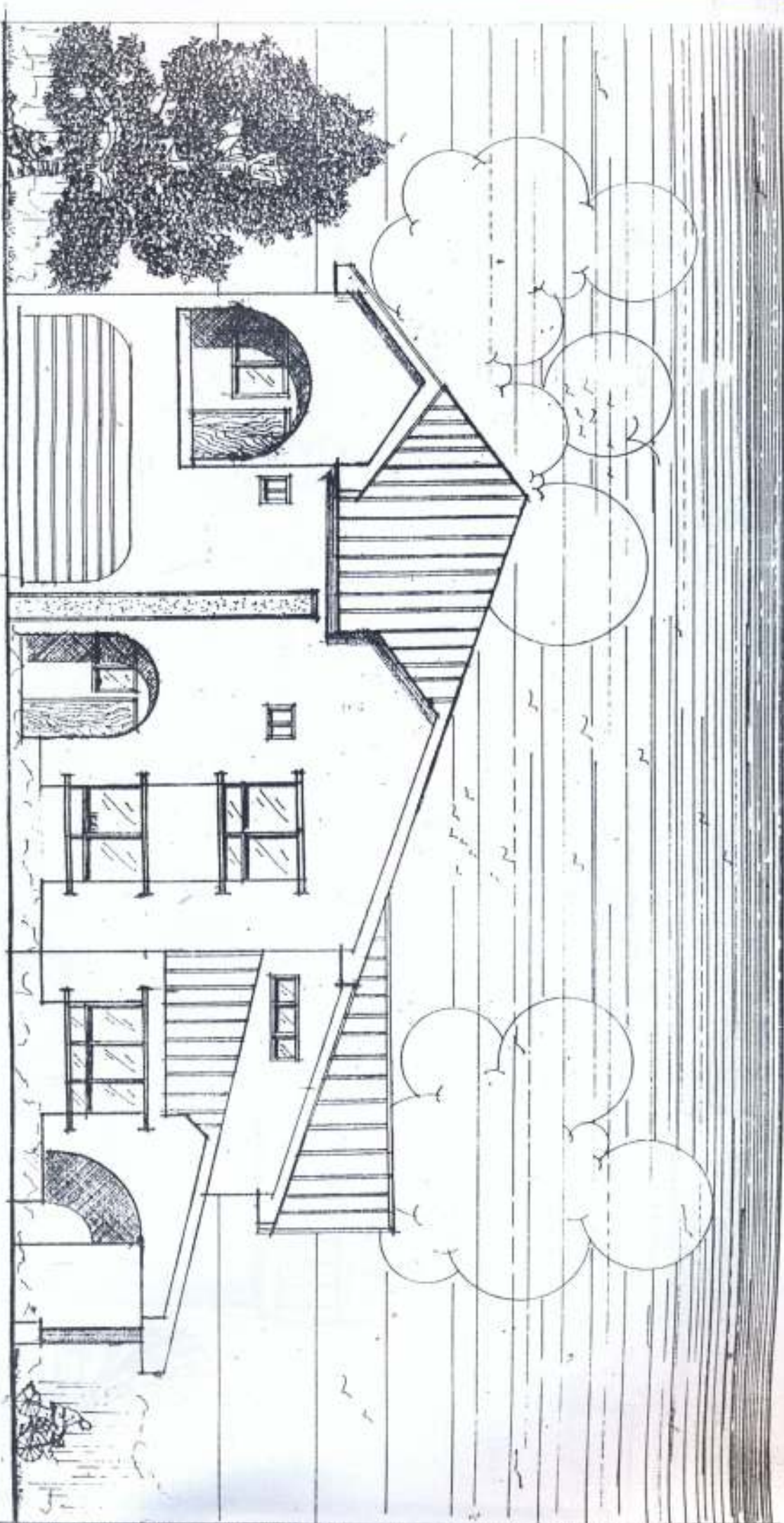
O FIRST FLOOR PLAN



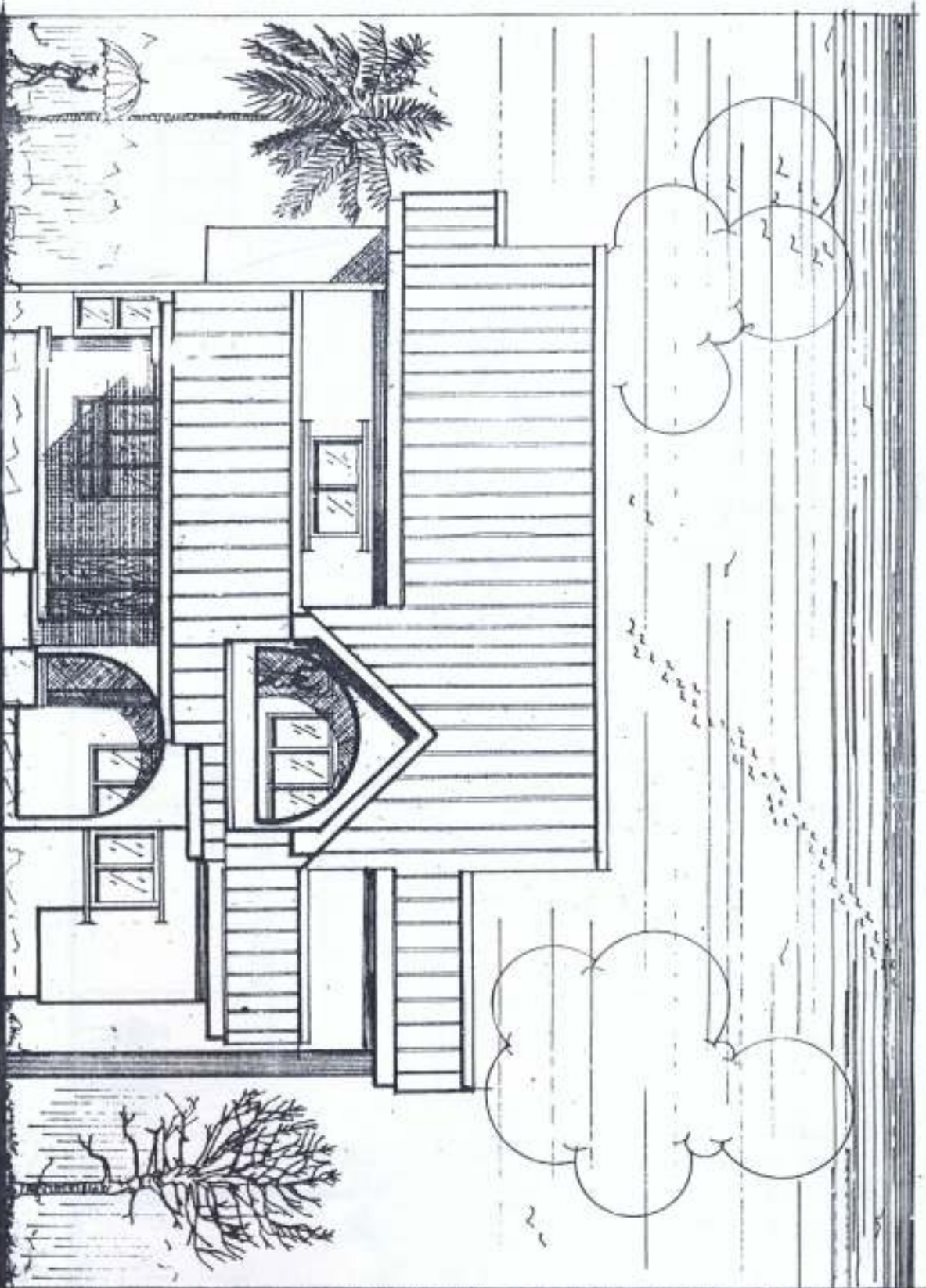
Roof below
Roof below



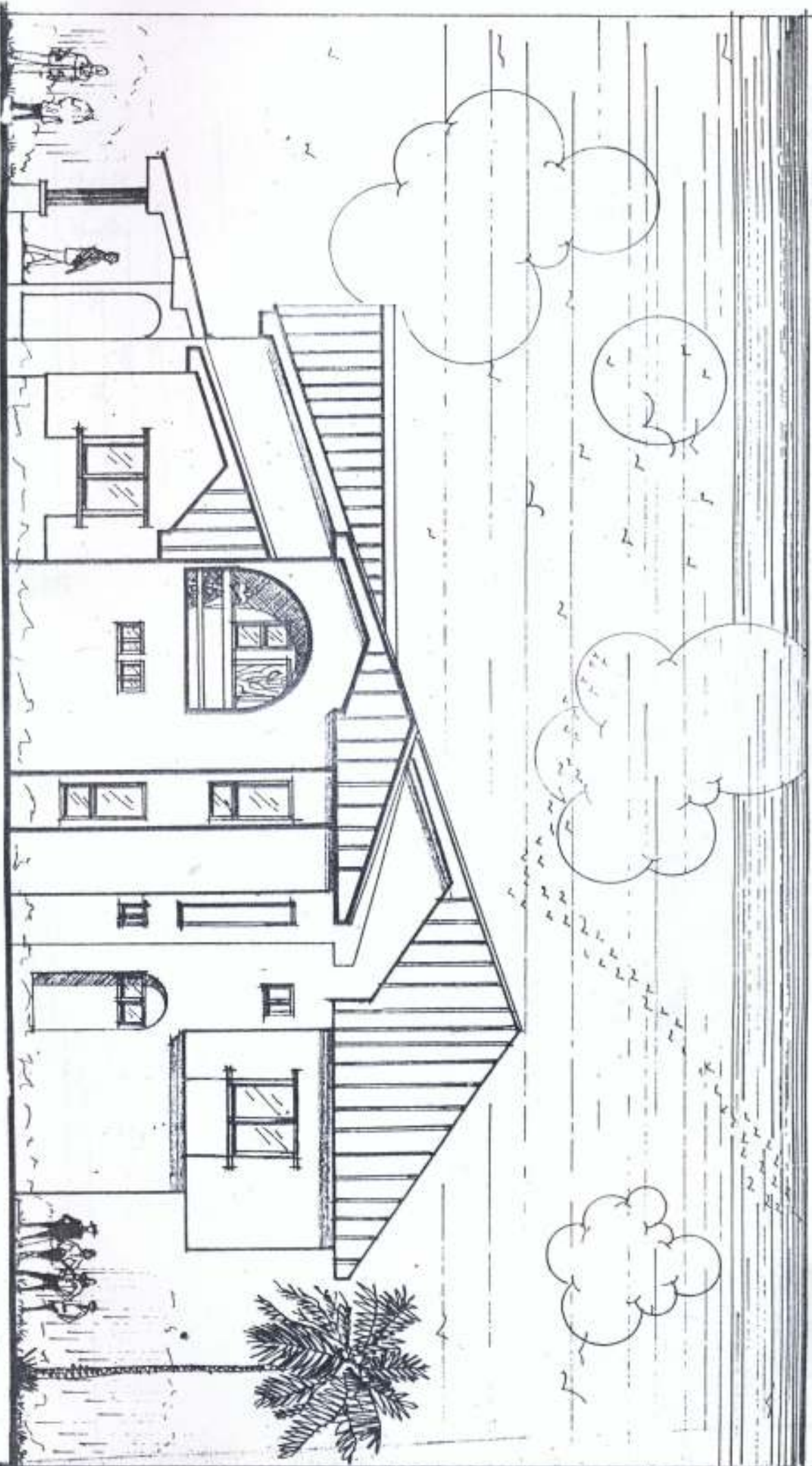
APPENDIX xxx: BACK VIEW



APPENDIX xxxi LEFT SIDE

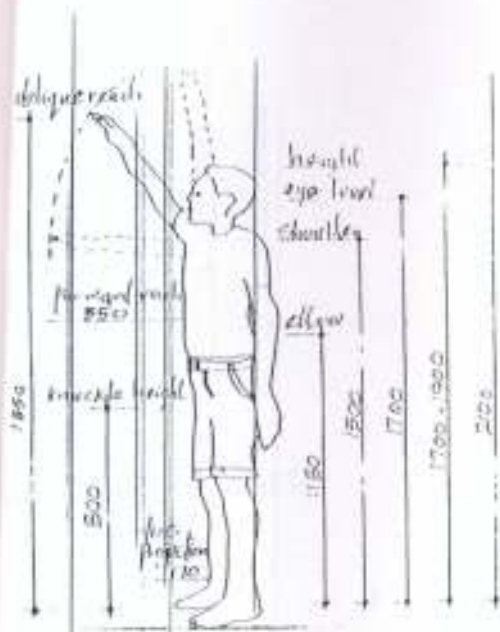


APPENDIX xxx11: APPROACH VIEW

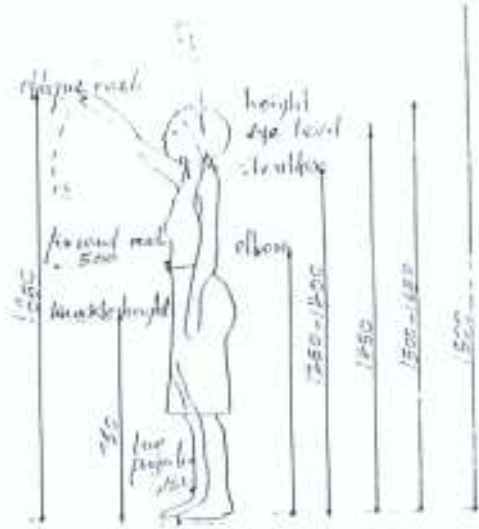


APPENDIX xxx111:

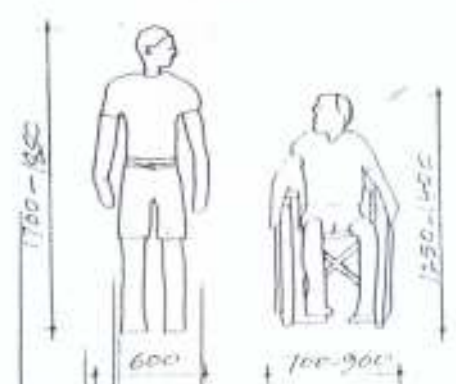
RIGHT SIDE



MALE USER



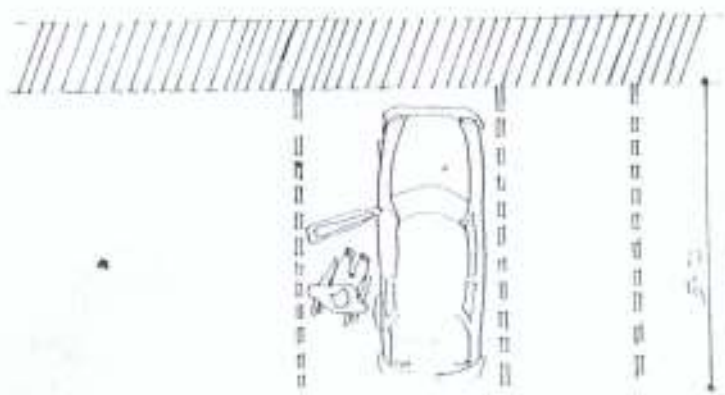
FEMALE USER



WHEEL CHAIR USER

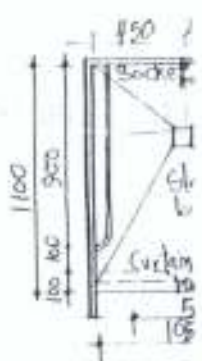


RAILS



Min 370 wheel chair needs standard bar

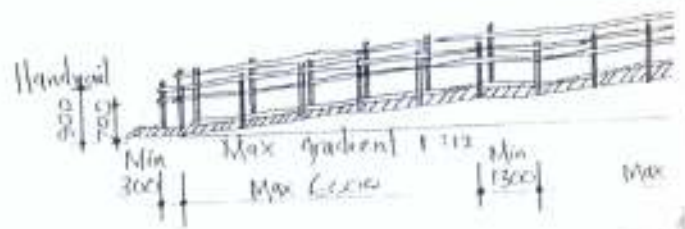
PLAN



SHOWER WITH

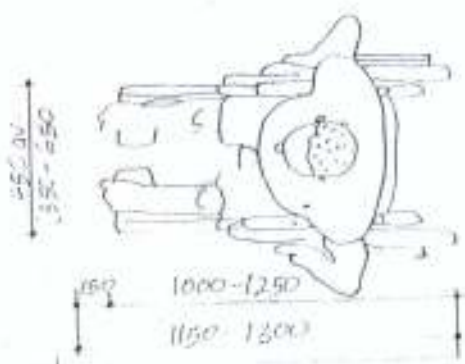


WHEEL CHAIR USER



RAMPS.

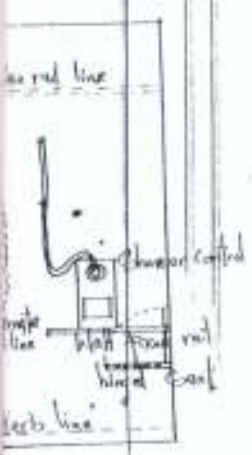
WHEEL CHAIR USER



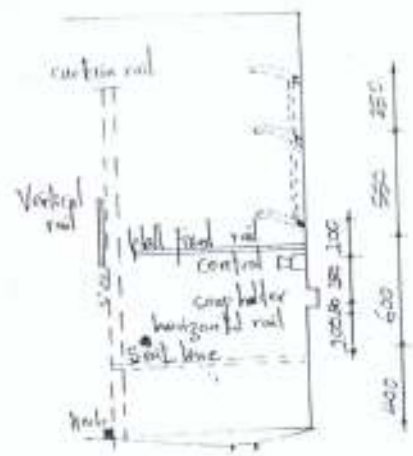
SPACE ALLOW



SECTION



SECTION



STANDARD W/C COMPARTMENT



SHOWER/W



CHAIR LIFT (MOBILITY AIDS)



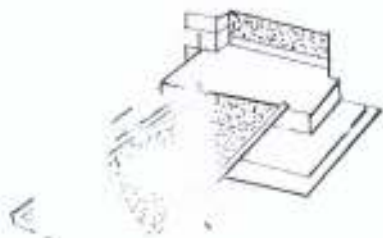
RAISED W/C SEATS (SANITAI



WALKING FRAME



W/C SUPPORT FRAME



PORTABLE RAMP



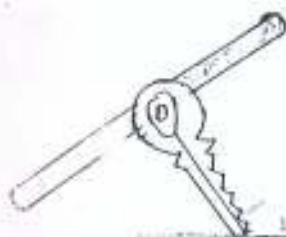
W/C RAISED ON PEDESTAL



KEY LEVELS



KEY HOLDERS



KEY HOLDERS



KEY HOLDERS



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