OWODE MARKET REDEVELOPMENT SCHEME

(A Research into the Maintenance Problem in Sellected Market in Nigeria)

By

OLATINWO FATAI ADEMOLA ABDUL
B.Sc. (Hons) A.B.U.

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AUGUST, 1991

DECLARATION

I, OLATINWO, Fatai Ademola Abdul of the Department of Architecture, Faculty of Environmental Design, Ahmadu Bello University, Zaria hereby declare that this thesis work has been an academic undertaking and a personal effort in pursuit of knowledge. All quotations and information utilized and their sources have been duly acknowledged by means of references.

OLATINWO, FATAI A. ABDUL

AUGUST, 1991

CERTIFICATION

This thesis report entitled "Owode Market Redevelopment Scheme - A study into the Maintenance problems in Sellected Markets in Nigeria." by Olatinwo F.A. Meets the regulations governing the award of the degree of Master of Science in Architecture, and is approved for its contribution to knowledge and its literary presentation.

S STulpule — 19/09/91

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Sqn Ldr Madu D.M — 16/5/91

Member: Supervisory Committee — Date

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Member: Supervisory Committee — Date

_____ — _____

Head: Department of Architecture — Date

_____ — 14/12/92

Dean: Post Graduate School — Date

DEDICATION

This piece of work is dedicated to Almighty God for his blessings and guidance over all of us. And also to my beloved father:

Alhaji T.A. Olatinwo,

For his Courage and Love.

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This thesis report would be incomplete without expressing my gratitude to people who helped me in one way or the other, throughout my course.

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ABSTRACT

Human survival is greatly anchored on the production and/or consumption of three basic items, namely: FOOD, SHELTER AND CLOTHING. These requires man's practical effort in realising such basic needs. This man is pre-occupied with the task of exploring and exploiting his natural environment in order to obtain necessary resources to be transformed through the process of production into material use.

During the course of my study, it was found out that most Nigerian Markets are characterized by the problems of lack of proper Maintenance, as a primary problem, while other problems such as congestion, rowdiness, poor sanitary facilities e.t.c are secondary to it.

This report, not only identified these various problems but also attempted to offer a viable and lasting solutions to them; with particular reference to Owode Market.

In conclusion, the thesis made suggestions and recommendations, that if followed would help the Government, Architects, planners and various organisations to up grade the standard of traditional markets within the country.

STATEMENT OF PROBLEM

Most traditional Markets in the country have the problem of maintenance, poor accessibility, poor sanitary conditions, congestion of stalls, lack of infrastructural facilities encroachment on roads and walkings by squatters and hawkers of retail goods, fire hazards, bad drainage and refuse disposal systems, No adequate protection for shoppers from heavy tropical rain and sun, and also lack of proper display space for the various items for sale

From the research carried out, it was found out that, maintenance problem is the chief source of all other problems associated with Nigerian Markers.

The problem of maintenance however arises as a result of lack of proper Authority to actually see to the smooth running of Nigerian Markets. In view of this users of market abuses the use of the available facilities such as under letting the stalls and construction of various dilapidated structures which inturn leads to congestion of the stalls and other problems.

This thesis intends to provide a lasting solution, which is more of curative than preventive to the problems associated with Nigerian Market.

AIM & OBJECTIONS

Aims can be defined as the purpose/intention of the desired result to be achieved while objective could be referred to as the tools or ways in which the desired result could be achieved. The aims of this thesis reports is presented as below.

AIM

To provide a lasting solution to the problems of maintenance in Nigerian Markets, for a conducive market situation that would be capable of accommodating the growing population of the users.

However, to achieve this aim, the following objectives have been set out.

OBJECTIVES

- To make a comprehensive and analytical study into the maintenance problems in sellected Markets in Nigeria.
- To establish a maintenance unit capable of achieving high sanitary standards
- To make an architectural exposition towards improving the physical structure and planning of Owode Market.
- To create a forum for better understanding of market development problems.

SCOPE & LIMITATION

The scope of the Redevelopment scheme would be limited to analysing the existing site, gathering and reviewing of necessary datas, with the view to proposing an overall plan for the existing market, as this is an important element in the design solution.

The design solution would however include all the basic facilities for a modern market. Provision would however be made for:

(a) Adequate and proper maintenance

(b) Well planned traffic movement

(c) Adequate utilities and services.

However, the design as a whole would be in phases such that at the end of each phase, the redevelopment scheme looks complete.

RESEARCH METHODOLOGY

The research methodology for the successful realisation of the aims and objectives outlined earlier would involve:

- Collection of studies of selected markets in Nigeria
- Physical survey of existing structure on the redevelopment site
- Site physical measurements, photography and documentation
- Intensive search for published and unpublished materials relevant to the subject (Library Research)
- Studies of various problems that have be set designers of markets in recent time.
- Investigating information required through personal interview

TABLE OF CONTENT

PART ONE (GENERAL DISCUSSIONS ON MARKETS)

CHAPTER 1

* Title
* Declaration i
* Certification ii
* Dedication iii
* Acknowledgement iv
* Abstract v
* Statement of Problem vi
* Aim & Objectives vii
* Scope & Limitation viii
* Research Methodology ix
* Motivation 1
* Introduction 10

CHAPTER TWO

* Literature Review of Past works 12

CHAPTER THREE

3.1. Definition & Characteristics of Markets in Nigeria 18
3.2. Classifications of Markets 19
3.3. Functions of Markets. 23
3.4. Analysis of Nigerian Market Structure 23
3.5. Problems Associate with Nigerian Markets 25
3.6. Security and Five hazards in Markets 27

CHAPTER FOUR

* MAINTENANCE Problems in Nigerian Markets 31

PART TWO (OWODE MARKET SITUATIONS)

CHAPTER 1 - Offa Town

1.1. Brief History of the Town 39

1.2. Natural Characteristics 39

1.3. Economic Base of the Town 43

1.4. Transportation in and around Offa 44

1.5. Types of Buildings in Offa 47

CHAPTER 2 - Demographic Characteristic of Offa

2.1. Population Distribution 49

2.2. Ethnic and Religious Composition 51

2.3. Occupational Structure 52

2.4. Employment Structure 53

CHAPTER 3 - Owode Market

3.1. Brief history of the Market 55

3.2. Owode Market site 56

3.3. Catchment areas of the Market 57

3.4. Why traders & Shoppers prepare the Market 57

3.5. Hierarchies of Markets in Offa 58

3.6. Classification of Goods and Services 58

3.7. General Circulation within the Market 59

3.8. Market analysis and findings 60

CHAPTER 4 - Existing Facilities & Services within the Market

4.1. Water Supply 70

4.2. Power Supply 71

4.3. Drainage & Refuse Disposal 71

4.4. Sewage Disposal/Sanitary Facilities 72

4.5. Fire Services, Postal & Banking Facilities 72

4.6. Parking Facilities 72

4.7. Canteens & Restaurants 73

CHAPTER 5

5.1. The Sokoto Central Market, Sokoto 74

5.2. Baboko Market, Ilorin 82

5.3. The Jos Main Market, Jos 89

5.4. Makurdi Modern Market, Makurdi 97

PART THREE (THE DESIGN STAGE)

CHAPTER 1: **Design Proposal**

1.1 The site 101

1.2 Formulation of Design Programme 103

1.3 Standard for the provision of facilities 105

1.4 Schedule of Accommodation 107

1.5 Planning concepts 110

1.6. Design Consideration for Owode Market 112

1.7. Planning and Design concepts proposal 119

1.8 Zoning 124

CHAPTER 2 (CONSTRUCTION METHODS)

2.1 Ware Houses system 126

2.2 Whole sales & Retail stall construction 128

CHAPTER 3: (IMPLEMENTATION STRATEGIES)

3.1 Supervision & Maintenance 132

3.2 Phasing 133

3.3 Finance 135

3.4 Responsibilities of the Government 135

3.5 Responsibilities of the Individual groups 136

3.6 Responsibilities of the Architects 136

CONCLUSION AND RECOMMENDATION 137

LIST OF FIGURES

Figure		Page
1.	Sokoto Central Market Layout	77
2.	Baboko Market, Ilorin, Layout	89
3.	Jos Main Market, ground floor plan	92
4.	Jos Main Market First floor plan	93
5.	Site Analysis Diagram	102
6.	Centralised delivery with One way traffic	113
7.	Peripheral Parking with Ring Road	113
8.	Central Precinct with Peripheral Parking	113
9.	Pedestrian precinct with parking enclosed by Ring Road.	114
10.	Pedestrianized centre with central parking	114
11.	Centre with central traffic Junction	115
12.	Pedestrian Precinct interlaced by Vehicular Route	116
13.	Pedestrian Precinct with End parkings	116
14.	Pedestrian Precinct with enclosed parkings	116
15	Zonning according to design consideration	117
16.	Pedestrian Precinct with End parking on Owode site	120
17.	Pedestrian Precinct with parking enclosed by Ring Road on Owode site	121
18.	Pedestrian Precinct with enclosed parking on Owode site	122
19.	Propose planning/Design Concept	123

LIST OF PLATE

Plate		Page
1a.	Dilapidate Owode market Stall	2
1b.	Dilapidate Owode Market Stall	2
2a.	Trading under tree shade due to lack of adequate stall	3
2b.	Road side trading due to lack of adequate stalls	3
3a.	The squater Nature of Owode market Meat stall	4
3b.	Unhygenic display of Meat outside Owode Market	4
4a.	Dilapidate Owode Market Stalls	5
4b.	Dilapidate Owode Market Stalls	5
5a.	Dilapidate Owode Market Stalls	6
5b.	Improper display of Goods due to lack of adequate space	6
6a.	Trading along road site in Ilorin evidence of congestion	7
6b.	The congested Emir Road in Ilorin due to spill over of trading activities	7
7a.	Oja Oba Market Ilorin	8
7b.	Oja Oba Market Ilorin	8
8a.	Congested Ita-Osu Market shopping Mall	9
8b.	Poor Lighting System of stalls in Ita-Osu Market, Ijebu-Ode	9
9a.	Offa Central Mosque	48
9b.	Entrance to the Olofa's Palace	48
10a.	The Existing Refuse disposal system in Owode	61
10b.	Haphazard display of Goods within Owode Mª k Market Stalls	61
11a.	Owode Market Provision Stalls	62
11b.	Lack of Maintenance, resulting in the congestion of the Circulation space	62

page

12a. The Existing Owode Market parking space 63

12b. Evidence of squatters and Hawkers within Owode Market parking space 63

13a. Evidence of congestion as squatters and Hawkers took over the Access Road sides 64

13b. Evidence of congestion - Spill over of trading activities along road sides 64

14a. Haphazard display of Goods within Owode Market parking lot 65

14b, The existing Owode Market stalls in Bad conditions 65

15a. Evidence of squatters within and outside Owode Market 66

15b. Shopping under tree shades 66

16a. The extended part of Owode Market in a bad condition 67

16b. Improper display of Farm produce along road sides 67

17a. Illegal Errection of temporary stalls 68

17b. The Presence of Squatters and Hawkers within Owode market 68

18a. Unhygenic display of Food Stuffs 69

18b. Lack of adequate display space 69

19a. Illegal Errection of temporary stalls within Sokoto cetral Market 78

19b. Haphazard display of Goods within Sokoto Market 78

20a. Sokoto Marking parking space 79

20b. Trading Outside the Sokoto Market Fence 79

21a. Semi covered drainage gutter within Sokoto Market 80

21b. One of the Sokoto Market entrance gate 80

22a. Illegal Errection of temporary stalls within the Sokoto Market

22b. Illegal Errection of temporary stalls within Sokoto Market 81

Page

23a. Illegal Errection of temporary Sheds all over Baboko Market 86

23b. Presences of squatters and Hawkers within the Baboko Market parking Area 86

24a. Views of the Baboko market stalls 87

24b. View of the Main road that runs through the Baboko market 87

25a. Evidence of congestion as squatters took over the road sides into Baboko Market 88

25b. Lack of adequate display space 88

26a. Perspective views of the Jos Main Market 94

26b. Views of the Jos Main Market from the pedestrian Bridge 94

27a. Interior View of one of the Canteens provided in the Jos Market 95

27b. View from one of the courtyards showing the roof structure of the Jos Market 95

28a. Views of one of the courtyards provided within the Jos Main Market 96

28b. One of the Entrance situation into the Jos Main Market 96

MOTIVATION

The whole idea of the thesis came to the researcher from numbers of experiences/knowledge of the deteriorating conditions of Nigerian marker, such is the case of Owode Market Offa. It was however noticed that many Nigerian Markets are associated with various problems due to lack of Maintenance, and which tends to hinder socio-economic activities within markets.

As a result of dynamism in the society, the population of the users of markets keep on increasing without adequate growth of the market itself, thus resulting in the available facilities being over used and not well maintained. The Architect as the master of his own environment must however strive hard to meet the needs of his environment.

He must be aware of the result of dynamism in the society and look for a way of upgrading the standard of his environment. Such is the case of Owode Market, and all these motivated the researcher. It is however hope that at the end of the research, a lasting and viable solution would have been provided.

Plate 1a



DILAPIDATED MARKET STALLS DUE TO LACK OF MAINTENANCE, RESULTING TO VARIOUS HAZARDS.

Plate 1b



DILAPIDATED NATURE OF OWODE MARKET STALLS AS A RESULT OF LACK OF MANAGEMENT.

Plate 2a



TRADING UNDER TREE SHADE DUE TO LACK OF ADEQUATE STALLS TO CATER FOR THE GROWING POPULATION OF TRADERS WITHIN OWODE MARKET.

Plate 2b



LACK OF ADEQUATE STALLS WITHIN OWODE MARKET, THUS RESULTING IN ROAD SIDE TRADING

Plate 3a



THE SQUALOR NATURE OF OWODE MARKET MEAT STALLS.

Plate 3b



UNHYGENIC DISPLAY OF MEAT OUTSIDE OWODE MARKET.

Plate 4a



THE PHOTOGRAPHY SHOWS THE DILAPIDATED NATURE OF OWODE MARKET STALLS.

Plate 4b



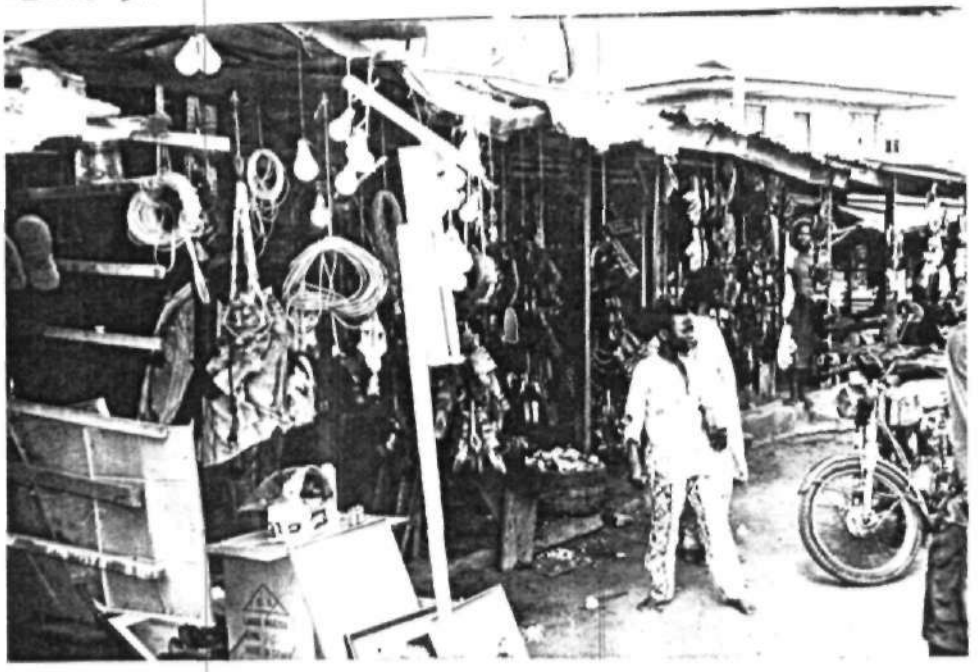
THE DILAPIDATED SHED EXPOSE TRADERS TO THE HAZARDS OF RAIN & SUN.

Plate 5a



DILAPIDATED AWODE MARKET STALLS, EXPOSING TRADERS & GOODS TO HAZARDS OF RAIN & SUN.

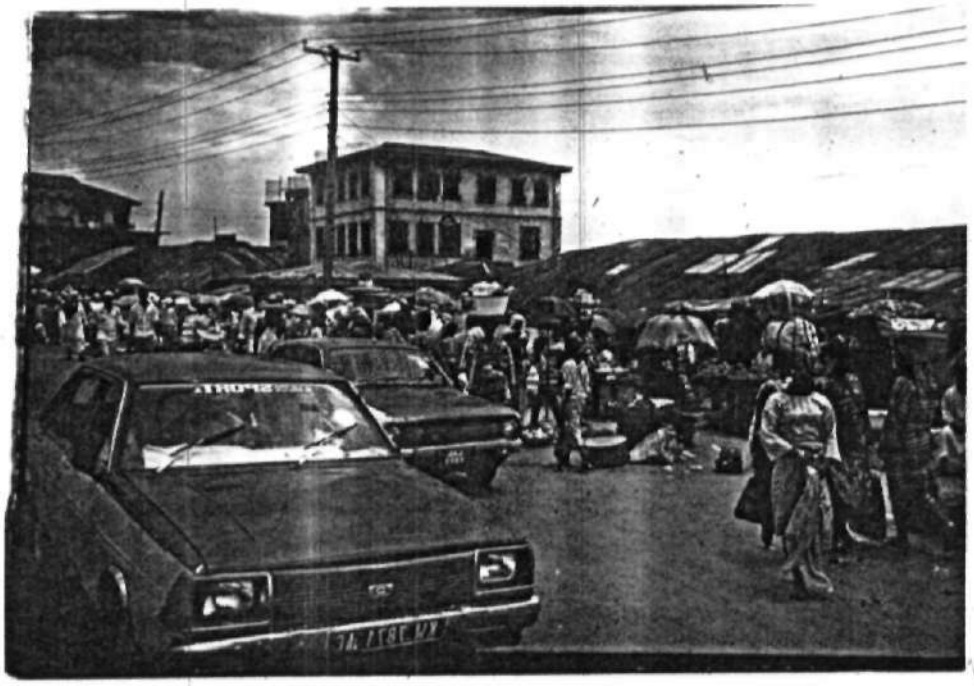
Plate 5b



IMPROPER DISPLAY OF VARIOUS SPACE DUE TO LACK OF PROPER PLANNING AND ARRANGEMENT OF THE MARKET STALLS.

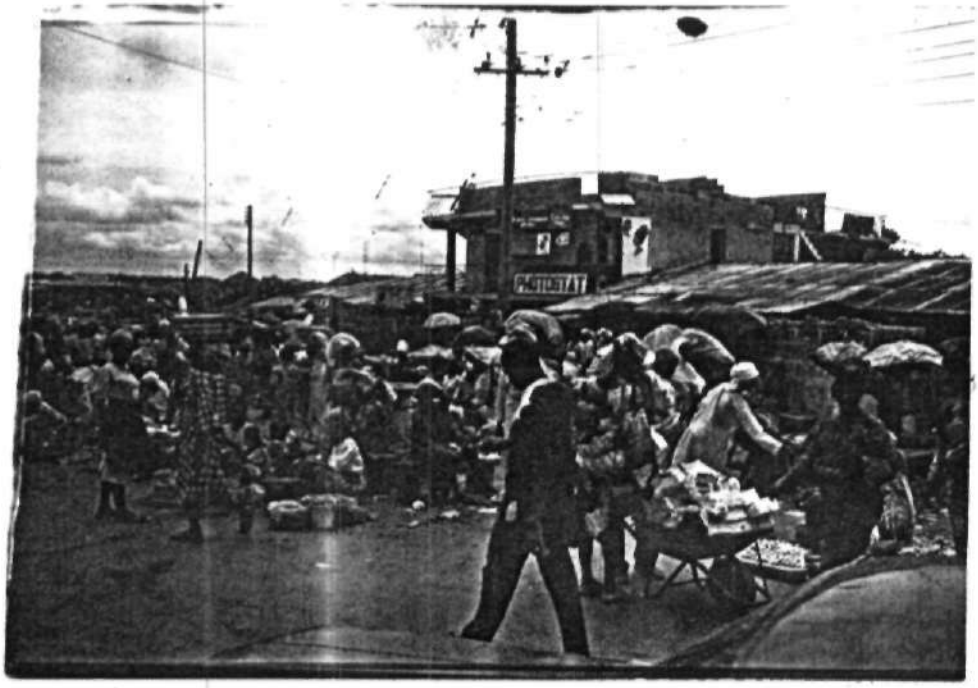
OJA-OBA MARKET, ILORIN

Plate 6a



- THE PHOTOGRAPH SHOWS THE TRADING ALONG ROAD SIDES, IN ILORIN.
- EVIDENCE OF CONGESTION.

Plate 6b



THE ALREADY CONGESTED EMIRS ROAD DUE TO SPILL OVER OF TRADING ACTIVITIES INTO THE ROAD.

Plate 7a



- ADEQUATE DISPLAY SPACE
- PRESENCE OF SQUATTERS NOTICED ALL OVER THE MARKET.

Plate 7b



VIEW OF THE STALLS ARRANGEMENT ALONG THE CENTRAL MOSQUE SIDE, OJA-OBA MARKET ILORIN.

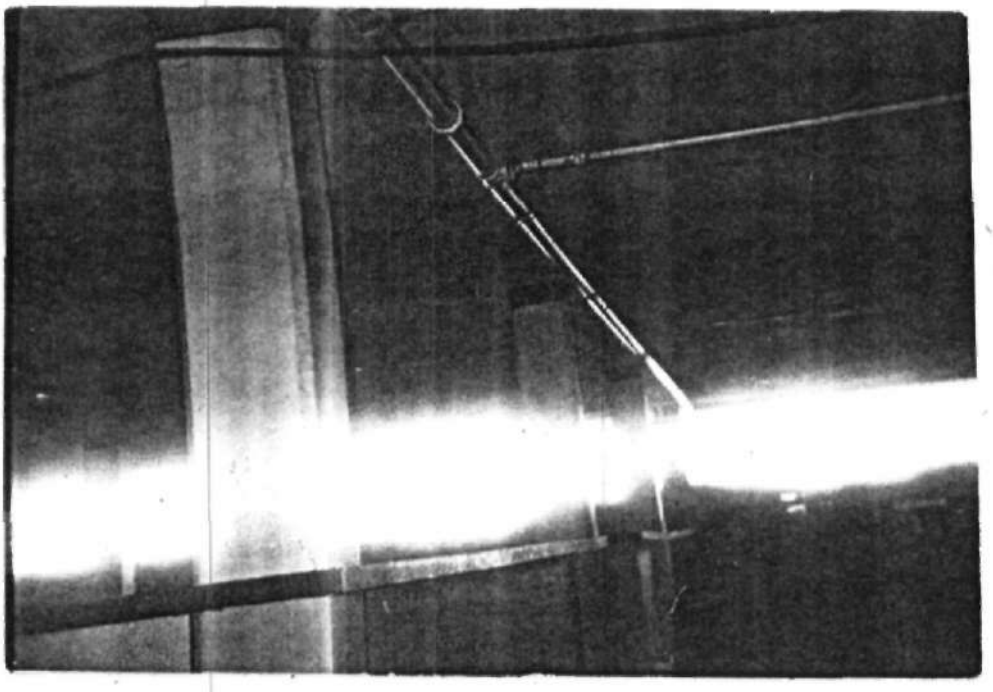
ITA - OSU MARKET, IJEBU-ODE

Plate 8a



- CONGESTED SHOPPING MALL & LACK OF ADEQUATE DISPLAY AREA.

Plate 8b



POOR LIGHTING SYSTEM OF THE STALLS & THE SHOPPING AXIS.

INTRODUCTION

All over the world, the word market does not have a universal meaning, it varies in time and space.

Market in the most literal and immediate sense are places in which things are bought sold.

In modern industrial system, the market is not a place; it has expanded to include the whole geographical area in which sellers compete with each other for customers.

In ancient times, market has as centres of commerce, seems to have had three separate points of origin.

(a) First at the Rural Level, where dwellers met at a centre for the exchange of commodities through barter system.

(b) The second was in service to the land lord rents essentially was paid in grains, even when it was converted into money, sales of grains were necessary to supply the cultivator with funds to meet his dues. Payments of rents was a one way transactions imposed by the land lord. In turn, the land lord used the rent to maintain his warrior clients, Artesian and these led to the growth of towns as Centre of trade and production. An urban class developed with a standard of life enabling his member to cater for each other as well as to the land lords and officials.

(c) The third and the most influential origin of market was in international trade.from early time, merchant adventurers (Arabs and the Phoenicians) risked the lives and capitals in carrying the products of one origin to the other. This importance of international trade for the development of market system was precisely that, it was carried on by the third parties within a settled country, commercial dealings were restrained by consideration of rights, obligation and proper behaviour.

In Nigeria, just like all other markets, Owode Market in Offa emerge in the same manner with the afformentioned origin of markets. The market grew and became popular with the activities of

the railway men in the town couple with this, Offa has arable land for cultivation of agricultural products. The town as also served as nerve centre for other neighbouring towns and thus became the marketing centre for agricultural produce and all these had remained the most dominant growth factor. Hence his lead to the convergence of people from neighbouring towns periodically (usually five days interval) for the exchange of various goods and services. As the population grew, the activities of the market become a daily one.

The introduction of industrial goods led to increase in population of both buyers sellers alike, this inturn made the available facilities inadequate. More so the problem of improper maintenance of these facilities, rapid growth, lack of planning grated all other secondary problems such as congestion, rowdiness, poor sanitary conditions and so on in the market.

The thesis have been divided into three main parts.

Part One, covers general discussions on markets

Part Two, concentrated on the analysis of the existing situation in Owode market.

Part Three, is made up of four chapters. This is the design proposal proper and covers the Design, Construction Methods, Implementation strategies, Conclusion and Recommendations.

CHAPTER 2.

LITERATURE REVIEW

The literature review of this thesis would concentrate generally on academic researches as well as past thesis project in architecture and urban planning. This is in order to expose the various problem areas in market designs. This will also highlight different solution and attempt at solving the problem in the past.

Odeleye (1963) in his study of various markets in Lagos stated that in Lagos Island, there is not one market, that is worth the name. No one up to date in social and hygienic standard. Without exception they are all a squalor. Although this has taken a very long time with the area now well developed, the statement still stands. In the sense that area has now being over populated and the market size has not actually increase thus resulting in congestion and rowdiness of the market.

He however attempted to solve the problem by the provision of dust bins all over the section of the market. He tried as much as possible to separate the pedestrian and vehicular traffic by the provisions of tool bridge across the busy roads. Shoppers were protected from sun and tropical rain by a special design roof covering the whole site with roof lighting design for National Lighting.

Vagale (1972) noted in his study of Anatomy of traditional markets that generally Nigerian Markets have small site area

coverage because most of them developed on spaces that do not give adequate room for future expansion to cope with the urban growth thus resulting in congestion. The study noted that dumping of refuse/garbage and other solid waste at street corners, open drains, lack of trees and shrubs, absence of open spaces are common sights in market. Furthermore, it also noted that about 2/3 of the market structures are constructed with temporary materials such as timber and Iron sheets. He however concluded that for markets to function efficiently, under hygienic condition and as viable socio economic institution, it has to be improved or rebuilt.

Arinze (1976) in the study of market centres in Zaria Urban Area, identified the hierarchies of markets and shopping centres in Zaria and their spatial distributions as the problems associated with markets. She however proposed integration of markets and shopping centres, this according to her will be a time saving device for shoppers, who commute over space from a shopping centre to a market.

Good (1976) in his study of the markets and marketing systems noted that facilities in the upkeep of African Markets are inadequate to meet the basic needs and aspiration of markets users. He pointed out that there is in sufficient display and storage space. He attempted solving the problem however by providing various facilities needed in markets, such that, it would be adequate to cater for the ever growing population of the users. Provision were also made for display and storage spaces in his design.

In the study of physical characteristics of markets in Ilorin, Kwara State, **Onoker Horaye (1981)** observed that physical planning in markets is virtually absent, thus congestion of various markets and lack of infrastructural facilities. He then concluded that the challenge of planning is not only recognising the importance of markets but also finding solutions to these problems.

Okonkwo (1981) in his study of Owerri modern market argued that large sums of money are being spent on building market halls, that are not adequately utilized, owning to the lack of management and control, he noted that an efficient and acceptable design will only be achieved through careful study of existing markets and critical analysis of activities going on within it. He also noted that adequate and efficient management and proper maintenance of the market is the tools needed to achieve a working design.

Abdullahi (1984) in his study of Kaduna Central Market redevelopment geared the study towards not only identifying the problems of hawkers as they exist in the market, but also presented the solutions in physical terms, and provided trading sites for the hawkers within the market. This he argued, is because they sell almost the same type of commodities found in the market stalls.

Fola-Alade (1986) in her study of markets for Ondo State, noted that non- existence of an effectively planned ware houses posed the problems of congesting the roads and the narrow streets with bulky materials such as cement, Iron, Timbers, Pipes, Farm products e.t.c. This in a way reduced the capacity of the roads and thus creating traffic congestion, encroachment on open spaces e.t.c. She however in a solution provided adequate ware houses as well as whole sales stalls for bulky commodities. She also increased the size of roads to ease traffic congestion.

Moseri (1986) in his own study out lined that presently, most markets in Benin City are characterized by poor accessibility, encroachment on roads and walk-ways by squatters/hawkers, and dilapidated structure. Others include Insanitary conditions, poor sewage disposal system. Inadequate refuse receptacles and other public utilities and facilities. He however argued that effective planning of the market space and adequate maintenance of the available facilities will be the solutions to the problems.

Mohammed Bashir (1989) in his own study of physical expansion in Commercial Centres, identified the problem of congestion which resulted when there is no change in the size of the commercial land us/development to contain the Commercial activities. He however concluded that to avoid congestion, there has to be a simultaneous growth of commercial development to contain the growing activities resulting from population increase, this refers to the physical expansion of the commercial centres.

University College Hospital, Ibadan (1986) in their study of hygiene in Nigerian market, found out that, though there appears to be a flourishing trade, from the practices observed, it seems that the traders have very little knowledge of the basic rules of hygiene. This situation is further aggravated by the fact that the available facilities are extremely limited.

Some of the interesting facts that emerged through their investigation include series of health problems faced and risks run by both the traders and consumers. These include - accidents from the congested arrangements of the stalls, the uneven ground surface, particularly after heavy rains, and the faulty display of wares; inadequate toilet facilities and faulty refuse disposal habits. Some children who accompany their parents to the market and play in the open and often dirty gutters adjoining the stalls are particularly susceptible to the threat of food poisoning. There are no storage arrangements and fainter food is sometimes offered for sale!.

There is also the problem of the beggars in the petty trading part of the market whose number seem to increase, as people tend to drift into this group because of lack of employment. They however concluded that the market needs immediate redevelopment and that adequate facilities should be provided with in the market to meet the needs immediate redevelopment and that adequate facilities should be provided with in the market to meet the needs of the users. They

also suggested that the market should be given a proper and efficient Management to see to the smooth running of the market.

Jowandu (Unpublished) in the study of Jankara Market raised the points that: Dry goods, especially cloth and clothing accessories should be nearest to the road. The tenants are relatively wealthy and may be expected to invest money in remodelling their stalls. Stalls should be of different sizes so that the tenants could have a choice and can obtain larger stalls as they succeed in their trading. Fancy goods stalls can be behind the cloth stills Delivery to these areas is usually by light vans. Behind the fancy goods stalls can come provision and house hold equipments. These are necessities and people should have to reach them.

Meat and Fish section should be separated from the other sections and have concrete or other impervious counters.

Adequate security must be provided and the whole area locked at Night. Generally there should be adequate toilets, drinking water stand-pipe, and rubbish bins in fixed points (to avoid quarrels).

He also noted that the provision of post offices, banks, and other ancillary facilities should be considered.

Ibru, Vaughan - Richards & Associates in their research of Nigerian Markets, noted that the Kaduna Centre Market, which is easily accessible from all part of the city has its environs consist of numerous shops laid out in a linear fashion and engaged in virtually the same economic activities as the market itself. This however adds support to the argument raised by Arinze (1986) that market should be viewed in an overall planning contexts of commercial districts and not as a market place alone. They noted that the Kaduna Central Market has a reasonable level of urban facilities and fairly reasonable standard of market structures. They agreed that the stalls appear to be reasonably in sign and layout, but the area for retail trade has over the years become considerably congested with the increased allocation of space, particularly in the main circulation areas, for

opening trading. The available storage space for whole sale goods transacted is grossly inadequate. This however, they notice led to a spill over of whole sale activities into the Commercial district surrounding the market.

The waste disposal system according to them leaves much to be desired. Although some commendable efforts were made to properly dispose off the day's waste and garbage, the demand for this service from the users of the market and adjoining commercial area out strips the availability of such services.

They however concluded that proper provision should be made for up grading the standard of the market.

Now, having gone through the various studies, on Nigeria Markets, many problems facing markets in Nigeria could be outlined as follows:

(a) - General lack of proper Management

(b) - Poor sanitary conditions

(c) - Congestion of stalls

(d) - Poor accessibility of most markets

(e) - Evidence of fire hazards

(f) - Poor refuse collection and disposal methods

(g) - Bad drainage system

(h) - Most markets lack physical planning

(i) - Improper display of various items

(j) - No protection for shoppers from heavy tropical rain and sun.

However many suggestions has been offered towards solving the problems by the past researchers, but they have failed to identify a feeder problem that is responsible for all other problems. It is the opinion of this thesis that the issue of maintenance is the primary problem while others serve as secondary problems. And thus the problem of maintenance must be solved for better market situation.

CHAPTER 3

MARKETS IN GENERAL

This chapter focuses on the characteristics, definitions, and classification of markets. It also deals with the various structure of markets and market organisation in some selected markets under study.

3.1. DEFINITIONS & CHARACTERISTICS OF MARKETS

As earlier mentioned in the introduction of this thesis, market in the most literal sense has various meaning. Many Authors have defined market in different ways to suit their immediate environment.

Eva Kraff defined market as centres for social interaction, political, news, consumeradeship, terminal point of many festivities in a given part of the city. Kraff however was trying to create the ground that,markets expand beyond mere buying and selling and that various activities takes place in a market place.

Hodder and Ukwu defined market as an institutionalised activities occuring at a definite place and involving the meeting of the people there at a particular time. Here, the institutionalized activities referred to buying and selling as well as various social, political and economic activities in which the people of a place indulged.

Mabogunje defined market from geographical point of view, by referring to market as towns where transactions are carried on in delineated areas occupied periodically by buyers and vendors of retail goods.

Here, he tried as much as possible to identify a defined space for occasional buying and selling.

From the economists point of view, markets does not necessarily mean to be a place where buying and selling is done. But any point where there is interaction of demand and supply. What the economist is trying to say is that, buying and selling can take many forms, which include Telephone and Post.

After analysing the various definitions of market, for the purpose of this thesis however, market can be defined as place where both buyers and sellers engaged in various commercial activities.

However from the various definitions given above market can be seen to have the following characteristics.

1. There is a mapped out area
2. There is free entry and exist in the market
3. There are buyers and sellers of various goods
4. More often than not, the atmosphere is very hostile this is as a result of noise through haggling between buyers and sellers

3.2 CLASSIFICATION OF MARKETS

Market interms of classification can be grouped into different ways.

1. Functional Classification
2. Periodic "
3. Time of Operations

3.2.1 FUNCTIONAL CLASSIFICATION

This is the type of classification in which markets are classified according to the function they perform in the distributional chain. However four major functions are identified with Nigerian markets.

FEEDER MARKETS:

These type of markets exist in Rural areas, they are small periodic markets that supply urban traders with goods for sale in bigger markets in urban Centres. They act as feeder markets to the bigger markets.

BULKING CENTERS (MARKET)

These are Centres where products from various smaller markets are collected and assembled into large quantity for onward transportation to the urban retail or whole sale market, Example of such markets is Ode-Oba market in Oyo State.

URBAN WHOLE SALE MARKET

This act as an intermediate market between the bulking Centres and the urban retailers. The products from the bulking markets are broken into smaller components and are distributed to retailers. A good example of this type of market is the Owode market Offa, which is the market under study.

URBAN RETAIL MARKET

These are consumer markets where households get their daily needs. In this market, goods are also broken down into smaller consumable units for sale.

3.2.2 PERIODIC CLASSIFICATION

Most African towns and societies, are not self sufficient, because they specialized in the production of one thing or the other, hence there is the need for periodic meetings of these towns for the exchange of their various commodities.

Mabogunje, classified periodic markets into two

(a) Provincial periodic market

(b) Inter-kingdom periodic market

The provincial periodic markets are held every forth day, and attended by people living not too far from the market place. This type of market is normally found in small towns and villages, and sometimes in urban Centres too.

The Inter-kingdom periodic markets are held at intervals of eight to sixteen days, and often attract buyers and sellers from far distances ranging from 50km and above.

However in periodic markets, various types of goods ranging from stuffs, clothes, house hold goods as well as imported materials are sold. And also there are other markets that operates daily.

3.2.3 TIME OF OPERATION

The operation of Nigeria market has taken various forms in the past years. The time of operation varies from one market to another. This includes

(a) Morning market

(b) Day market

(c) Day and Night market

(d) Night market

Most of these markets are identified based on the time within which they are operated and on the type of goods sold in them.

Morning markets are usually found in the Northern part of Nigeria, situated very close to the traditional defence wall around the town. The operation time is between 6.00 and 12.00 noon daily.

Day markets on the other hand are found in most Nigerian towns. They are more organised and usually operated between 8.00 am and 6.00 pm daily. Intensive retailing of Agricultural goods as well as manufactured goods characterized the activities in this type of market.

Day and Night markets have ben identified in some parts of the country, especially in Ibadan. The time of operation of this market is between 8.00am and 9.00pm. Intensive retailing of Agricultural and Non-Agricultural goods characterized this type of market.

Night markets in Nigeria dated back as far as 1825, when Clapperton identified seven Night markets in Katunga (old Oyo Empire). The market usually commence around 5.pm and ends 11.00pm daily. The type of commodity sold here calls for the odd time of operation. The various commodities sold include, perishable goods such as:

- Vegetables
- Meats
- Fish
- Cow geese and
- Various cooked items.

These types of markets are usually located in close contact with the king's palace, thus making it easily accessible to young men and women, meeting for other reasons than economic. various other functions such as political and social function are performed in the Night market.

3.3 FUNCTIONS OF MARKET

Various markets in Nigeria originated with the emergence of various towns and villages. They are usually centrally located, thus serving as a converging point for the inhabitants of the town for various functions which are either political or social. However markets service various functions such as:

(a) It serve as a strong base for possible distribution of various commodities.

(b) Markets serve as a source of revenue to the local government authority which inturn strengthens the economic base of the town

(c) It also serves as an institution of disseminating information

(d) Due to the compact nature of various markets, it provides social security and economic opportunity to both buyers and sellers.

(e) Markets also boost images of various towns by attracting various people from different parts of the country to the market to sell or buy various items.

(f) Give large measure of social security and economic opportunity to traders. Hence it has been noted that the market place can also be considered as an effective meeting ground of urban and Rural cultures.

3.4. ANALYSIS OF NIGERIAN MARKET STRUCTURE

Market trading in the past, took place under tree shades. Nigeria then was mainly an Agrarian Society and the inhabitants produced almost every thing they needed. The informal trading activity under tree shade was therefore quite adequate for their normal daily social and economic transactions.

As the standard of living of the people increased sheds like the farm huts, were erected rather in a

manner.

The system of market Administrations employed then was efficient. The local village chief appointed market superintendent, who was to employ many assistants to help him. The assistants take proper maintenance of the market precinct. As payment for their services, each seller donates some quantity of his or her merchandise.

As the social and economic structure of the society become more complex, more formal and organised market trading was introduced. Large area of land were allocated for market sites. Bigger sheds, called market stalls were erected by the local government council, stalls were arranged in a rectangular grid pattern. Efficient administration were set up; peace and order duely maintained.

However the present day Nigerian markets are over populated, due to gradual increase in population. The sites are already surrounded by residential buildings. No room for expansion. There is no more fund for adequate maintenance illegal stalls being erected. Stalls became discredit, the surrounding dirty and filthy. The general picture a squalor. This accounts for the collapse in efficiency and integrity of most Nigerian markets as a social and economic institution. Local government councils pay little or no attention to the efficient and hygienic running of the markets. There has virtually not been any substantial improvement on the organisation and structure of Nigerian markets of the past. For now, as it as during the ages, rain beats down and drenches buyers and a large proportion of the various commodities displayed. This is however the situation in Nigerian market scene.

3.5 PROBLEMS ASSOCIATED WITH NIGERIAN MARKETS

Basically the problems identified with Nigerian markets could be classified into three main categories.

(a) Structural problems

(b) Social "

(c) Political "

3.5.1 STRUCTURAL PROBLEMS

This problem consist of other problems such as:

i) **Small Site Area**

Most Nigerian markets are located within the city Centre, usually bounded by Residential/Commercial areas. Thus as the town grows with increase in population of the users of the market, the size of the market remain the same. Thus leading to the congestion and over crowding of most Nigerian markets.

ii) **Poor Accessibility**

The problem of poor accessibility into some Nigerian markets can be seen interms of pedestrians/vehicular conflicts. The inability of vehicles to move into and out of the market, compounded the problem as bulky materials have to be shifted into the markets using wheel barrows. Most Nigerian markets have their parking spaces converted to motor park for commuters and this in a way prevents loading and off loading of goods. Bus and Taxi stands are mostly absent and passengers are usually picked and discharge by the road side. Thus resulting in hold ups.

iii) **Refuse Receptacles**

The absence of refuse disposal system in Nigeria markets generally resulted in indiscriminate dumping of refuse in open heaps and drains, within the markets. This attract disease carrying agents like flies and rodents. It also results in offensive odour and fumes.

This is a threat to the health and safety of traders as well as their customers.

iv) **Dilapidated Structures**

This refers to the poor conditions of the materials used in the construction of the various stalls in Nigerian markets . The chief materials used are iron sheets and timber. Construction of stalls done with cement blocks are very insignificant. However the various construction done with the use of timber posts and zinc have created temporary impression of Nigerian market and by nature they are not durable. In most cases, the Iron sheets are already corroded and licking, thus exposing traders to the hazards of rain and fire. e.g. Zaria market, Owode market, Oja Oba market Ilorin etc.

v) **Drainage Systems/Sanitary Facilities**

Nigerian markets are mostly characterized by poor drainage system, where they exists, majority are either blocked or uncovered due to lack of proper maintenance. The sewage disposal systems are bad. The few toilets present in most, are poorly maintained. These problems together with poor drainage facilities results in the prevalence of water and insect-borne diseases. However with the increase in Nigerian markets, the unhygienic conditions will deteriorate further and the incidence of disease will greatly increase.

3.5.2 SOCIO-CULTURAL PROBLEMS

This comprises of other problems such as:

i) **Problems of Squatters & Hawkers**

The menace of hawkers in Nigerian markets is now at an alarming rate. Apart from the fact that they encroached the side walk, they completely atimes take over the front areas of some stalls, by parading or evolving temporary stands for their wares. The presence of these Hawkers and squatters presents an over crowding situation in Nigerian markets.

ii) **Cultural Belief**

Most Nigerian markets are being patronize dogmatically on the basis that people are traditionally rooted to them, and not on the basis of modern facilities that are available there. Hence people are seen patronizing same old and traditional markets e.g. Owode market Offa. Oja Oba market Ilorin e.t.c.

3.5.3 POLITICAL PROBLEMS

These problems has to do with:

i) **Poor Governmental Policy**

The government has not placed much premium towards the maintenance of infrastructural facilities in markets. Most Nigerian markets are faced with the problem of maintenance due to the absence of authorities to actually take proper care of the market's facilities.

ii) **Poor Enlightment Programme**

Traders and shoppers in Nigerian Markets are not well informed about how to use the various facilities provided in the markets. Thus the few facilities present are either over used or under used.

3.6. SECURITY AND FIRE HAZARDS IN MARKETS

Security is a very important consideration in market designs. The general nature of commercial activities requires a place that provides adequate security for traders and their goods. However, there are two major security problems in markets.

(a) Burglary

(b) Shop-lifting

Market Burglary is the act of breaking into the market in other to steal various goods over night.

Shop-lifting in markets, is an act of stealing in a stall/shop while pretending to be a customer.

3.6.2 SECURITY MEASURES

General lock up of the entire market building after the day's transactions is very important:

- Where appropriate, individual lockup devices for stalls should be provided
- Lockable shelving arrangement under counters should be provided.
- General search-lighting on the entire market should be provided
- Burglary alarm at strategic points should be installed
- Employment of night watch-men.

3.6.3 FIRE HAZARD IN MARKETS

Fire is another very important factor to be considered in the design of markets. Commercial activities requires a market place that provides adequate fire resistance and effective control system. Many Nigerian markets have been destroyed by fire due to the fact that proper provisions were not made for fire fighting and protection.

Causes & Spread of fire

Majority of fire hazards in Nigerian markets are caused by

i. Careless cooking within the stall
ii. Faulty electrical installations
iii. Arson

Fire moves rapidly by convection and usually spread laterally along ceilings. The markets usually influence easy spread of fire. Majority of fire deaths in markets are caused by smoke and toxic gases.

however in most Nigerian markets, the spread of fire as a result of out break is usually aided by congestion, rowdiness, improper positioning and spacing of the market structures. The use

of timber post and zinc in the construction of market stalls also influences the spread of fire.

3.6.4 FIRE CONTROL METHODS IN MARKETS

There are various methods of controlling fire spread in markets.

(a) **Use of Fire Walls**

Fire walls is a fire resistant barrier that normally extends through the roof of stalls to prevent easy spread of fire as a result of out break. Fire walls usually requires 2.4 hours fire resistance ratings depending on the anticipated fire severity.

- Reinforced concrete
- Bricks
- Concrete blocks and gypsum plaster
- Asbestos
- Aluminiums.

However to prevent the short circuit of fire around a fire wall, there should be no openings adjacent to its ends.

(b) **Use of Fire Fighting Apparatus**

The use of various fire apparatus will also aid in preventing the spread of fire in a market. These apparatus include the:

Following:

- Ladder
- Fire Engine
- Pumper
- Trunk
- Ambulance
- Hydrant
- First Aids
- Fire buckets
- Fire alarms/detectors
- Sprinkler system.

Hydrants are special outlets for fire control installation system. For fire control in markets, they should be placed at strategic positions around the market, this would enable easy and quick control of out break. Hydrants are usually provided with a link to the main fire control reservoir. The use of hose couple to Hydrant facilitate easy control rather than fire vans, that may not even gain easy access to the market.

There are basically two types of hydrants used in market designs.

i) Pillar hydrant - This provide direct link to the fire control reservoir and requires a machine to generate adequate control pressure.

ii) Automatic Hydrant - This generates its own pressure with an inbuilt automatic pressure machine

Hydrants are however very effective means of fire control in markets.

3.6.5 GUIDELINES ON RESCUE

The market building should have at least 3 exists for speedily evacuation of the shoppers and trader with the market. The market should be accessible to fire fighting equipment on all the sides. There should be enough space around the market building to erect scaling ladder.

The ladder could be use to gain direct access to people who are trapped in the market building if vehicular access to the building is limited. Rope knotted together could also be considered. Fire men may need to use hook ladders to ascend the face of building.

Height of some of the ladders is given as below:

- Hook ladder: 45m
- Ordinary ladder 10.6m and 13.7m
- Extension ladder 18.3m and 24.4m.

CHAPTER FOUR

MAINTENANCE PROBLEM IN SELLECTED NIGERIAN MARKETS

This chapter focuses on the various problems associated with maintenance in sellected markets in Nigeria. However for this purpose, four markets have been sellected.

a) kaduna Central Market

b) Owode Market Offa

c) Oyun Market Offa

4.10 Kaduna Central Market

Central market as its name complies is centrally located in the Kaduna Urban area off, of the main transport artery, Ahmadu Bello Way. It is the heart of the rapidly expanding Central Business district.

- It has a total site area of BHA, allocated to the market from Lord Lugard Master Plan.
- The environs of the market consists of numerous shops laid out in a linear fashion and engaged in virtually the same economic activities as the market itself.

4.11 Maintenance Problem Areas

The areas that lack adequate maintenance in this market include:

Floor The floors are constructed of concrete slab for the individual stalls. The floors has over the years become considerably

demage by the arrangment/storage of various goods on them. In the cooked food areas, some trade resulted to pounding food on the floors and this greates various damages on the floors. However dueto lack of adequate maintenance of the floor, most of the floors pills off, thus leaving some stalls with just the hard core. This however the situation in some parts of the market.

Walls

The walls are also not well maintained. Traders and shoppers sometimes rub their hands on the walls, thus giving the walls dirty looks. Some people sometimes write various things on the walls. The paints on some of the walls are already pilling off and require re-painting. But the Mangements are more concerned with the revenue/rents they collect from the traders than the actual Management of the market.

Roof

Most of the roofing are due with the use of Zinc.These has over the years become considerably rusted and thus leaking. These however exposed the various traders and the good to the hazards of rain and sun.

Waste Disposal/Drainage System

The waste disposal system within the market leaves much tobe derived, and commendable effort are made towards this effect. However the demand for the services out strip the availability of ther services provided.

The drains dischaging waste, water from the market is semi covered, which is quite reasonable, but some areas adjacent to the market, particularly along the rail road tracts are poorly drained thus causing unhygenic condition. All these places needs proper drainage gutter and adequate maintenance.

Refuse Dumps

The refuse disposal system within the market is quite bad. Refuse are dumped all over the marker any how. Thus leaving the

market in a dirty condition. The refuse from the market are sometimes dump very close to the market in open dump are. This is however unhygenic. Burning of refuse around the market as also come. This could easible expose the market to the hazards of fire. However due to lack of proper and adequate maintenance, the situation becomes more pathetic.

Architectural Factors

Haphazard, heterogenous layout hinders upgrading the standard of the market. The areas for retail trade has over the years become considerably congested with the growth in population of the users and without adequate growth of the market/ proper maintenance of the market. The available storage space for the volume of wholesale goods, transacted is grossly inadequate, which however led to a spill over of wholesale activities into the commercial district around the market.

The market layout includes a motor park, such facility should be on integral part of a market particularly as a loading station. Unfortunately, however, in addition to loading and off-loading functions, this motor park also serves as a transport terminus for passenger vehicles going to Abuja, Jos, Kafanchan and other points south. The activity is now quite substantial due to lack of proper maintenance and Management. Thus the motor park now operates to the detriment of the market.

4.2.0 **Railway Station Market, kaduna**

The market is located at the railway junction in Kaduna South. Due to the fact it is situated at the rail road terminus which connects the major geographical zones of Nigeria, it is generally accepted that this market provides the best opportunity in kaduna to obtain produce from all parts of the country.

General Findings on Maintenance of the Market

Vehicular access to the market is via station round about off of kachia road. The access has over the years become extremely congested

and the feeder road to the market itself leaves little room for parking.

Trading activities in the market are generally confined to the small market place area. Expansion has been limited because most of the adjacent properties are owned and managed by the Nigerian Railway Corporation. The stalls are laid out haphazardly.

Facilities in the market are extremely deplorable. The stalls are of wooden posts with corrogated sheet for roofing and walling. The construction is generally sub-standard. A recent fire demolished a good portion of this market but within a few weeks the market once again was in full swing.

Amenities, conveniences etc are seriously lacking. There is virtually no drainage pattern, refuse are dump all over the market. Infact the overall level of environmental hygene leaves much to be desired. The waste disposal system present formidable problem. The market lack Management . And from the look of things there is virtually no maintenance of the various market structures.

4.3.0 **Owode Market Offa**

Owode market has a very small site area, located within the commercial area of Offa. Commercial plots were laid out haphazardly around the market.

Maintenance Problem Area

The market generally lack adequate management and proper maintenance of the facilities present in the market. These facilities includes:

The Market Structures

60% of the market stalls were constructed with the use of iron sheets and timber post. These however gave the market a temporary impression. It also exposes the market to the hazards of rain and fire. However the other 40% are constructed of block works.

The Flooring

The floors are constructed with use of concrete slab for the individual stalls. However it has over the years become entremely damage by the traders due to lack of maintenance and general repairs of the floors. Also in the cooked food section, traders are seen founding food on the floors with adequate consideration for the maintenance of the floors. This is however common in all the market visited.

The Walls

The walls are of block work. Rendered internal and external with standard plaster. The stalls are also painted both internally and external. However the workmanship were very poor. And thus, the paints are filling off and the walls has over the year damage by the tradder, who sometimes rub the hands on the walls, nails the walls for various display e.tc

The Roofs

The roofs are also not well maintained.

- The iron sheets are already corroded and are leaking thus exposing the traders and goods to the hazards of rain.

General Planning/Parking

The general parking provided for the market has been converted to a motor Garage. Hawkers and squatters are also seen parading their waves with the parking space as well as on the access roads leading to the market.

The market lack physical planning. This couple with increase in population of the users, as well as the small site area of the market resulted in the congestion of the market. And thus the facilities provided are being over used due to lack of maintenance of the facilities.

General Security of the Market

The security of the market is inform of fence around the market. Night guards were employed for the provision of security after every day transaction. But these people are not efficient enough. Thus buglary case are very rampant within the market. Although most of the shops has individual locks, the market still lack security light and proper management to see to the proper security of the market.

Face Lift

Over the years, the market has not enjoy any face lift. The people concern with the Management and Maintenance of the market are more concern with the little amount of revenue they collect from the traders than the actual running and Maintenance of the market. Thus there hasn't been any face lift for the market since.

4.4.0 **Oyun Market, Offa**

The market has total site area of 13 HA. However 9.38 HA of the total land was developed. The market is located at the fringe of the town, far from the commercial zone of the town.

The market is not easily accessible as a result of the distance from the town.

Maintenance Problems

The market lack adequate Management and proper Maintenance thus resulting in various problem suchas below:

a) **Roof Leakage**

The roofs are constructed of corrugated asbestors roofing and most of them are already damage over the years and thus liable of exposing the traders to the hazards of rain.

The floors and the walls are in good conditions due to the fact that traders and shoppers have not been using the market.

b) **Security**

The security of the market is not well quarantee, due to the fact that the market is located far from the town. This has however rendered the market useless for the time being. The market has been burgled several time and various materials such as the roofing sheets, the doors, windors, the counters, the lighting system have all been removed.

PART TWO

CHAPTER 1

OFFA TOWN

This chapter gives an insight into the Historical Background of Offa towns. It also focuses on the various characteristics of the towns.

1.1 BRIEF HISTORY OF THE TOWN

The name, Offa was derived from the Yoruba word "bow", and the traditional title of it's ruler 'Oloffa' means ' the owner of the bow'. This title handed down from one ruler to another, most probably came from the fact that the first leader of Offa was hunter and archer. There is however no information regarding the age of the towns, but it is believed to be about three centuries old. It is commonly believed that the original settlers were the Yorubas from Ile-Ife, the spiritual centre of Yoruba land, or Oyo: either is possible, considering the proximity of Offa to these two towns.

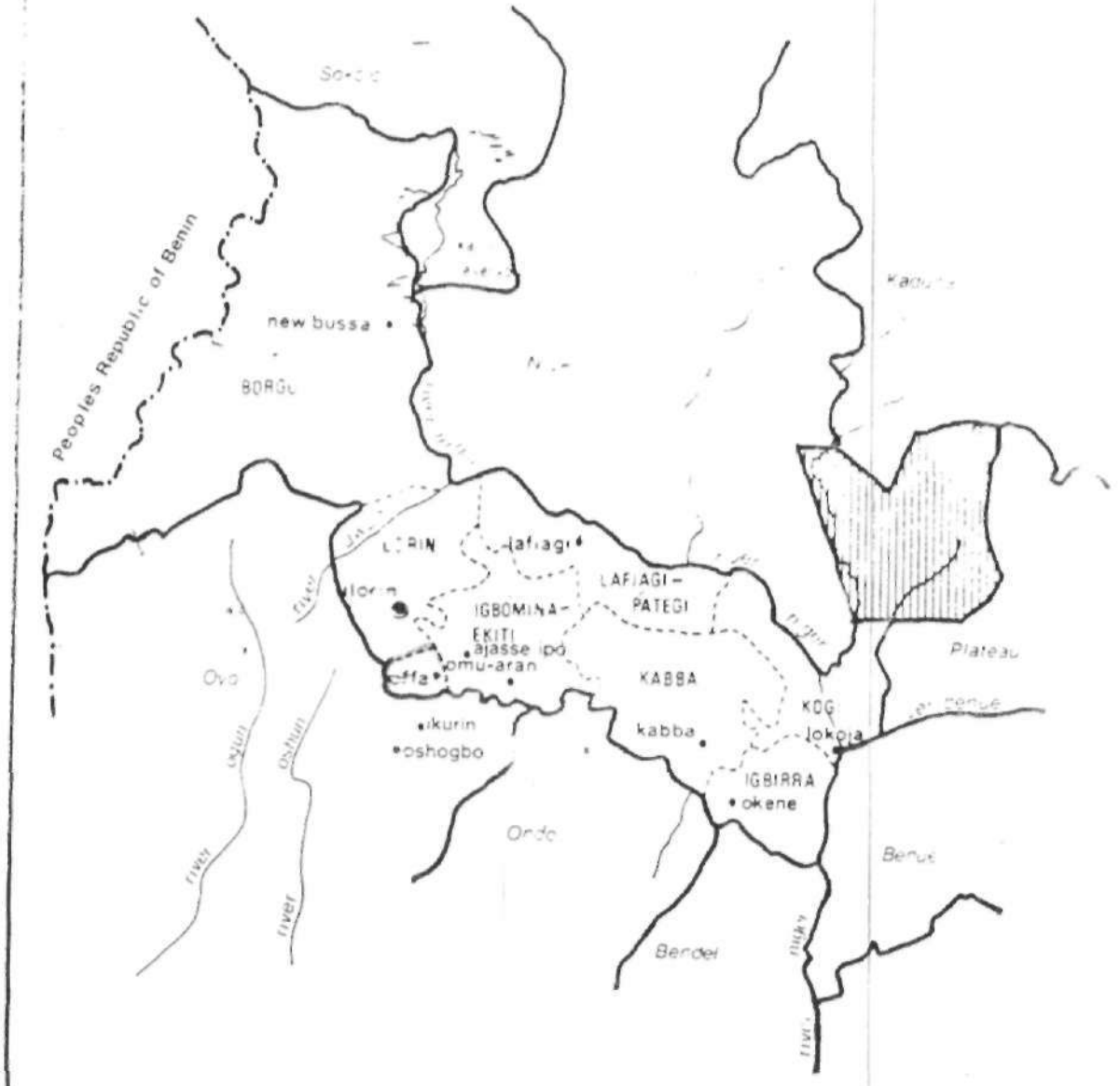
1.2 NATURAL CHARACTERISTICS

LOCATION

The town is located on the western high lands of Nigeria at an altitude of 425 meters above sea level on the water shed of the southern boundaries of Kwara State. (see map).



MAP OF NIGERIA SHOWING
KWARA STATE



MAP OF KWARA STATE
SHOWING OFFA.

CLIMATE

The town is characterized by two main seasons:

The wet season from May to October, and the dry season from November to April. Each of these seasons is characterized by a specific type of prevailing wind. The wet season brings with it south westerly winds originating from the equatorial rains belt and blowing from the high pressure zones which occur over the Atlantic during this period. The dry season is accompanied by the harmattan, a dust-laden wind blowing from the North east.

Rain normally begins to fall in late March, but maximum precipitation generally occurs towards the end of the season. The dry season, with temperatures reaching up to 38^0c, brings drought conditions. The mean annual rainfall in Offa is between 1200 and 1400mm. The short dry season of 3-10 weeks is well marked, and in certain years, the long dry season is very severe.

Temperature conditions remain virtually unchanged throughout the year.

The relative humidity is about 80 percent at 9 a.m in the wet season. In the dry season, the Harmattan winds help reduce the relative humidity from a level of 80 percent to about 65 percent.

Tornadoes usually indicate the end of the rainy season, and sometimes, destroy crops and dwellings.

GEOLOGY

This region displays simple geological characteristic with no major structural disturbances and no identifiable geological formations. The area is probably under lain by the pre-cambrian basement complex consisting of granites, schists and gneisses.

Generally, the topography is even with gently slopes, and drainage is well developed.

SOILS AND VEGETATION

The soils and vegetation are typical of the forest region. The Arable soil are good for Agricultural cultivation as well as for various construction purpose. The vegetation is very dense due to the abundant ground water supplies. The land is however intensively farmed. Vegetation along the lower part of the near by streams are left to grow, while those on the upper part has been cleared and turned over to Agricultural use.

Generally, numerous streams facilitate natural drainage in the area. An embankment four kilometres north east of Offa, on the river Oyun, form a small and shallow reservoir covering an area of about 35 hectares.

1.3 ECONOMIC BASE OF OFFA

The economy of Offa is basically on Agriculture, trade, commerce and services. Thus these made the town the focal point of economic growth in Oyun Local Government Area of Kwara State. The town has the largest population concentration in the area as well as the largest number of social educational and public utilities.

Because of its strategic locations between Ilorin, the Kwara State capital and Oshogbo in Oyo State, it has become the centre of attraction for various goods and services.

The area around Offa is intensively cultivated, although only about 30 percent of families own farm land outside their court yards. The main Agricultural crops produced include Yam, Cassava and Millet. A large proportion of the produce is retailed in the market.

Being the only major commercial centre in Oyun Local Government , Offa attracts a sizeable number of traders and shoppers from the rest of the Local Government and also from other part of the country in general.

There are basically two major markets in Offa.

i) The Regional Market which is the Owode market

ii) The town market which is the palace market

The Owode Market attracts approximately 10,000 buyers and sellers daily, most of who come from Offa and it's surrounding towns. A variety of goods, ranging from clothes, medicine, House hold-Equipments, Food stuffs, building materials, live stocks to spare parts are available in the market. The Owode market also operates on periodic basis every 5 days. This attracts people from all part of the country. About 16,000 people attend the periodic market.

The palace market attracts a small number of traders. It operates on night basis. The variety of goods available are small compare to Owode market.

The industrial sector of the town composed of large and small scale industries. The small scale industries however consists of sawmills, structural metal firm, printing, block industries and bakeries. They employ between 15-60 people. The large scale industrial sector consists of A biscuit factory, form industry, carpet factory and the brewery. They employ between 400-1000 people. However the location of the town on the main railway has helped the growth of these industries, giving them easy access to the Nigerian markets and ports.

1.4. TRANSPORTATION IN AND AROUND OFFA

A major regional road, Oshogbo - Offa - Ilorin serve the inter city transportation.

The Oloffa and Ibrahim Yaiwo ways are the tow major ways in Offa. from these, road loops, radial roads and foot parts serve the residential areas, commercial areas and other public areas. Most of the roads in the town are tarred, except for some few that are still laterite.

The railway system of Nigeria includes a major line from Lagos to Nigeria via Ibadan, Ilorin, Jebba, Kaduna , and kano. The section between Ibadan, and Ilorin crosses the Kukuruku hills at Offa. The

OYUN MARKET
OFFA ....
INDUSTRIAL
ADJOINING TOWN CIRCLE.
FUTURE EXPANSION
RESIDENTIAL AREA
COMMERCIAL "
ROADS AND EXTENSION
OYUN MARKET
INDUSTRIAL AREA.
AFELELE RESERVOIR.
RAILWAY ZONE.

1.5. TYPES OF BUILDINGS IN OFFA

Out of the total area of land developed, 65% can be classified as residential including private and public housing areas. Educational institutions represent 10%, while commercial areas and religious area represent the remaining 25%.

According to the residential survey carried out in 1974, 2 main types of dwellings were identified.

(a) Multi House hold building

(b) Single House hold building

72% of the house hold building surveyed cause under the Multi House hold building, with 2 or more families sharing a single unit. Over one- third of the residential buildings had courtyards. While about 61 percent were compact and rectangular.

Dwellings are not usually allocated according to definite plots. They all exist in close proximity without specific boundaries, and the land between houses are regarded as common land for every cluster.

The various types of building existing in Offa include.

i. Commercial Buildings - This includes hotels, Market structure, Film house, Banks e.t.c.

ii. Religious Buildings - These are various religious structure scattered all over the towns such as Mosques, Churches and Shrines.

iii. Residential Building -

iv. Education Building -

Two-thirds of the building structures are less than 20 years old. Majority of the structure are single storey building. About 60% of the structure are now constructed of cement, block while the other 40% use mud as the building material; for walls.

Roof construction was predominantly of metal sheets, and occasionally of concrete, and asbestos sheets.

Plate 9a

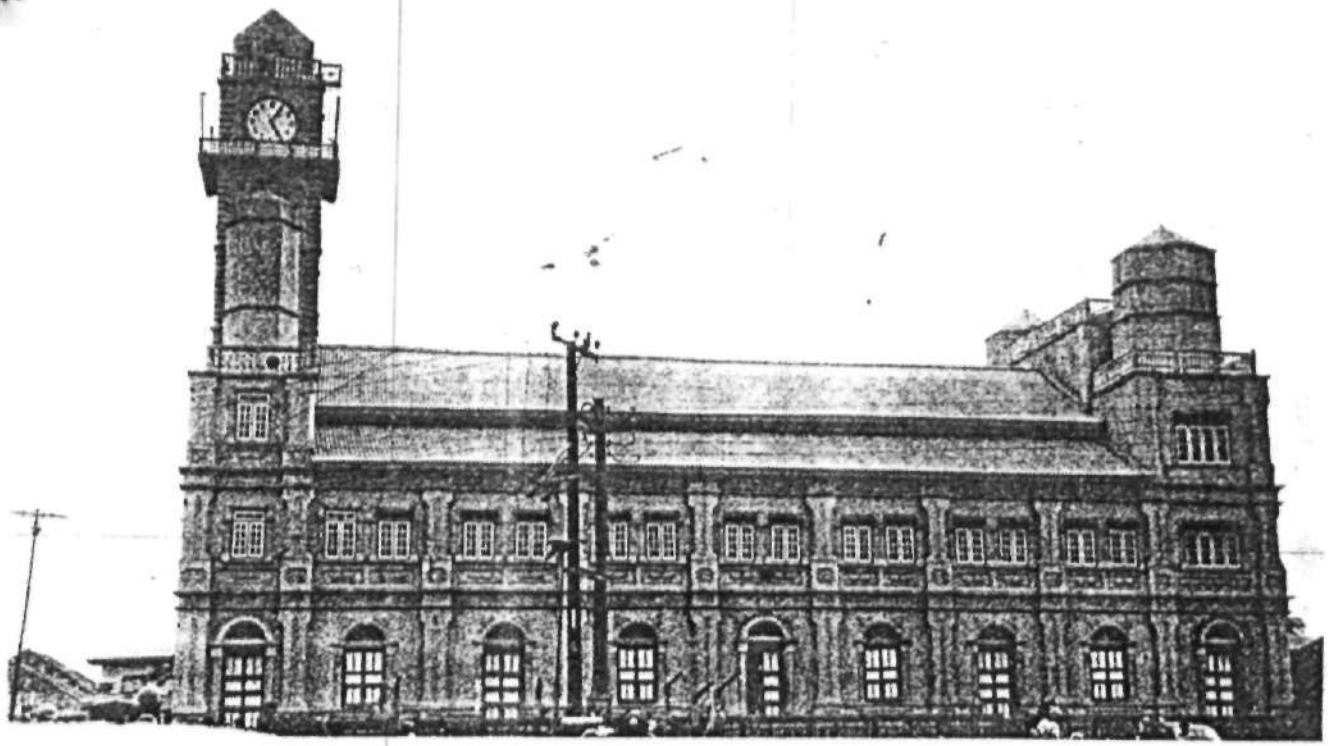
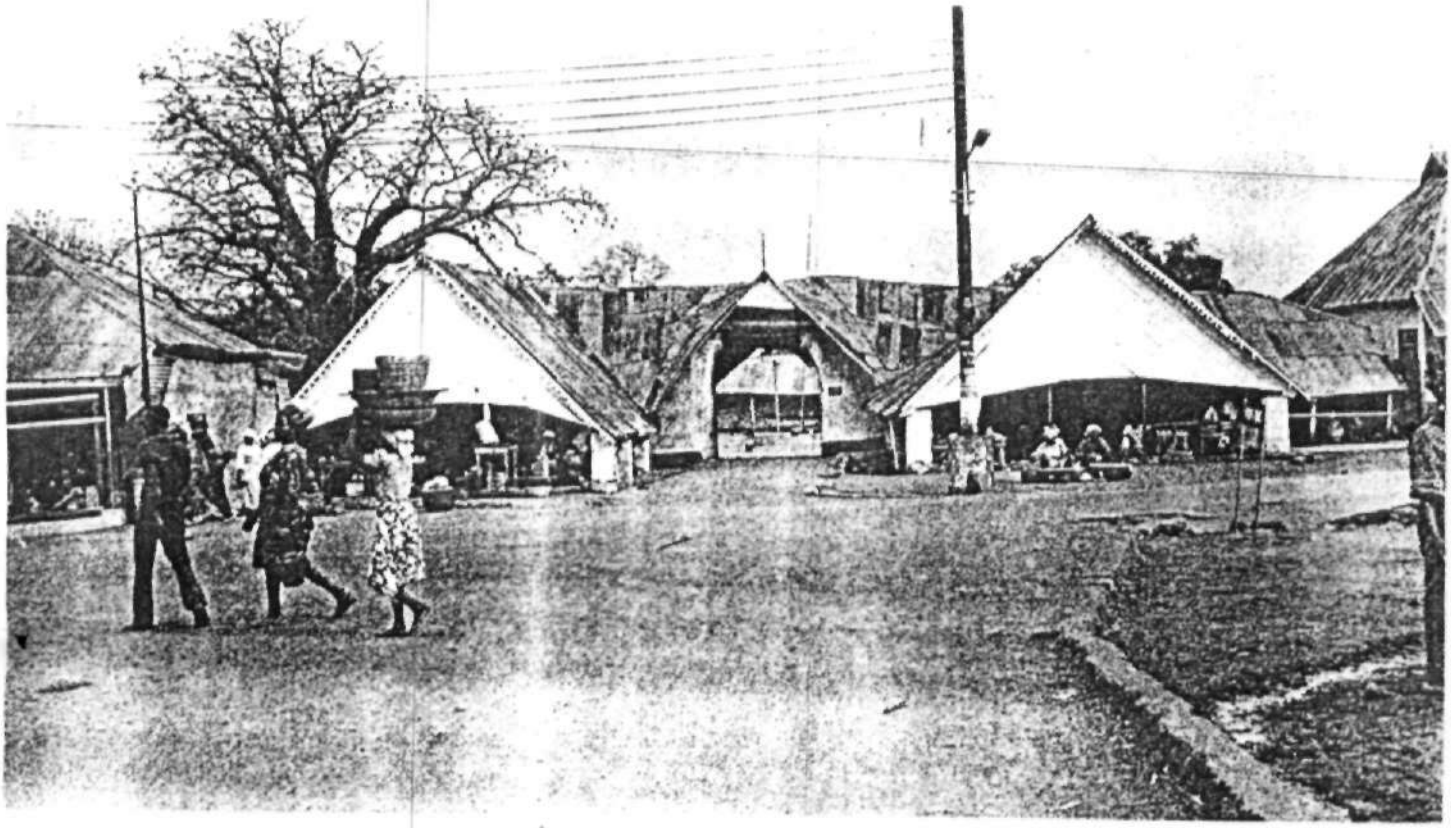


Plate 9b



CHAPTER TWO

DEMOGRAPHIC CHARACTERISTICS OF OFFA

This chapter deals with information gathered on the population structure of the town, the Occupation of the people, Religious and employment structures which will serve as basis for the final solution to the various problems confronting the market.

2.1 POPULATION DISTRIBUTION

According to the 1963 population census Offa had a population of 71,600 and by 1974 it has risen to 94,500. It is estimated that the town grew at a natural growth rate of 2.55 percent per annum. However projecting from this population, the population in 1990 would be 139,300. And for the purpose of this study a population size of 206,000 for Offa in the year 2005 was projected. It is very unlikely that Offa will grow faster than the rate of natural increase. The town will however attracts in-migrants, if the growth strategy for it, is properly moderated in all aspects of development: which include both Government and private Capital Investment, Industrial Locations, Growth of Educational Institutions as well as various expansion/location of commercial centres. See the Table -

PROJECTED POPULATION TABLE

Year	1980	1985	1990	1995	2005
Assumed annual growth rate	2.55	2.55	2.55	2.55	2.55
Projected population by end of phase	109,900	124,600	139,300	160,300	206,150

Source: OFFA MASTER PLAN BY DAR AL-HANDASAL CONSULTANT 1974-2005

2.1 POPULATION PROFILE

The 1974 population survey of Offa shows that population based on age and sex of the people, consists of 2 main categories.

i. The dependent population: This class consist of the much younger and the much older groups. They depend mainly on others for survival

ii. The working age population: This class consists of those who are engaged in one way or the other in a gainful pursuit.

However the population profile shows that for independent population, 45.9% are under 15 years, and 3.8% are over 60 years. While for working age population, from 15-19 years, accounts for 50.3% of the population. If however, the working age population is divided into two Age groups of 15-34 years, and 35-39 years, then the younger age group accounts for about 60% of the working age population and the older group account for the other 40% of the working age population.

TABLE: POPULATION PROFILE FOR OFFA 1974

Age Group (years)	Male	Female	% of total population	Category
0 - 15	23.1	22.8	45.9	dependant population
16 - 59	21.3	29.0	50.3	working age
60 - and above	2.0	1.8	3.8	dependent
Total	46.3	53.6	100.0	

Source: OFFA MASTER PLAN

In the working age population category, there are more female than males. This is because naturally the Female population is more than the male population. Another reason is due to the fact that men die younger thus in the market largest population of people participating in trading are female. The other working areas are far less populated as Owode Market.

2.2 ETHNIC AND RELIGIOUS COMPOSITION

The Yorubas, who represent the majority of the town's population, own most of the land and control the ruling of the community. The 1974 survey of Offa shows that 92 percent of the heads of house holds were Yorubas.

The Hausas and the Nupes in Offa, engage mainly in the trading of Agricultural products and Food stuffs, this is due to the fact that majority of them own land at the suburb of Offa, where they farm various agricultural products. They account for 4% of the population.

The Ibos and the Edos are largely employed on the railway, while most of the Igbiras are farm labourers. They account for the remaining 4% of the population.

Source: Offa master plan.

RELIGIOUS COMPOSITION

The population compositions shows that 79 percent of the inhabitants are Muslims 19 percent Christians, while the remaining 2 percent belong to the other religions. However the Offa people generally have various traditional festivals that they celebrates yearly. The most popular of all these festival is the Moremi Festival. However with the emergence of education, and modern religion (i.e Islam and Christianity), all the various traditional festivals have all been neglected.

Source: Offa Master Plan.

2.3 OCCUPATIONAL STRUCTURE

Offa is generally characterized by plain arable land, which is suitable for Agriculture, this however influenced the occupational structure of the people, where by about 70% of the population were engaged in Agriculture. However in the recent past, due to the emergence of specialization, mechanization and urbanization within the town, only 18% of the working population now engaged in Agriculture. 55% of the labour force engaged in the tertiary section (i.e commercial activities such as marketing, trading, banking, insurance etc), 20% engaged in manufacturing while about 7% of the labour force engage in various types of construction and casual works.

This is however, the type of community in which it is difficult to make a satisfactory analysis in such terms, since a large proportion of the population engaged in more than one occupation and women undertake various jobs besides their house duties. The survey carried out shows that the total labour force is divided into two, based on the time of work

(a) Full time workers:

They are usually referred to as the effective labour force, and are found in full time income producing occupations. The full time workers are primarily of two types.

i) The self employed sector - which in the area of study constitute about 60% of the effective labour force. Majority of these people engage in trading.

ii) Wage employed sector - Constitute the remaining 40% of the effective labour force. They are employed in various industries and institutions.

(b) Part-time and casual workers:

They are usually referred to as marginal workers. They form a pool of casual labour for various jobs. They combine both self employed work and wage employed work.

Source: Offa Master Plan.

2.4. EMPLOYMENT STRUCTURE

In the early sixties, it was estimated that about 80% of Offa inhabitants, 18 years and above engaged in some form of income producing activities, Majorly, Agriculture. 85% of this labour force engaged on a full-time basis, while 15% engaged on a casual or part-time basis.

However in the recent past, the high rate of labour force has gone down seriously, due to more awareness and education. More young people tend to seeking knowledge outside the towns. Presently, due to the serious improvement in school attendance, there is high unemployment and this led to increase in self employed sector. Thus leaving people to specialized in various areas.

In the study area, the emergence of Owode Market, led to increase in female participation in self employed sector. About 60% of house wives in the town engaged in trading within and outside

Owode Market. Also, young female school leavers, engaged in trading activities, as well as in clerical and teaching jobs . Nearly about 80% of all the females within the town engage in income producing activities, while the remaining 20% primarily engage in house hold activities.

Source: Offa Master Plan.

CHAPTER 3

OWODE MARKET (EXISTING SITUATION)

This chapter deals with the History of Owode market and other general findings about the market as outlined as follows.

3.1 BRIEF HISTORY OF OWODE MARKET

The emergence of Owode Market in the History of Offa was dated back to the late 1940s with the siting of Nigeria Railway Station in Offa. Then, the present Owode market was used as a camp for the railway workers. Before this time, the traditional market was situated close to the Oba's palace operating as a night market. The articles here were generally farm products and textiles.

The coming of the Railway workers, resulted in sellers of various commodities bringing their goods to the Railway worker's camps where they have a very good price for their various commodities, and this called for the name of the market "OWODE' Meaning money has come. However the Railway Authorities later constructed various quarters close to the station, thus the workers moved out of their camp to the quarters and the huts erected at the camp were converted to various stalls for traders, thus the emergence of OWODE MARKET. The market, later became very popular has

Nigerian Railways passengers having stop over in Offa patronize the market. It was for the convenience of these foreign traders and buyers, that the Offa people started operating the market on periodic basis i.e every 5 days.

3.2 OWODE MARKET SITE

3.2.1 LOCATION

The location of the market is within the new commercial area of the town, thus grouping the market, the Railway Station, some Banks, the Post Office, and other Public/Private Firms together. The location of the market is at the intersection of two major ways; The Ibrahim Taiwo road and the Oloffa way at the town centre .

See Map on the next page.

3.2.2 PLANNING

The market lack proper planning. This in a way led to the uncontrolled development of the market and other various problems affecting the smooth running of the market. These problems include:

(a) **ACCESSIBILITY, PARKING, AND TRAFFIC CONDITION**

The market lack proper parking space thus which owners resulted to street parking and this led to traffic congestion around the market. Accessibility into the market is another major problem there is inability of vehicle to move into and out of the market. Most of the roads leading to the market are characterized by pot-holes and heavy encroachment by squatters and hawkers.

There exists conflicts between pedestrian and vehicular traffic. Movement around the market is highly disorganised and dangerous for pedestrians. However for effective market situation, the problem of pedestrian and vehicular traffic must be resolved.

(b) **DILAPIDATED STRUCTURES**

Timber posts and Zinc construction was adopted for 60% of the stalls within the market. This gave the market a temporary

impression and by nature, the stalls are not durable. The Zinc are already corroded and licking, thus exposing the traders to the hazards of Rain and Sun.

(c) **FIRE HAZARDS**

The materials used in the construction of the stalls can easily aid flame spread. The stalls are also closely packed, this made possible easy spread of fire. Only last year (1990), fire accident was recorded and about 50 shops were affected and goods worth about N500,000 were estimated to have been destroyed. Poor accessibility also aid in fire hazard in the market, as there is no access for fire fighters to operate.

(d) **SQUATTERS/HAWKERS**

The menance of hawkers/squatters in the market is now at an alrming rate. Apart from the fact that they encroach the side walls, they completely atimes take over the facade of some stalls, by parading or evolving temporary stands for their wares. The market situation with the presence of these hawkers and squatters presents an overcrowding situation.

3.3 CATCHMENT AREAS OF THE MARKET

From the research survey carried out and also from Offa master plan, it was found that shoppers come to the market from all parts of Kwara State and some of the surrounding States. The largest number of them come from Offa town, Ilorin town and Oshogbo town. Shoppers from Ibadan, Lagos, Bendel, and other far places visit the market periodically.

3.4 WHY TRADERS & SHOPPERS PREFER THE MARKET

Traders prefer the market because they are sure of customers from various works of life for their Goods, although some essential facilities are lacking, they are guarantee of selling all their goods in a short time.

The wide range of goods and services within the market is what attracts shoppers to the market, goods and services are also cheaper compared to other markets around. Most shoppers from other districts visit the market periodically to cut down transportation cost.

3.5 HIERARCHIES OF MARKETS IN OFFA

The markets found in Offa have been classified using the following criteria.

1. Population the market serves
2. Market area
3. Ranges of Goods sold in the market
4. Users attendance.

The following are identified order of hierarchy of the various markets.

(a)	Owode Market	Regional Market
(b)	Palace Market	Town Market
(c)	Popo Market	District Market
(d)	Alubata Market	District Market

Of all the markets mentioned above, the Owode market is the first in line of hierarchy. This is because the market exhibits a wide range of goods, services and utilities which are also found in other markets at a lower standard.

However all the markets lack proper planning and proper maintenance. They also lack adquate parking spaces, no toilets, no drinking water system and lack of proper refuse disposal units.

3.6. CLASSIFICATION OF GOODS AND SERVICES

The wide range of various goods in Owode market is the main reason why shoppers prefer the market. The goods are also cheaper here compared to other subordinate markets. These various goods are classified as below.

(a) **CONVENIENCE GOODS**

These are goods that are essential for the day to day consumption. These includes perishable goods like Food Stuff, Vegetables, Stationeries , merdicine and toileteries.

(b) **DEMAND GOODS**

These are part time needs that one can have from time to time. These includes Textile materials, Provisions, Electrical goods, Clothing Materials, e.t.c.

(c) **LUXURY GOODS**

Luxury or impulsive goods are the expensive kind of goods sold in the market, those include Electronics, Cosmetics, Expensive House holds equipments e.t.c.

(d) **HEAVY GOODS**

These are goods that usually are needed once in a whole, heavy as the name implies. These include: Furniture, Building Materials and Live stocks.

3.7 GENERAL CIRCULATION WITHIN THE MARKET

The market lack formal planning, thus the circulation within the market is hopeless. The aspect of circulation within the market is very important. Considerations for good circulations are as follows.

- Proper separation of pedestrian and vehicular traffic in the market, preference should be given to pedestrians safety
- Provision should be made for proper planning of the circulation system within the market.
- Provision should be made for adequate parking and stationing spaces of both private and public transit vehicles.
- Neat traffic junction and clear vehicular movement pattern are desirable for effective circulation.

3.8 MARKET ANALYSIS AND FINDINGS

The Owode Market is located within the commercial centre of Offa, because of various problems associated with the market, the commercial areas has become very congested due to lack of proper planning of the market.

The Kwara State Government in 1976 proposed and later constructed another market at the outskirts of the town. Traders were asked to move to the New site but they refused, because the site is away from the commercial centre.

Although the Owode Market lack various facilities, the patronage kept on increasing day in, day out.

The Local Government Authority in 1985 made provisions for four refuse collection points and security fence with night guards, these however reduced the problem of inadequate facilities a little bit.

A total of 1513 stalls, open and lockable stalls exist within the market.

Lock-up stalls were rented out at N30.00 per month while open stalls are rented out at N15.00 per month stalls made of Timber/Zinc construction attracts N10 monthly.

Owode Market is however congested due to the erection of temporary stands all over the market walk ways.

While other coming traders struggle to erect stands illegally on pedestrian walkways, one still finds some stalls locked. Reasons for this is that some traders rent more than one stall due to lack of ware houses and use the other stall for the storage of their goods.

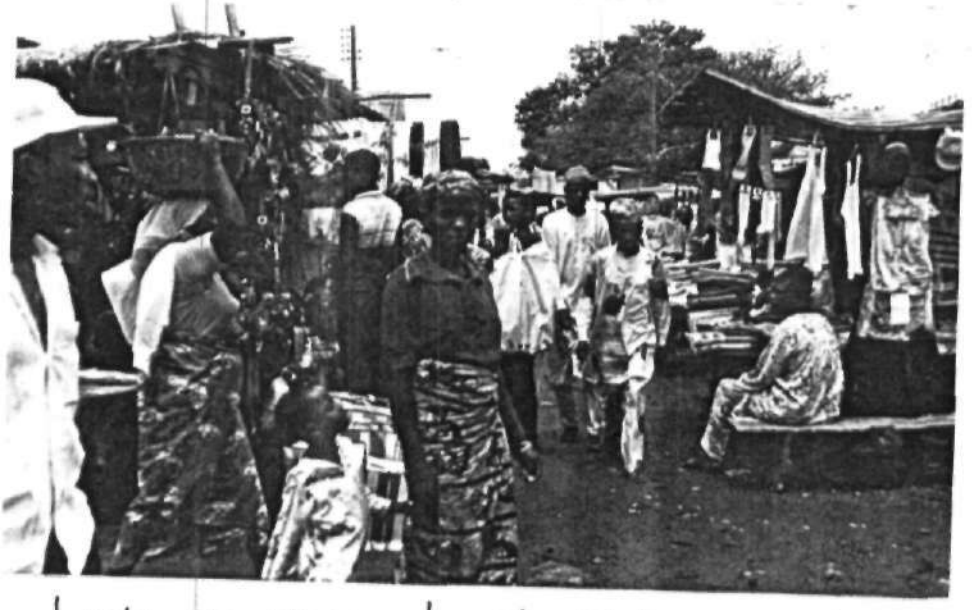
The market however lack proper Management/Maintenance. Adequate provision was not made for Management Office and maintenanced unit/workshop. Thus the situation within the market is pathetic. Every thing is upside down.

Plate 10a



THE EXISTING REFUSE DISPOSAL SYSTEM WITHIN THE MARKET IS VERY BAD, AND UNHYGENIC.

Plate 10b



LACK OF PHYSICAL PLANNING RESULTING IN HAPHAZARD DISPLAY OF WARES.

Plate 11a



THE PROVISION STALLS WITHIN THE MARKET LACK PROPER DISPLAY SPACE.

Plate 11b



THE MARKET LACK PROPER MAINTENANCE, THUS DISPLAY TABLES LITTERS THE CIRCULATION SPACE PROVIDED.

Plate 12a



SPILL OVER OF TRADING UNTO THE PARKING SPACE PROVIDED FOR THE MARKET.

Plate 12b



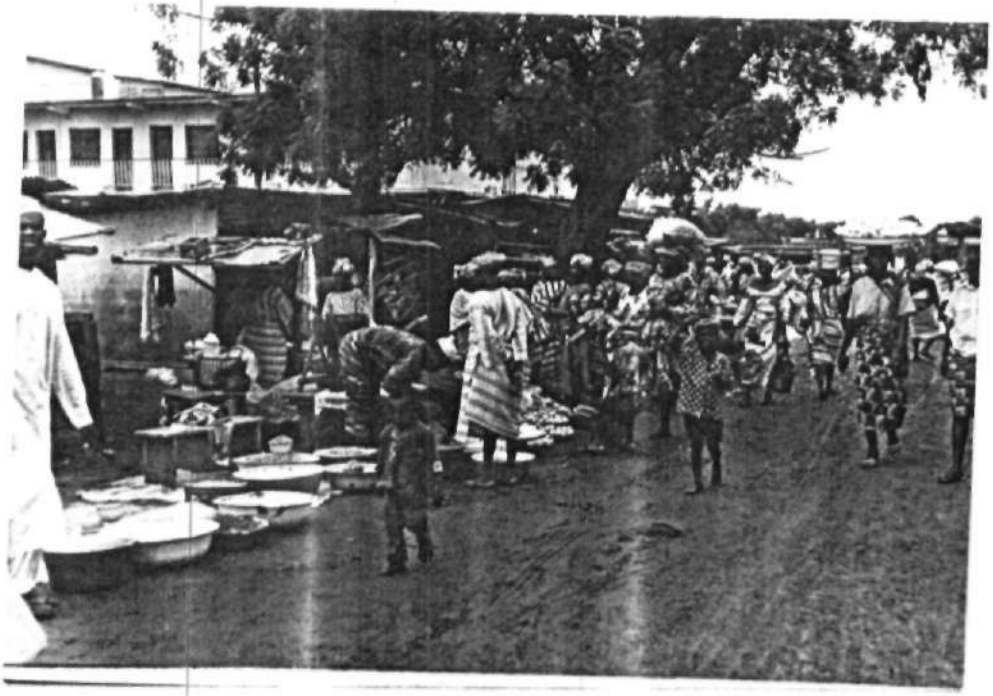
COMMUTTERS & SQUATTER COMPETE FOR SPACE WITHIN OWODE MARKET PARKING LOT.

Plate 13a



EVIDENCE OF CONGESTION AS SQUATTERS AND HAWKERS TOOK OVER THE ACCESS ROAD SIDES

Plate 13b



EVIDENCE OF CONGESTION,— SPILL OVER OF TRADING ALONG ROAD SIDES

Plate 14a



HAPHAZARD DISPLAY OF GOODS WITHIN THE OWODE MARKET PARKING LOT.

Plate 14b



THE EXISTING OWODE MARKET STRUCTURES IN BAD CONDITIONS.

Plate 15a



SQUATTERS TOOK OVER THE FAÇADE OF SURROUNDING BUILDING DUE TO LACK OF STALLS WITHIN OWODE MARKET.

Plate 15b



SHOPPING UNDER TREE SHADES.

Plate 16a



THE MARKET SITUATION AT THE EXTENDED PART OF OWODE MARKET.

Plate 16b



IMPROPER DISPLAY OF FARM PRODUCE ALONG ROAD SIDES OUTSIDE OWODE MARKET.

Plate 17a.



ILLEGAL ERRECTION OF TEMPORARY STALLS WITHIN THE PARKING SPACE PROVIDED FOR THE MARKET.

Plate 17b



THE PRESENCE OF HAWKERS & SQUATTERS IS CREATING A LOT OF PROBLEM WITHIN THE MARKET.

Plate 18a



UNHYGENIC DISPLAY OF VARIOUS FOOD STUFFS, DUE TO LACK OF PROPER STALLS TO ACTUALLY CATER FOR THE TRADERS. THIS CAN HOWEVER LEAD TO CONTAMINATION OF VARIOUS FOOD

Plate 18b



THE PHOTOGRAPH SHOWS LACK OF ADEQUATE DISPLAY SPACES AS NOTICED ALL OVER THE MARKET; RESULTING IN CONGESTION OF THE CIRCULATION SPACE

Drainage and toilet facilities were not adequately provided for. The refuse disposal bin and system are not adequate. A proper planning and redevelopment of the market site would however go a long way in solving the various problems associated with the market.

CHAPTER 4 EXISTING FACILITIES/SERVICES WITHIN THE MARKET

The daily duration of trading activities within the Owode Market is about 10 hours. However there is virtually no provision for any facilities to cater for the daily essential needs of the users.

This chapter discusses the existing service/facilities in the market.

4.1. WATER SUPPLY

The market has no water supply system at present. Basically three sources of water supply are used in Offa.

i. Treated piped borne water

ii. Bore-hole water, and

ii. Shallow wells.

However, with all the various types of water supply system present in Offa, no adequate provision was made for any within the market. There are neither stand pipe nor wells. Traders are seen bringing water to the market from their homes. There are however, some people selling water to shoppers and traders within and outside the market.

The master plan however proposed to extend the public water supply in Offa, and the distribution to all the Oyun designated settlements. Due consideration has been given to the population growth and the increased per capital water consumption expected from improved living standards. This would however be extended to Owode market. Thus reservoir/water towers would be incorporated in the redevelopment of the market for storage and distribution of water.

4.2. POWER SUPPLY

About 40% of the stores within the market are made of permanent structures and all these, are connected to the main power line running parallel to the market. However all the temporary stalls are not connected to the supply. The recent fire out break within the market was traced to the electrified stalls. This could be controlled through the various methods outlined in PART 1 chapter 4.

The Offa master plan however proposed 2 part tariffs and lamps of high efficacy for the street lighting, this is to be extended to all parts of the town as well as Owode market. This would serve as security hights for the market. In case of power failure, Owode market could be provided with a stand-by generator for effective security.

The national telephone system has been extended to Offa and this should be extended to the market to make transaction and communication easier.

4.3. DRAINAGE AND REFUSE DISPOSAL

There is virtually no particular drainage pattern within the market. Waste water stagnates the market streets. The refuse disposal system is nothing to write home about. Garbage is either disposed of outside the market or else it is dumped with in the market, around the stalls, or in the nearly bush.

As the market developed the capacity of the ground to absorb rainwater reduce and the run off after a storm increased, causing more water logging.

However, the market topography is good for diverting drainage. By providing an adequate drainage system, the hazards of occasional flooding within the town could be avoided.

The increase in population and economic activity of the market has increased the amount of refuse, thus the market is in an unsanitary state or condition.

4.4. SEWAGE DISPOSAL/SANITARY FACILITIES

At present, there is no public sewage disposal system within the market. There are two poorly maintained toilets within the market. Thus traders prefer going to a nearby bush or to private buildings around the market. The conditions of private and shared toilets are unhygienic. This condition together wish the poor drainage facilities resulted in the prevalence of water and insect-borne diseases.

However with the increase in the population of the market, the present unhygienic conditions will deteriorate further and the incidence of disease will greatly increase.

4.5. FIRE SERVICE, POSTAL & BANKING FACILITIES

There is no provision for fire service station within and outside the market. There is no fearible access for fire fighting apparatus. In the recent past this contributed to the spread of fire and resulted into thousands of naira worth of goods being destroyed. A stand fire station should be provided with all facilities for fire fighting. The market should be plan in such a way that it would be very easy to control fire spread.

The postal and banking facilities are all outside the market. They are not easily accessible from the market area. A well planned market incorporating these facilities is highly necessary.

4.5 PARKING FACILITIES

The market parking spaces is not well maintained. The parking apart from not being adequate, has been converted into

motor park for commuters. Squatters and Hawkers also have their stand within the parking space provided.

The parking for trunks and whole sale delivery area is not provided. Thus the same motor park is being used by whole sale trader for the loading and off loading of their goods. There is however traffic congestion/conflict.

- No proper separation between pedestrians and vehicular traffic.
- No proper separation between light and heavy traffic
- Parking space not even enough for private vehicles.

4.7 CANTEENS/RESTAURANTS

The canteens/cooked food areas are scattered all over the market. The stalls are not well arranged. Looking of food is done opening in the market. Condition of service is not commendable.

Some restaurants are located outside the market. They are not easily accessible although the condition of service is better and hygienic. The canteens are not properly orientated. Smell of food are carried all over the market by the prevailing wind.

CHAPTER 5:

CASE STUDIES

This chapter closely examined part of the predesign investigation which deals with case study of some exacted projects. with which to establishing Architectural merits and demerits which would eventually be used as appropriate in the design proposal.

The set of case studies considered, provided necessary exposition and relevant data on

(a) Sokoto Central Market, Sokoto

(b) Baboko Market, Ilorin

(c) Jos Main Market, Jos

(d) Makurdi Modern Market, Makurdi

5.1. THE SOKOTO CENTRAL MARKET

The Sokoto Central Market is the Main Market Centre for commercial activities in Sokoto. The idea and planning of the market started early 80's. The market is one of the biggest contemporary markets in Nigeria with total site area of 21 hactares. The market is equiped to some extend with modern facilities.

The general facilities provided in the market include:- Administrative block, with Management Offices, Clinic, Police Post, and Banking Facility.

Mechandise Blocks:- This consists of various stalls and shops of different sizes. 75% of the stalls are lockable while 25% are open

stalls. However various goods such as textiles, foot wares, cosmetics e.t.c to food product: Fruits, Vegetable e.t.c are sold in the market.

The market has a total of 6000 stalls and shops for the various goods.

General services available in the market include, public toilets, refuse collection area, drainage gutter, parking spaces, canteens, water supply and delivery areas for trucks.

5.12. PLANNING

Simple rectangular blocks are arranged in a scattered and haphazard Manner with no Homogeneity. The space around the blocks are used as pedestrian shopping malls. The vehicular circulation is around the periphery of the market. Thus total separation from pedestrian precinct. The layout is bounded by roads.

5.1.3 STRUCTURE

- Simple structure
- Multi-Bay Barrel roof adopted. This is good for horizontal spread of the market.
- Steel trusses and aluminium roofing also used in the construction of some stalls.

The walls are of cement/sand blocks, while the floors are made of concrete.

5.14 GENERAL APPRAISAL

MERITS:

i. The maintenance of the market is easy, because the structures are simply.

ii. There is total separation of vehicular and pedestrian traffic.

iii. The market is easily accessible from any part of Sokoto.

iv. The drainage gutters are well planned round the market.

v. There is good and adequate water supply system.

vi. There is adequate and decentralized parking spaces around the market for easy accessibility to any part of the market.

DEMERITS:

i. Mechandise blocks are not linked together thus affects the movements of shoppers from one block to another block on rainy and sunny days.

ii. Drainage gutters are exposed and can easily be blocked

iii. There is virtually no provision for show cases and display spaces. Thus traders display their various goods along the circulation space provided

iv. There is no adequate provision for ware houses for the storage of bulky goods.

5.15. MAINTENANCE OF THE MARKET

Sokoto Market lack proper maintenance due to inefficient Management of the market. The facilities provided are however deteriorating. The market also lack effect social hygienic control. In the sense that various items are scattered all over the market. Gutters are open, and which is not ideal. Cooked food, meat and fish are not properly taken care of, due to the fact that there is no health/social control officer to see to these. This resulted in

i. Haphazard display of goods and display tables along the circulation spaces provided

ii. Dumping of refuse inside the uncovered drainage gutters.

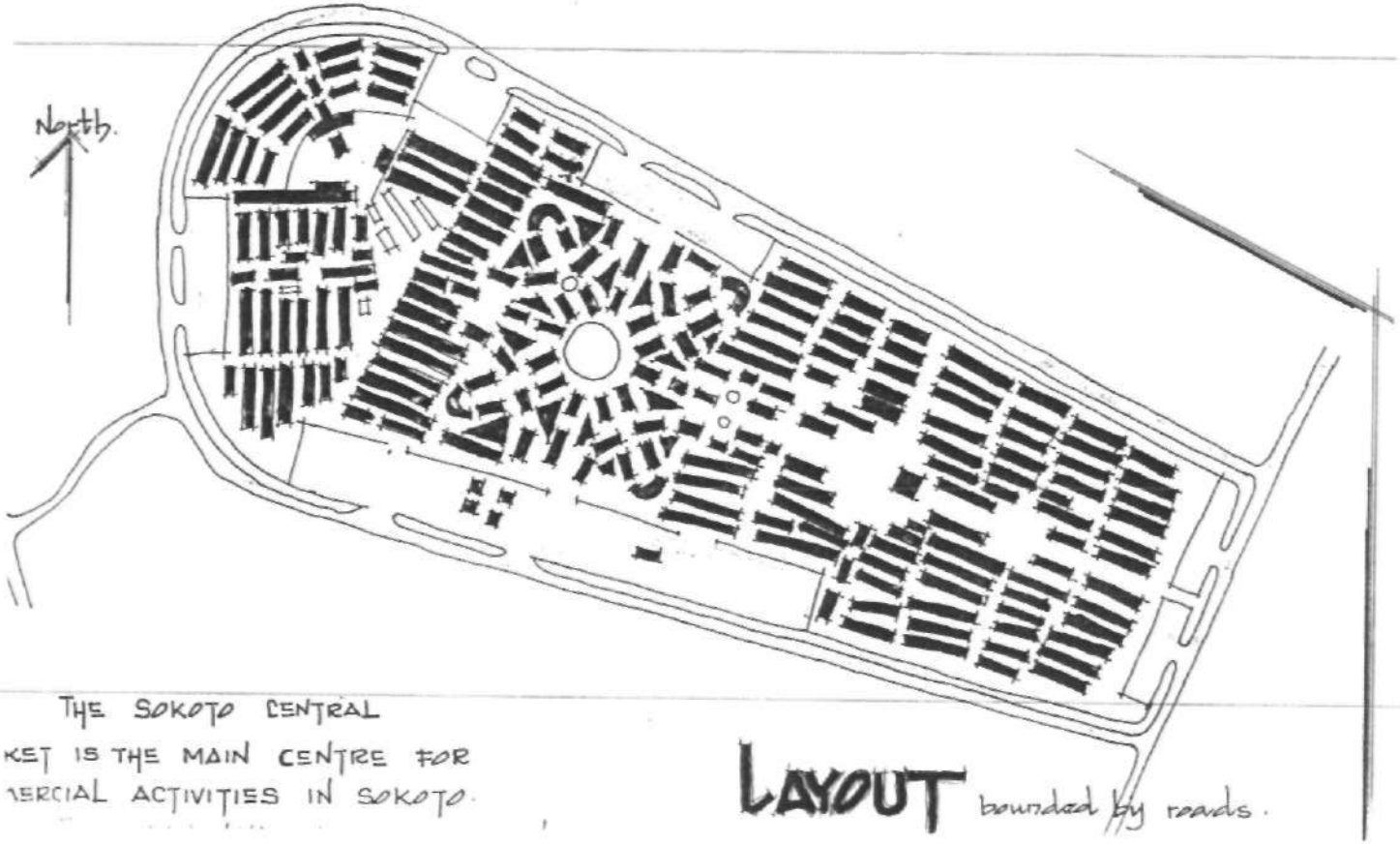
iii. The erection of temporary stalls and

iv. The general squalor nature of the market.

5.16. SECURITY AT THE MARKET

The security at the market is based on the fence built around the market such that the market could be lock after every day transaction. Apart from the fence, there are night guards, security light around the whole market. Again for most of the stalls they have security locks such that the individuals lock-up stalls after every day transaction.

SOKOTO CENTRAL MARKET



THE SOKOTO CENTRAL
KET IS THE MAIN CENTRE FOR
MERCIAL ACTIVITIES IN SOKOTO.

LAYOUT bounded by roads.



ILLEGAL ERECTION OF TEMPORARY STALLS IS COMMON WITHIN SOKOTO MARKET DUE TO LACK OF PROPER MANAGEMENT.

Plate 19b



HAPHAZARD DISPLAY OF VARIOUS GOODS BY SQUATTERS ALONG WALKWAYS.

Plate 20a



PARKING OF MOTOR CYCLE OUTSIDE SOKOTO MARKET MAIN GATE.

Plate 20b



TRADING OF FRUITS & PERISHABLE GOODS OUTSIDE SOKOTO MARKET FENCE.

Plate 21a



THE PHOTOGRAPH SHOWS THE SEMI-COVERED GUTTER WITHIN SOKOTO MARKET.

Plate 21b



ONE OF THE ENTRANCE GATE INTO THE SOKOTO MARKET.

Plate 22a



LACK OF PROPER MANAGEMENT RESULTING ILLEGAL ERECTION OF TEMPORARY SHED ALL OVER SOKOTO MARKET.

Plate 22b



THE PHOTOGRAPH SHOWS THE STRUCTURE OF THE TEMPORARY SHEDS COMMON WITHIN SOKOTO CENTRAL MARKET.

5.20 BABOKO MARKET

ILORIN

The market is a new market centre for Ilorin. The idea and plan of the market started in 1976. As a result of the various problems emanating from the old traditional palace market. Such as congestion and traffic holdup within the urban centre.

It was designed by Architects from the Ministry of Works, Ilorin

CLIENT: Kwara State Government

CONTRACTOR:

PROJECT SUPERVISOR: Chief Architect Kwara State Ministry of Works.

The general facilities provided include:

- Market Management Offices
- Cottage Clinic
- Bank Branch (Union Bank)
- Police Post
- Water Tanks
- 4 large Public Toilets
- Post Office
- Refuse Collection Depots
- Canteens
- Taxi & Private Car Parks
- Drainage Gutters
- Hand cart Depot
- Lorry Park.

Mechandise Blocks.

These consist of various stalls and shops of different sizes

60% of the stalls are lockable while 40% of the stalls are open

The stalls are for various goods ranging from Manufactured goods i.e cosmetics, foot wares, textiles, e.t.c to food products such a sgroceries, fruits, meat, vegetables e.t.c.

The market has a total of 1680 stalls.

5.21. **PLANNING**

Simple rectangular blocks are arranged in a uniform linear pattern. The spaces in between the blocks are interconnected and used as pedestrian ways, for easy movement of shoppers around the market. See Layout.

5.22. **STRUCTURE**

Simple construction composed of :

- Aluminium roofing sheets and timber rafters
- Cement/sand block work
- Timber doors and door frames
- Concrete flooring system and gutters.

Simple methods of construction was adopted

5.23 **FORM**

Simple form, composed of pitch roofs falling freely on either side of the block.

The pitch roof is constructed of timber rafter and purlins, See details.

5.24. **GENERAL APPRAISAL**

MERITS:

- The structures are simple and well laid out
- Accessibility is very easy from any part of the town
- Fairly planned with good circulation
- Articulate drainage
- Adequate refuse disposal system
- Adequate toilets and other vital facilities.
- Sound security by fence and night guards.

DEMERITS

- Uncovered drainage gutters
- Shoppers are exposed to the hazards of rain and sun
- No adequate provision for show cases or display space, thus traders reduced the circulation space with their various goods
- Insufficient parking spaces
- Traffic conflicts within the market
- No maintenance unit
- No provision for fire protection fighting services
- No provision for ware houses.

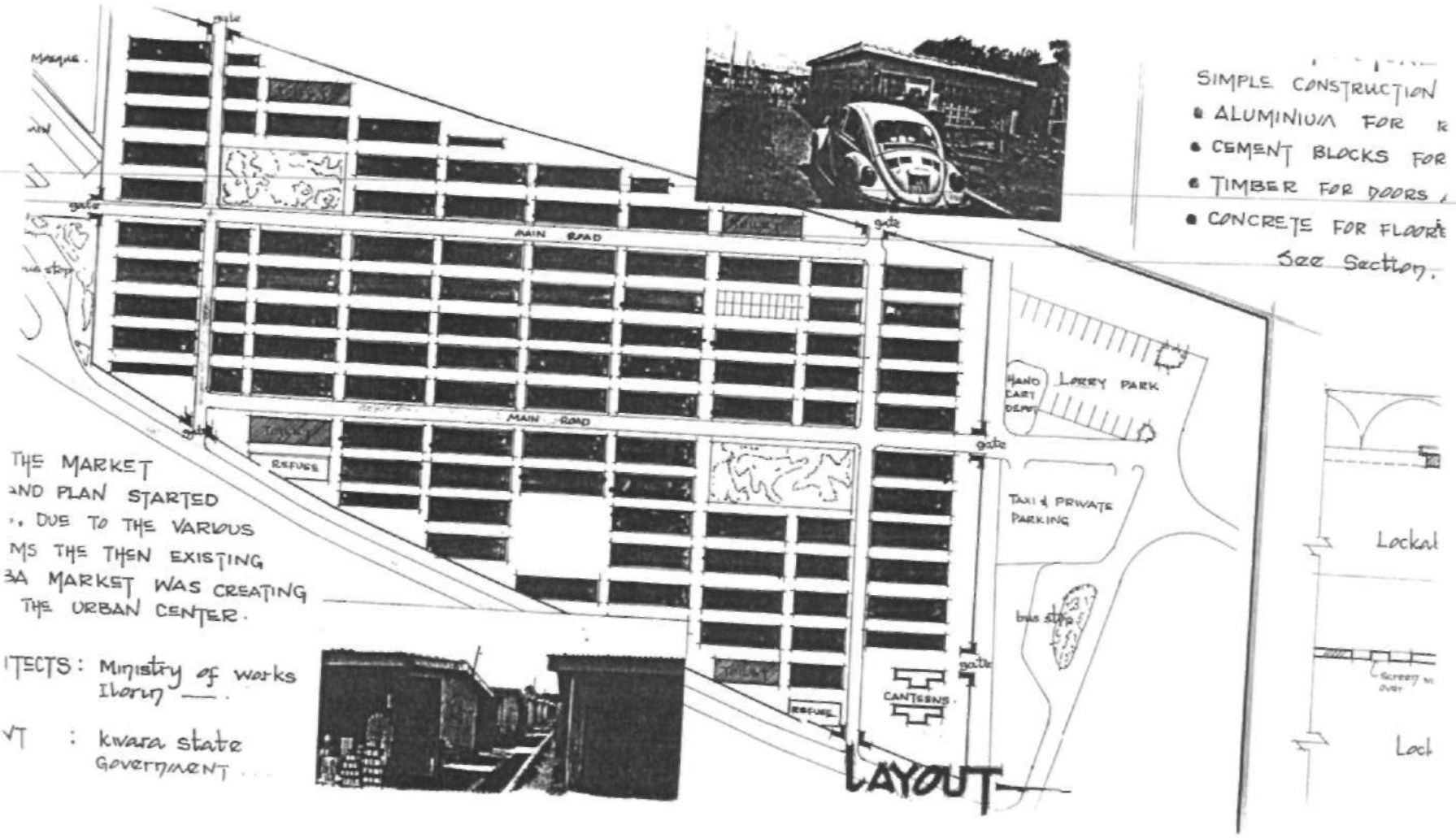
5.25. **MAINTENANCE**

The market lack proper maintenance due to lack of efficient Management and Maintenance section to actually take proper care of the market facilities. **The general condition of the market is bad.**

- The drainage gutters are blocked
- The toilets are no more working and smelling badly
- Refuse are dumped all over the market
- Display tablets litters the circulation spaces
- The water supply systems are no longer functioning, because the tanks are in bad condition and can no longer store water.
- Erection of temporary stalls is however common within the market.

5.26. **SECURITY AT THE MARKET**

The security at the market is based on the fence built round the market and night guards that guides the market every hight 60% of the stalls are however lockable stalls for individual security.



SIMPLE CONSTRUCTION

- ALUMINIUM FOR R
- CEMENT BLOCKS FOR
- TIMBER FOR DOORS,
- CONCRETE FOR FLOORS

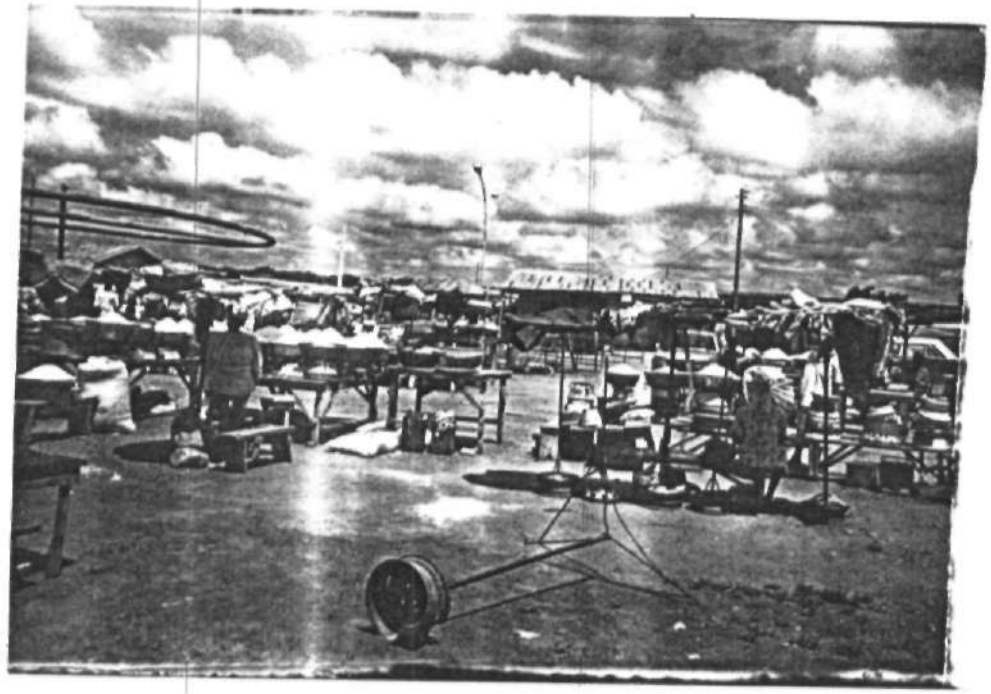
See Section.

THE MARKET
AND PLAN STARTED
., DUE TO THE VARIOUS
MS THE THEN EXISTING
BA MARKET WAS CREATING
THE URBAN CENTER.

ITECTS : Ministry of works
Ilorin.

VT : kwara state
Government

Plate 23a



THE PHOTOGRAPH SHOWS ILLEGAL ERECTION OF TEMPORARY SHED ALL OVER BABOKO MARKET DUE TO LACK OF PROPER MANAGEMENT.

Plate 23b



SQUATTERS & HAWKERS OF RETAIL GOODS TOOK OVER THE PARKING SPACE PROVIDED WITHIN THE MARKET.

Plate 24a



VIEW OF THE BABOKO MARKET STALLS.

Plate 24b



VIEW OF THE MAIN ROAD THAT RUNS THROUGH BABOKO MARKET.

Plate 25a

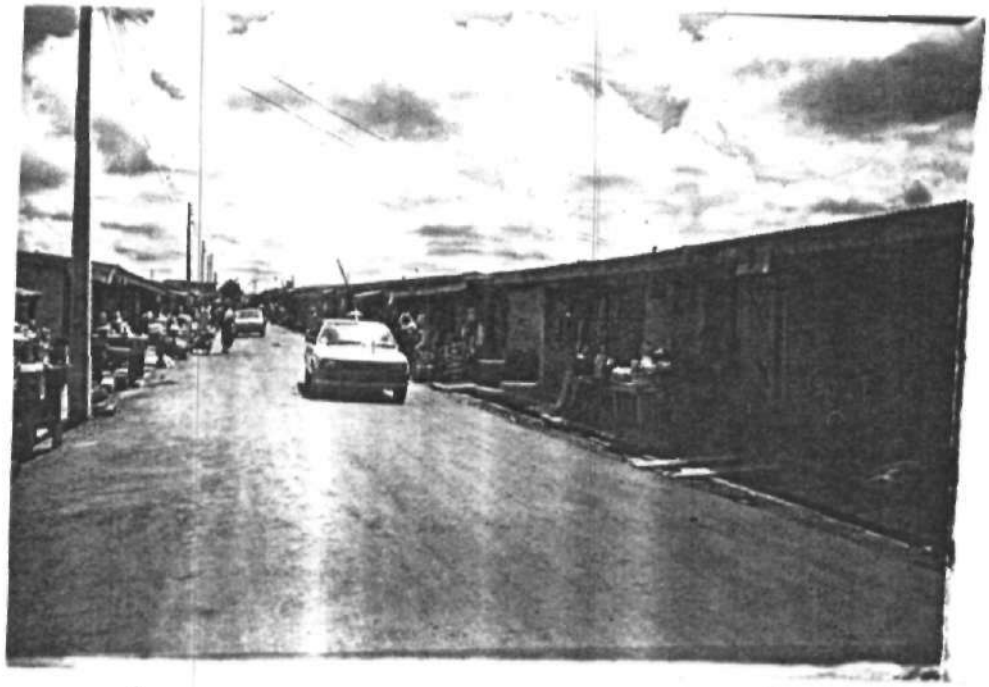
Plate 25a Plate 25a



SQUATTER & HAWKERS TOOK OVER ACCESS ROAD SIDES INTO BOBOKO MARKET, ILORIN.

Plate 25b

Plate 25b Plate 25b



DISPLAY OF VARIOUS GOODS ALONG ROAD SIDE DUE TO LACK OF SOCIAL CONTROL WITHIN THE MARKET.

5.3 THE JOS MAIN MARKET

The market is the only main market in Jos. It isa solid and vast structure, arranged on two floors and extending over 200 metres on the longer axis.

The plan and idea of building the market started in 1975, as a result of the former market being engulfed by fire in 1973.

The various groups that were involved in the idea and construction of the market are:

CLIENT: Jos Metropolitan Development Board

ARCHITECTS: Odeleye International Associates
Architects & Planning Consultants Lagos.

CONTRACTORS: Bepco Nigeria
(Benue-Plateau Construction)

PROJECT SUPERVISOR: Mr Sunil Patel (India)

The market was constructed and Business transactions started in it in November 1985.

5.31. GENERAL FACILITIES PROVIDED

- Administrative/Management Offices
- Fire service station
- Electrical power generators (2)
- Market clinic
- Restaurant/canteens
- Water Tower
- Police Post
- Toilets facilities
- Parking spaces for 600 cars and 100 trucks
- Refuse collection depot
- Banking facilities.

MECHADISE SPACE

These are provided in various sizes including flat forms, open lay stalls, small stalls, medium shops and large shops. The market is

however divided into various zones, in hall forms. Each hall is named after each local government in Plateau State. The various halls specialised in specific goods such as:

HALL	MECHANDISE GOODS
Akwanga	Textile/Clothings
Barikin - Ladi	Fancy Goods
Kanam	Foot wares
Lafia	Stationary
Jos	Farm Products
Keffi	Food Items
Shendam	Provisions
Langtang	Provisions
Awe	Provisions
Wase	Not occupied
Mangu	Not occupied.

- Colour Scheme
- Capacity of the market?
- Landscope
- Planning/Concept
- Structing

5.32. **GENERAL APPRAISAL**

MERITS:

- The structure is very bold and impressive
- Good toilet facilities provided
- Adequate refuse disposal system
- Good fire protection offered by the materials used.
- Proper separation of pedestrian and vehicular movements
- Over head food bridge for pedestrian safety
- Security provided by fence and night guards

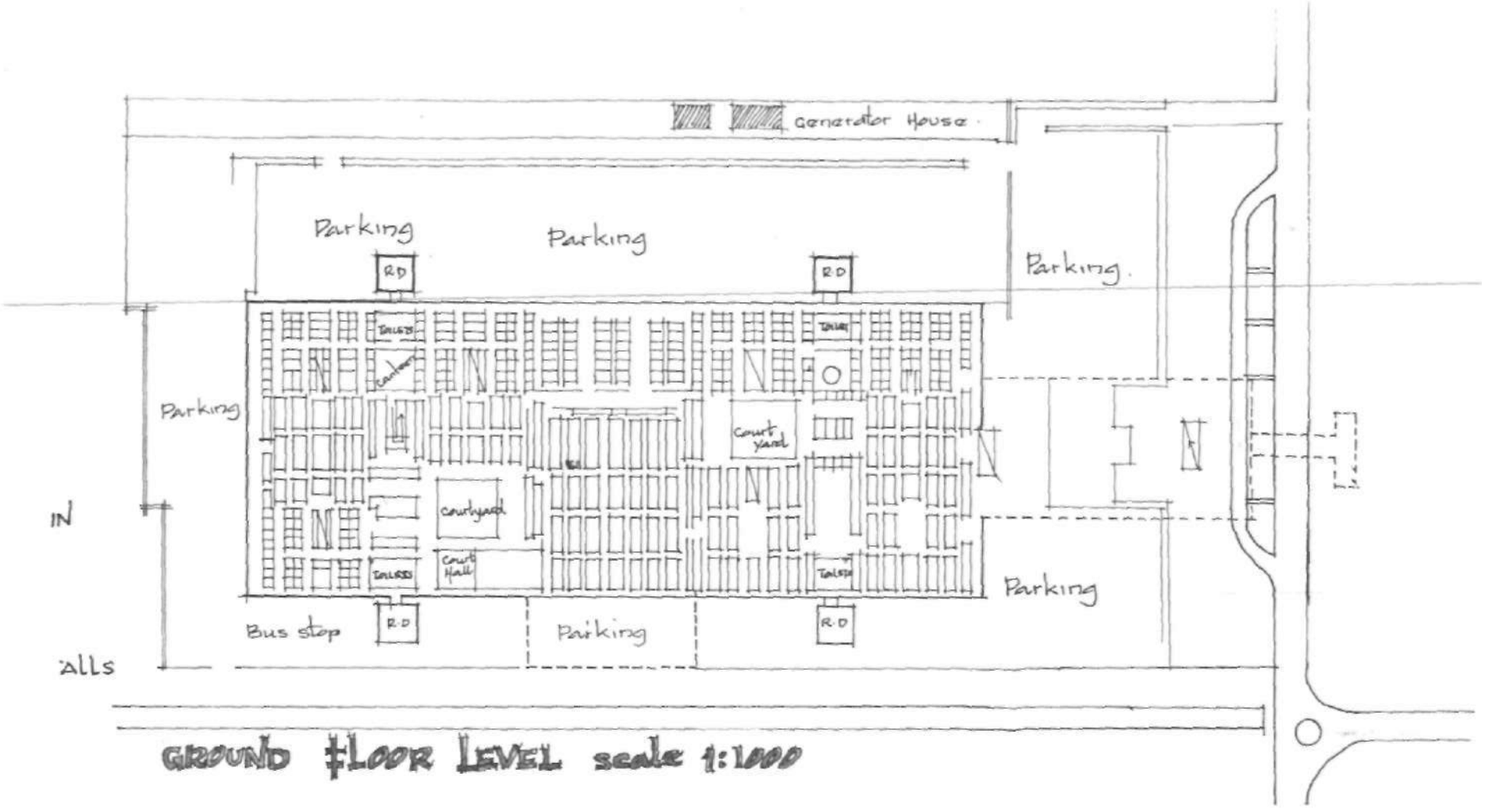
DEMERITS:

- Poor lighting due to deep planning
- There is no provision for storage facilities
- The shopping malls are too narrow
- Fire control could be difficult as the crowd of stalls inhibits fire fighting.
- Parking space provided are not well designed. They were arranged haphazardly round the structures.

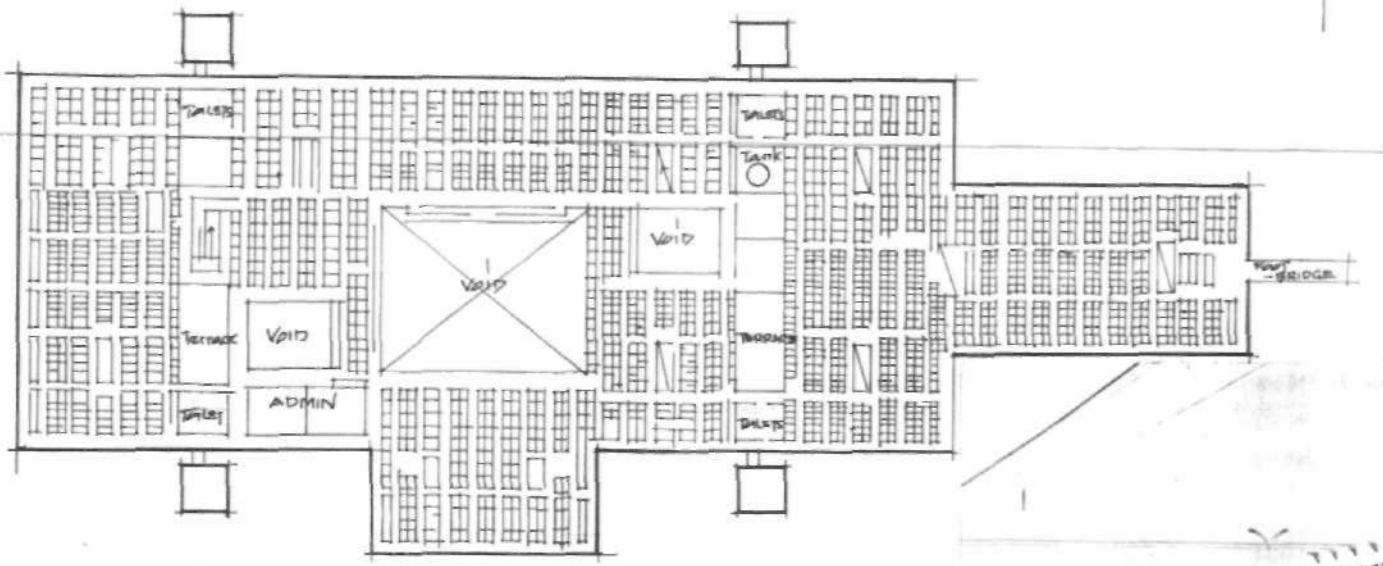
5.33. MAINTENANCE

Although the general environment is neat, some areas are still not well maintained.

- Display tables are scattered all over the courtyard.
- Squatters arranged their stands on walkways, restricting pedestrian movement.



GROUND FLOOR LEVEL scale 1:1000



FIRST FLOOR LEVEL scale 1:1000

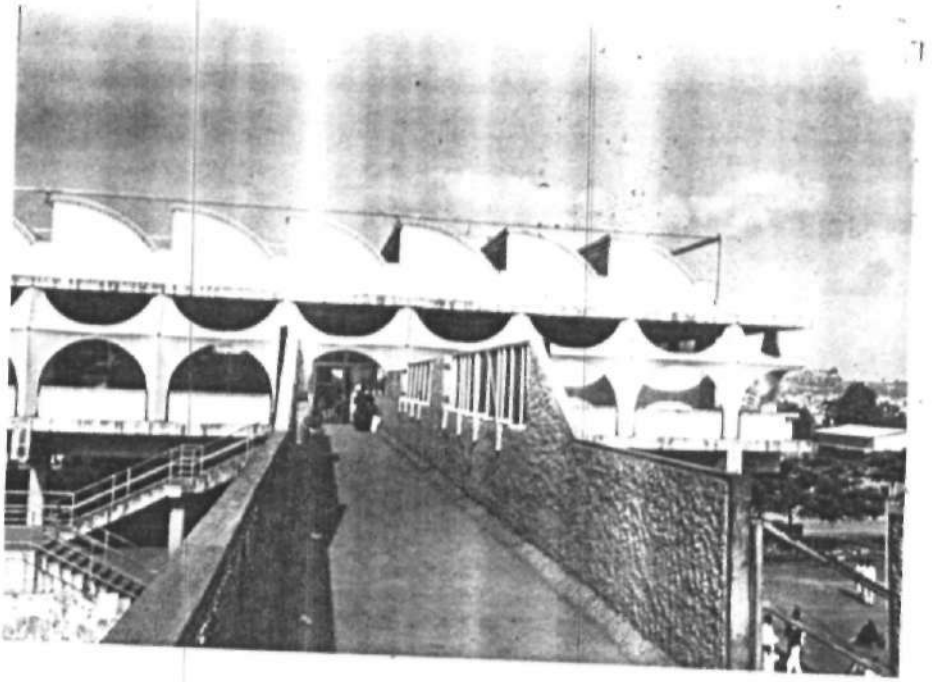


Plate 26a



PERSPECTIVE VIEW OF THE JOS MAIN MARKET SHOWING THE WATER TOWER & THE REFUSE COLLECTION POINTS.

Plate 26a



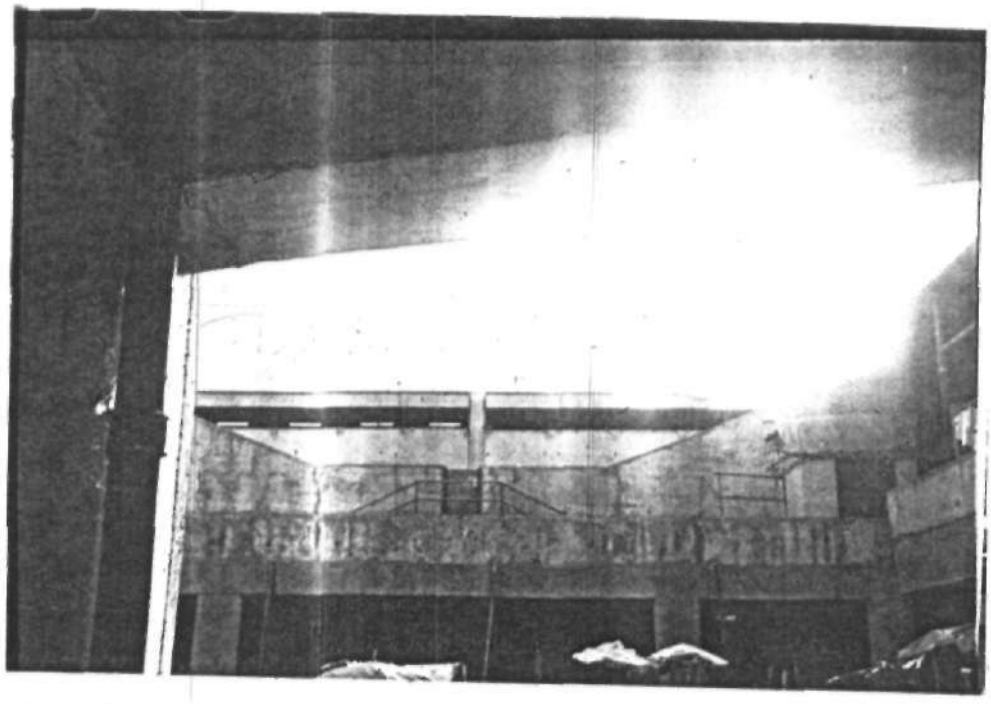
VIEW OF THE MARKET FROM THE PEDESTRIAN BRIDGE SHOWING THE VARIOUS CONSTRUCTION ELEMENT USED.

Plate 27a



ONE OF THE MANY CANTEENS PROVIDED FOR THE SHOPPERS AS WELL AS TRADERS WITHIN THE MARKET.

Plate 27b



VIEW FROM ONE OF THE COURT YARDS SHOWING THE ROOF STRUCTURE.

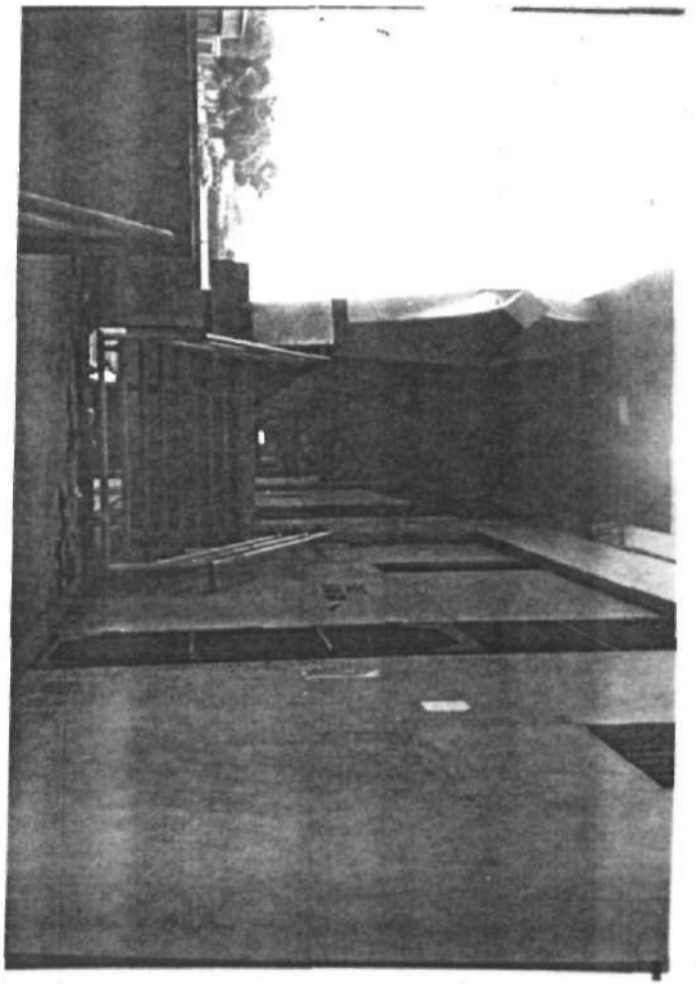
Plate 28a



ONE OF THE COURT YARDS PROVIDED. HERE, VARIOUS FRUITS & PERISHABLE FOODS ARE SOLD..

THE PHOTOGRAPH ALL SHOWS THE POOR LIGHTING OF THE SPACES DUE TO DEEP PLANNING.

Plate 28b



ONE OF THE ENTRANCES INTO JOS MAIN MARKET. THE PHOTOGRAPH ALSO SHOWS THE VARIOUS SEMI COVERED DRAINAGE GUTTER CONNECTED TOGETHER.

5.40. THE MAKURDI MODERN MARKER

The market is one of the latest contemporary markets in Nigeria. The plan and idea to build the market was conceived in 1982. The design and construction was carried out by Cementation Interactions in conjunction with seifart International Architects (Architects, Planners, Project Mangers)

5.41. GENERAL FACILITIES PROVIDED

This is grouped according to

(a) Administrative Function

(b) Mechandise Block &

(c) General Services.

Administrative Block - This consists of

- Management Offices
- Cottage Hospital
- Bank
- Travel Agencies
- Community Hall
- Police Station
- Professional Offices.

MECHANDISE BLOCKS

This consists of stalls and shops of different sizes in single bays. Double bays and 4 bays. Stalls/Shops are for various goods ranging from food products to manufactured goods. There are a total of 48 luxury shops, 24 ware houses and about 2,400 shops/stalls.

GENERAL SERVICES

This include:

- Fire Station
- Abattoir

- Drainage Gutters
- Water Tank
- Maintenance Workshop
- Refuse Collection Areas
- Incinerators

5.42. PLANNING

Simple clusters of rectangular blocks are are massed together with open courtyard spaces to break monotony. The spaces in between are used as pedestrian ways, they are interconnected to ease Movement around the whole market. The vehicular circulation is planned around the periphery of the market. Thus total separation of market precinct and vehicular circulation.

5.43. STRUCTURES

The whole structure is simple constructed with the use of Steel, Aluminium, Concrete and glass. The steel is employed for structural columns portal frames and stair cases. Aluminium used for roofing and wall cladding. The walls are composed of standard hard wood panels sandwiched in thin Aluminium sheets.

The structure composed of pitch roofs, falling freely on either sides. The pitch is achieved with the use of steel portal frame spaced at 6.0 metres centre to centre and covered by long span aluminium roofing sheets.

5.44. GENERAL APPRAISAL

MERITS:

- The pedestrian precinct is totally free of vehicular circulation
- Good separation of light and heavy traffic
- There is a very efficient and functional fire fighting unit with all fire fighting facilities
- Good natural lighting of the mall by the use of transparent roofing sheets.

- Fairly well planned with good and adequate parking space.
- The environment is very neat and liveable for retail business.
- The market is not yet over populated .

DEMERITS

- Uncovered/drainage gutters
- Shoppers are exposed to the hazards of rain and sun because the blocks are not linked together.
- The doors used, are wire gauze with steel frame. This poses a security risk to the shops.
- Some malls are narrow, and the shops are compact, this affects ventilation and congestion of circulation space can easily result.
- No provision for show case or display areas. Goods are thus spread haphazardly out-side the stalls and this reduces the circulation space.

5.45. **MAINTENANCE**

The market has a very good maintenance units. Thus the general environment is very neat. However effective social control by Management is very necessary to maintain orderliness in the market, this is due to the fact that traders in some areas of the market result to haphazard display of display table. This affects harmony and visual coherence.

PART THREE

CHAPTER 1:

DESIGN PROPOSAL

The predesign Investigation chapter i.e chapter 5, in PART TWO of this write up, examined and analysed various markets in Nigeria; However, this chapter presents the design proposals for the redevelopment of Owode market based on the predesign investigations

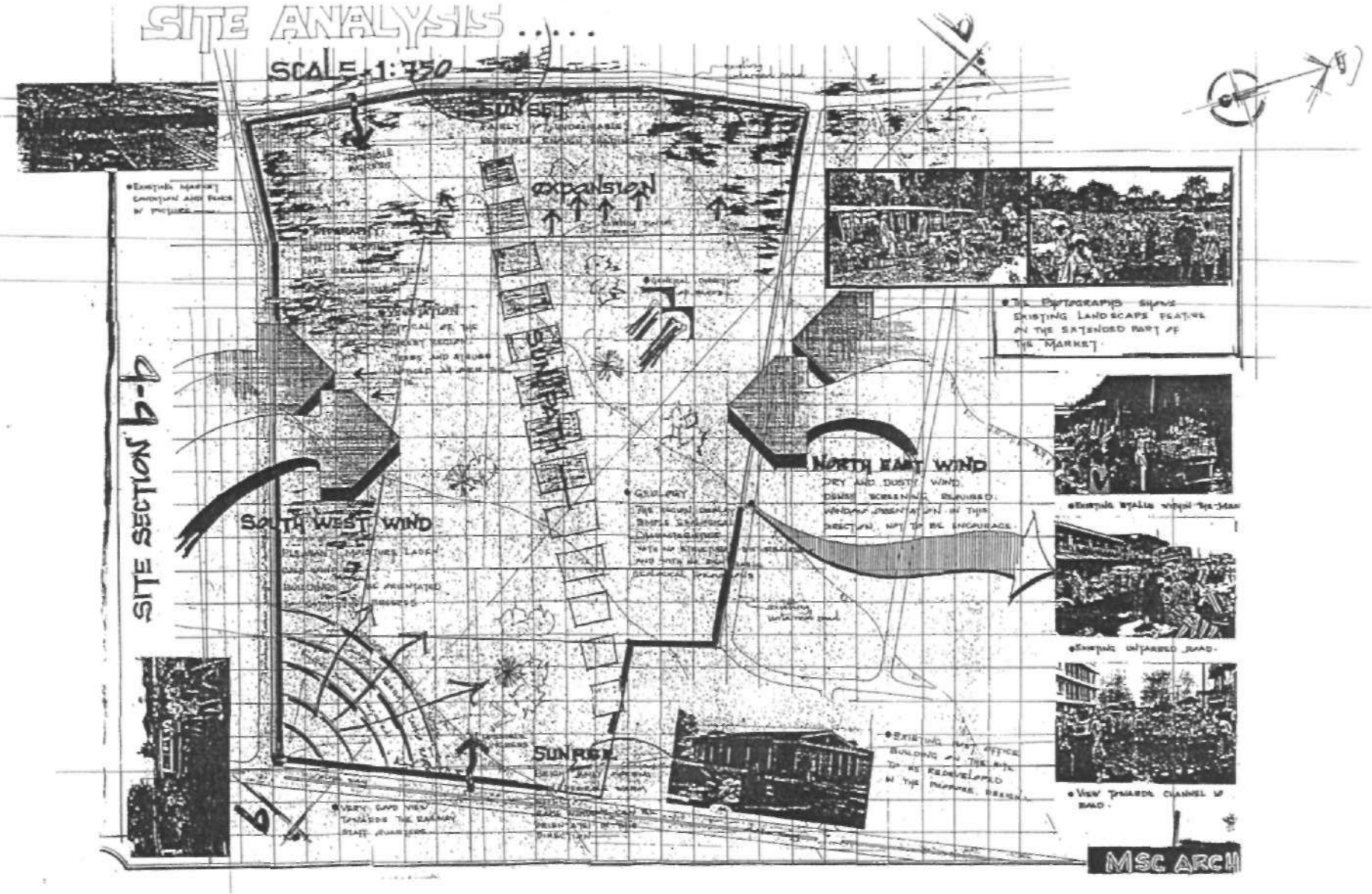
1.10 The Design Site

The market site, is the existing Owode market site at the intersection of the Olofa way and Ibrahim Taiwo way at the commercial town centre. The reasons for the redevelopment of this market site is based on the following factors:

i. **Location:** The location of Owode marker is within the commercial area of Offa, thus the centrality of the site relative to growing commercial centre. Other proposed and planned site are away from the commercial zone of the town, thus not easily accessible.

ii. Lack of immediate funds for the construction of a New Market entirely.

iii. Communual Effort: The idea of getting the users involved in the whole process of redeveloping the existing market, so as to make maintenance of the market a very easy task.


SITE ANALYSIS
SCALE 1:750
SUN SET
EXPANSION
NORTH EAST WIND
SOUTH WEST WIND
SUNRISE
SITE SECTION b-b
MSC ARCH

iv. **Accessibility:** The site is easily accessible from all prints of the town.

1.1.1 GENERAL ANALYSIS OF THE SITE

Access:- The site is bounded on all the sides by two major roads (the Ibrahim Taiwo road and the Oloffa way) and the untarred market road. Access into the market could be tapped from the market road as well as from Ibrahim Taiwo Road. The Oloffa way is always a very busy road.

Topography:- The site is generally sloping gently towards the Mu'u stream on the Northern part of the site. The slope ranges from 3-5 degree.

Vegetation:- Although most of the vegetation on the site have been tampered with, vegetation typical of the forest region still exists on some part of the site.

Geology:- The site display simple geological characteristics with no structural disturbances and with no identifiable geological formations.

Land use around the site - The site is surrounded by already occupied land on all the sides excepts on the western part of the site where some open land belonging to some families could be noticed?

1.1.2 SITE ANALYSIS DIAGRAM (FIG 1.0)

The site analysis diagram shows the various site characteristics, such as: direction of slope, points of ingress and exgress, relationship to the surrounding roads, wind direction, sunrise and sunset, expansion e.t.c. See figure 1.0

1.2.0 FORMULATION OF DESIGN PROGRAMME

The redevelopment scheme proposal shall incorporate all the basic commercial facilities to serve the growing central commercial area of Offa, as a whole, and other catchment areas of the market. The programme is worked out as follows.

1.2.1 GENERAL GOODS AND SERVICES

From the researcher's studies and general observation of existing Nigeria markets, various types of goods were identified, necessary for Owode market and the growing population. These were classified as follows.

Light/Dry Goods

i. General Provision

ii. Textile materials, clothing and fancy wares

iii. Foot wares, leather works, baggages etc

iv. Stationery and plastic products

v. Cosmetics and drugs

vi. Electronics/Electrical Appliances and components

vii. Light Antomobile products/spare parts

viii. House hold equipments.

Light/Wet Goods

General Food products

i. Vegetables

ii. Meat and Fish

iii. Cooked food

iv. Grains

v. Oils e.t.c.

Heavy Goods

- Farm products:- grains, fertilizer e.t.c
- Whole sales of some light Goods
- Building components
- Furniture

However facilities for the various goods outlined above are proposed as follows:-

(a) Traditional Market - proposed for Hawkers of various goods within the market.

(b) General retail stalls - these are proposed for various light goods.

(c) Whole sale stalls - proposed for light heavy goods

(d) Ware houses - proposed for heavy goods

Also identified from the researcher's survey were various types of facilities and services necesssary to be incorporated in the New proposal. These include:

Auxilliary Services

i. Service and Access roads, Parking spaces and open spaces.

ii. Delivery/Loading Bay

iii. Water supply tower

iv. Refuse dump/collection centres

v. Toilet facilities

vi. Maintenance Units within stalls

vii. Pedestrian Access and discharge points.

Administrative Services

i. Management Office

ii. Police and fire officers units

iii. Information and Enquiry

iv. Local Government Officer

v. Maintenance Office

vi. Health and social control units etc.

1.3.0 **Standards for the provision of facilities**

1.3.1 **Traditional Market**

From the survey carried out by the researcher, it was found out that, the ratio of the trading population in Offa to the total population is 1:50. It was however projected that by the year 2005, Offa would have a target population of 206.000.

The expected trading population (Etp)

=1/50 x (Target population)

= ETP = 1/50 x 206000/1

= 4120

It is assumed that by the year 2005, with adequate stalls to cater for the growing population, the number of hawkers to a retail stall would have reduce drastically to 1:10 retail stall.

Assuming about 60% of the trading population engage in retail trading.

retail trading population = 60/100 x 4120/1

:. Hawkers population = 2472

by the year 2005 = 1/10 x 2472.

= 247 stamds

:. A space for about 250 hawkers stands is needed.

1.3.2 **Retail Shops & Stalls**

The expected trading population = 4120

Assuming about 60% retail trading population

60/100 x 4120/1 = 2472 stalls.

This retail trading populations in the complex could be around 2000 giving allowance for people having stalls all over the town.

1.3.3 **Wholesale shops**

Using the standard ratio of 1:5 as observed from the survey carried out, that is one whole sale trader to every 5 retailers.

The whole sale trading population =

1/5 (retail trading population).

= 1/5 x 2472/1

= 494 approximately 500.

This might however be insufficient due to increase in whole sale trading. Thus assuming about 30% whole sale trading population.

20/100 x 412/1 = 824 This will be enough to cater for the ever increasing wholesales trading population within the complex.

1.3.4 **Ware House & Cold Store**

Ware Houses should be provided for to serve the whole sales stalls. The ware houses could be given to big companies to run. A

standard size of (60 x 24)m could be allocated for. About 4 of this, is needed to supply the whole sales section of the market.

1.3.5 **Auxilliary Services**

i. Service and Access Roads to range from 8 meters to 12 meters depending on the valume of traffic expected at every point. Adequate drainage gutters to be provided for, along the side of the roads for drainage.

Adequate parking space to be provided for, and to grow according to needs).

ii. **Delivery and Loading Bay**

Adequate loading and off loading Bay to be provided for, within the complex, such that it would be easy for big trucks to park and turn after delivery.

iii. Water supply tower should be provided to supply water to the whole complex. Stand pipes should also be located around the market.

iv. Refuse dump/collection area. This should be provided for at every section of the market. Dust bins should be located around the stalls in concrate casing for easy refuse disposal.

v. **Toiletries** A standard of between 1:15 - 1:25 is to be used for provision of toilets.

1.3.6 **Administrative Service**

One major block should be provided to incorporate various other function's such as.

- Management offices
- Police and fire branch offices
- Information and enquiry
- Local government officer's office
- Maintenance office
- Health and social control units e.t.c

1.4.0 **Schedule of Accommodation**

The following estimate of space requirements are derived from general standard and case studies on various other markets.

Function	**Size (meters)**
MARKET STALLS FOR a) **Light/dry goods** - General provisions - Textile materials, clothing and fancy wares. - Foot wares, leather works et.c - Stationery and plastic products - Cosmetics & Drugs - Electrical Appliances - Light Automobile products/spare parts. - House hold equipments b) **Light/Wet Goods** General food products.	Stall size in case studies is 2 x 2.5, 2.5 x 2.5 (average) . However for effective & adequate display and storage of various goods, the size will be increase and lockers provided. 2.4 x 3.6/(basic) Hawker stands to be provided for within the market space.
<u>WHOLE SALE STALLS</u> Whole sales of light goods such as - provisions - Stationeries - Cosmetics - House Hold equipment e.t.c	Stall size in case studies is 3 x 3.5m in most cases. This could be increase to. 3.6 x 3.6 for effective storage. Upper deck storage facility to be evolved.

Function	Size (meters)
WARE HOUSE For - farm products - Essential commodities - Building components - Furniture e.t.c	Those are very small in the markets studies. Big ware houses could be considered and to be given to big companies to run . These ware houses would supply the various whole sale stores. Thus A size of 60 x 24m could be used.
Business Function Such as: - Banks - Postal Services e.t.c	All these are already existing outside the market and thus could be incorporated into the scheme
Auxilliary Functions - Parking spaces	Adequate parking for cars and trucks to be provided for: A standard size of 2.5 x 5m (cars) 4 x 9 m (Truck) 4 x 15m (Trailers) should be used.
- Water Tower	Should be provided tosupply water to the whole market - 2 stand pipes are necessary. $45m^3$ tank would be enough for storage and supply.
- Toilet Facilities	1 x 1.5m Each. 50 toilet to be provided for.
- Refuse dump and collection centres	Should be located at 4 major points around the market. To be easily accessible for easy collection - Dust bins should also be provided in concrete casing along the shopping malls.

Function	Size (meters)
Administrative Functions	Office spaces to range from 3 x 4m, 3 x 5m
- Offices for Administrative Functions include:	to 3 x 6m.
- Management offices	
- Police & Fire offices	
- Maintenance office	
- Health and social control e.t.c	

1.5.0 GENERAL PLANNING CONCEPT

This presents some of the basic planning concepts used in the layout of different markets. They are analysed with their merits and demerits as follows:

1.5.1 Pedestrian Precinct with Parking Enclosed by Ring Road

This is characterized by

- proper seperation between pedestrian and vehicular traffic
- Vertical expansion of building possible
- No proper seperation between light and heavy traffic
- Traffic problems at junctions
- Limited accessibility to service trucks.

1.5.2 Precinct with Central Parking

Characterized by

- Lack of unity in planning
- Lack of separation between light and heavy traffic
- Lack of proper separation between vehicular and pedestrian circulation
- Possible central congestion and rowdiness
- Less traffic junctions.

1.5.3 **Pedestrianized Centre with End Parking**

Here, the pedestian precinct is bounded on 2 ends by parking. This however is characterized by

- possible expansion on the other two ends
- proper separation of vehicular and pedistrian traffic
- proper separation of light and heavy traffic
- problem of servicing the core areas with goods
- the concept is suitable for compact, high rise centres.

1.5.4 **Centre with Central Traffic Junction**

Characterized by:

- Road side parking which may result into congestion
- Lack of proper seperation between the various traffic
- Pedestrian movement unsafe
- Easy Access to service trucks
- Site attractiveness is marred with traffic chaos.

1.5.5 **Pedestrian Precinct with Enclosed Parking**

- A very pratical concept
- Easy access to service trucks
- Sound car access to the building
- Proper separation of both pedestrian and vehicular traffic
- Too many Access Points.
- Good for low rising commercial centres.

1.5.6 **Centralized delivery with one way parking**

Here

- There is proper seperation between light and heavy traffic
- There is no proper separation between pedestrians and vehicular traffic
- Pedestrian bridge required
- Better Goods delivery and safety.

1.5.7 **Peripheral Parking with Ring Road**

Here

- There is enormous circulation problems
- Pedestrian bridge required
- Light and heavy traffic separated
- Suitable for compact Highrise Commercial Centres.

1.5.8 **Pedestrian Precinct Interlaced by Vehicular Route**

- Traffic chaos at the various junctions
- Pedestrian circulation is very bad
- Poor Access for service trucks
- The concept is usually good for low rising centres

1.5.9 **Central Precinct with perpheral Parking**

- Enough parking spaces but not well defined
- Enormous traffic congestion
- No proper separation between the various traffic
- Foot bridge required
- Good for high rise centres
- No room for horizontal spreading of the centre

1.6.0 **Design Considerations for Owode Market**

In the design and planning of Owode Market, various spatial zones of related functional spaces must be made to work together in perfect Architectural harmony. Thus various design consideration were evolved for this purpose.

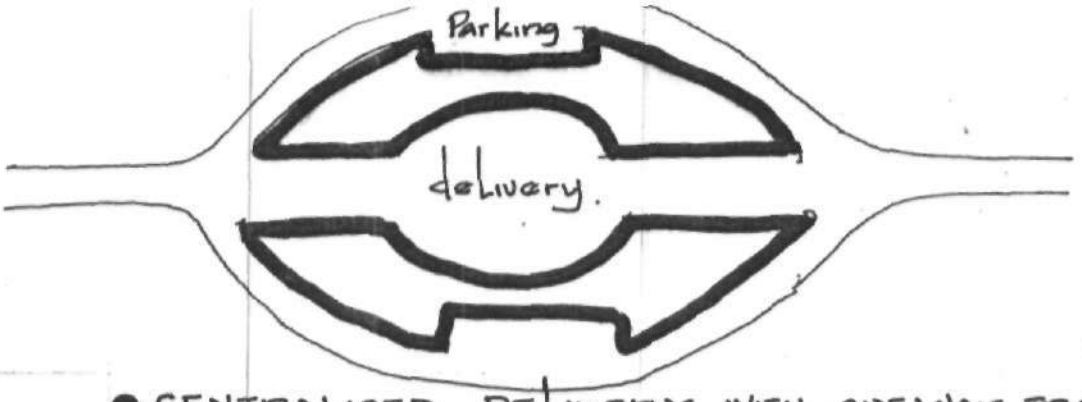
1.6.1 **Location and Access**

From the stand point of location Owode Market is easily accessible. The site is within the commercial core of Offa.

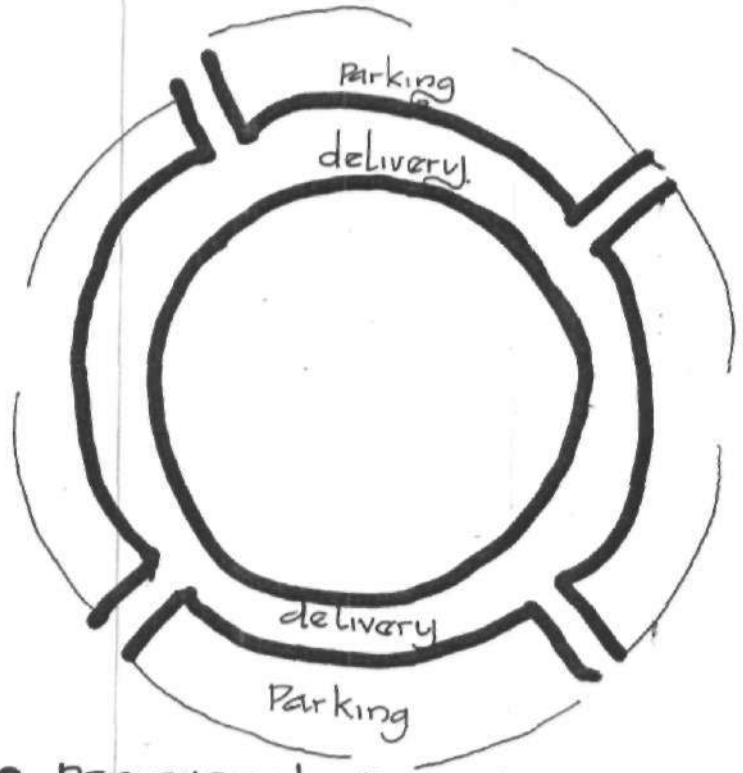
Access into the site should however be made very easy and convienient.

- It should also be possible to turn off from Oloffa and Ibrahim Taiwo way into the site.
- Intrance to, and exist from the parking areas must not be two close to the major junction on Oloffa way.

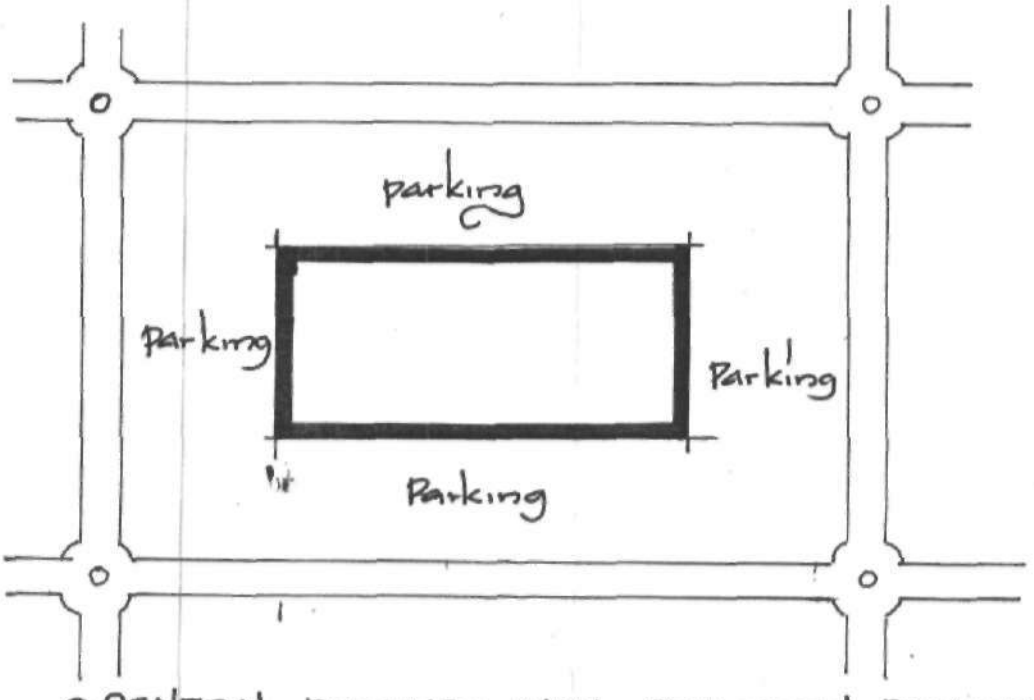
1.6.2 **Shape**



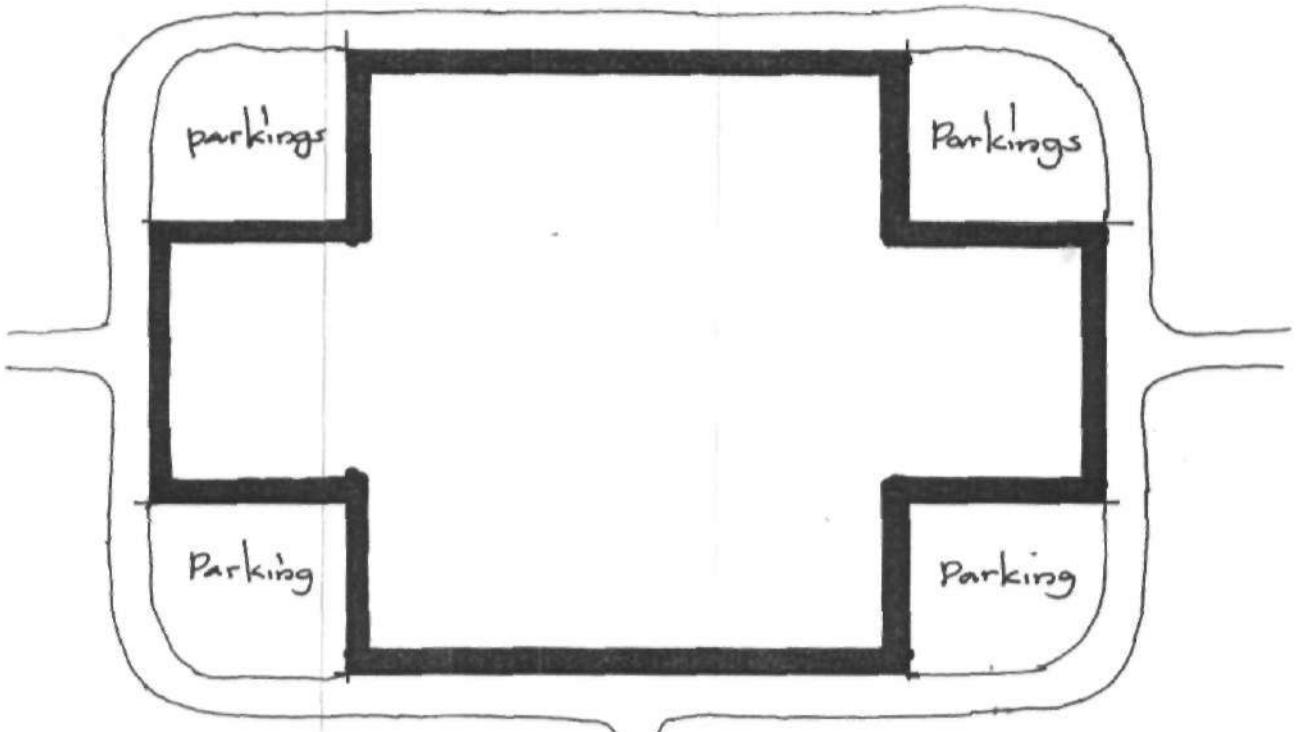
● CENTRALISED DELIVERY WITH ONEWAY TRAFFIC.



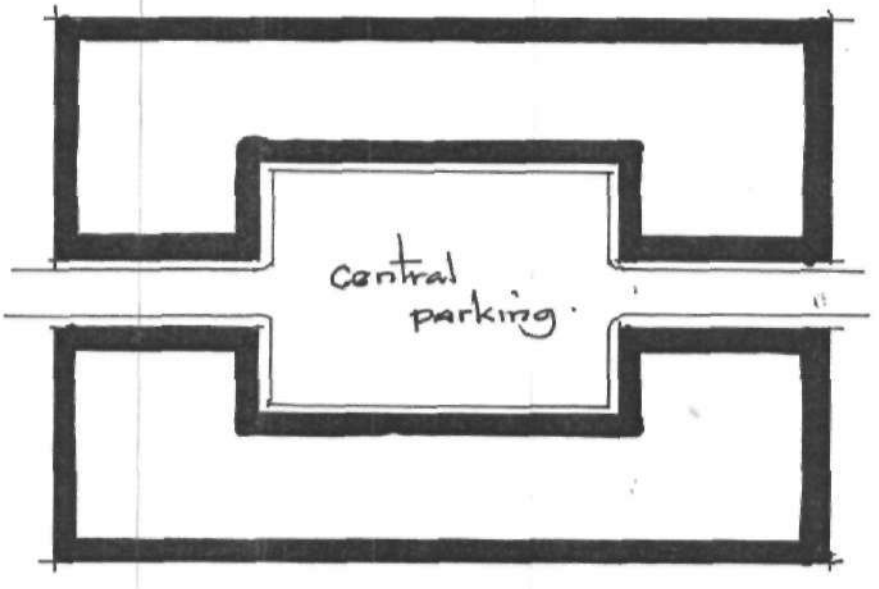
● PERIPHERAL PARKING WITH RING ROAD.



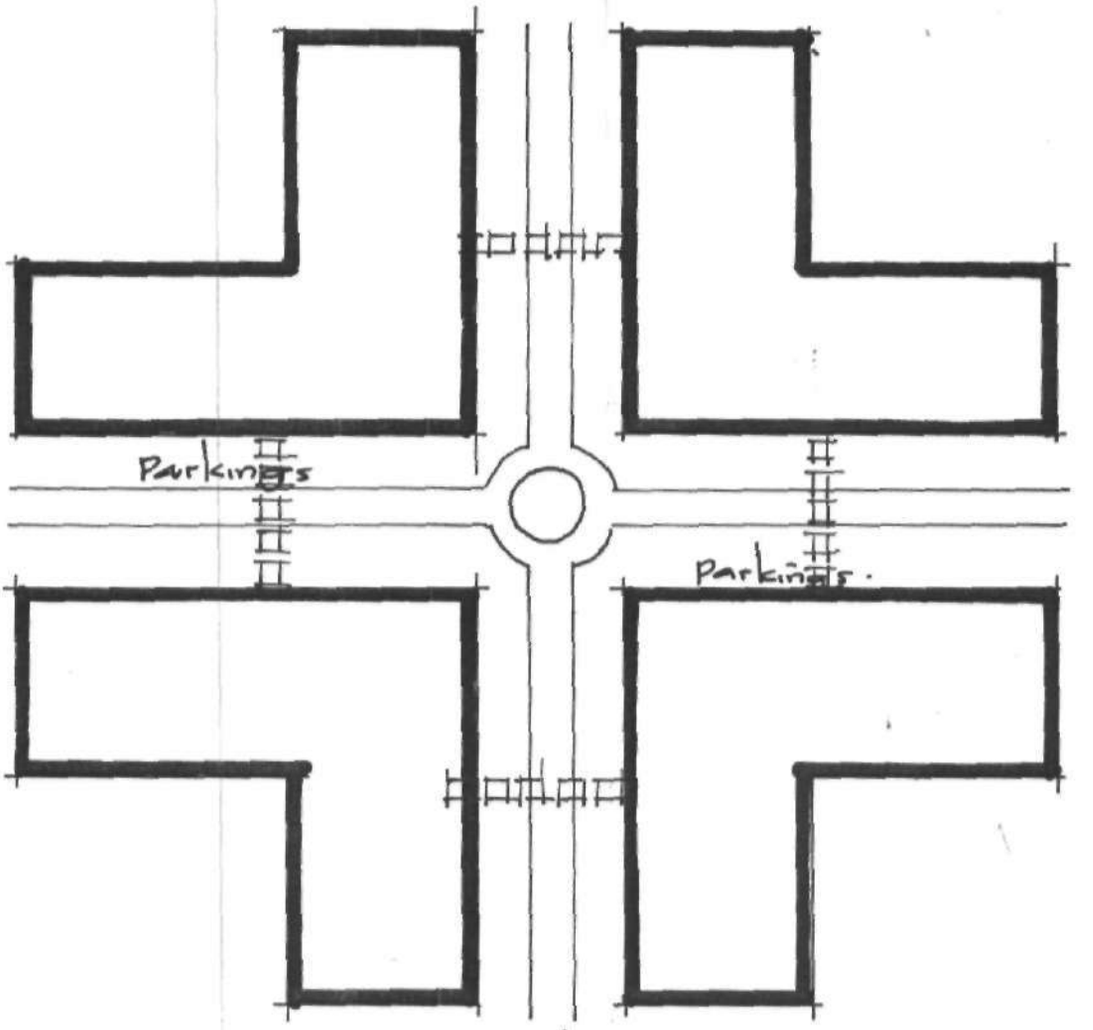
● CENTRAL PRECINCT WITH PERIPHERAL PARKING.



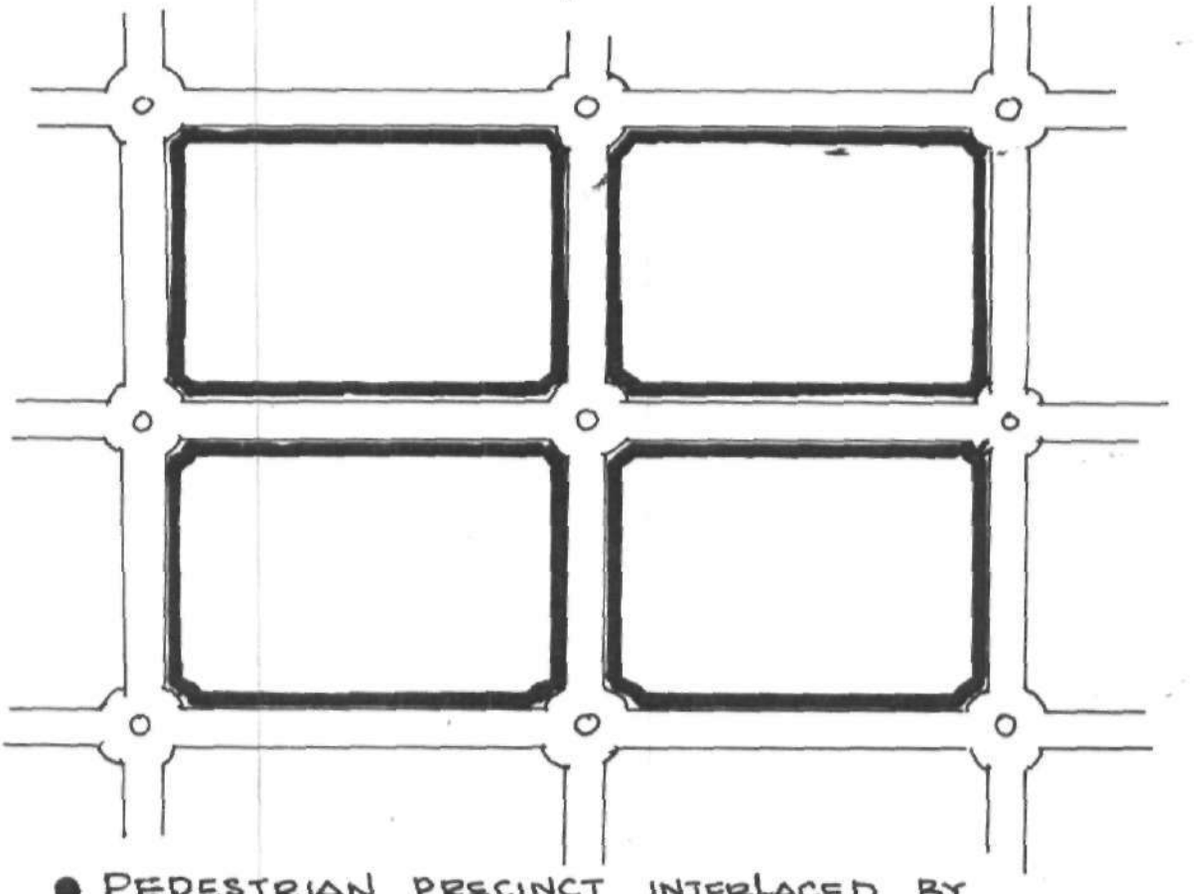
● PEDESTRIAN PRECINCT WITH PARKINGS ENCLOSED BY RINGROADS.



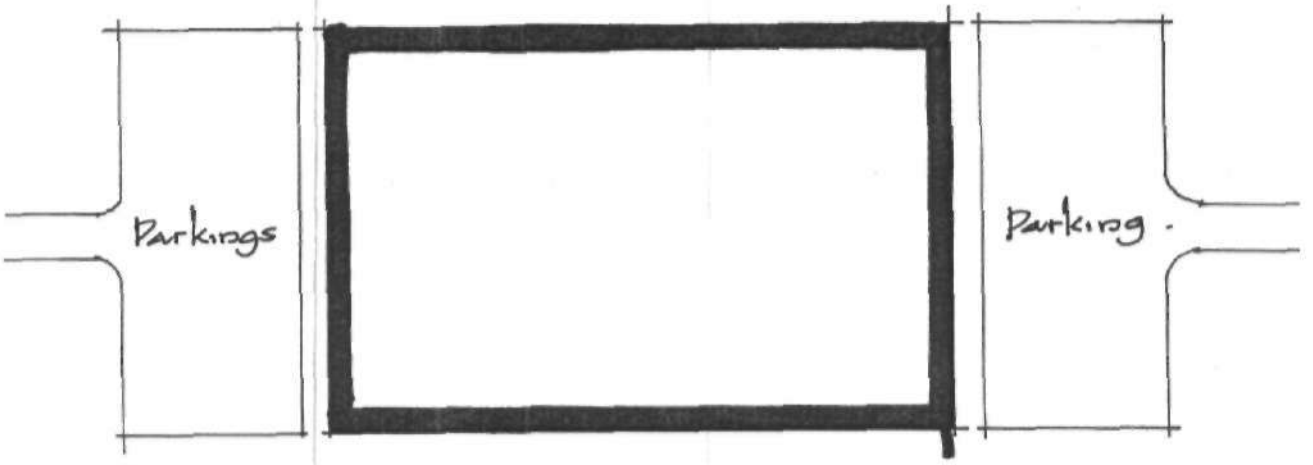
● PEDESTRIANISED CENTRE WITH CENTRAL PARKING.



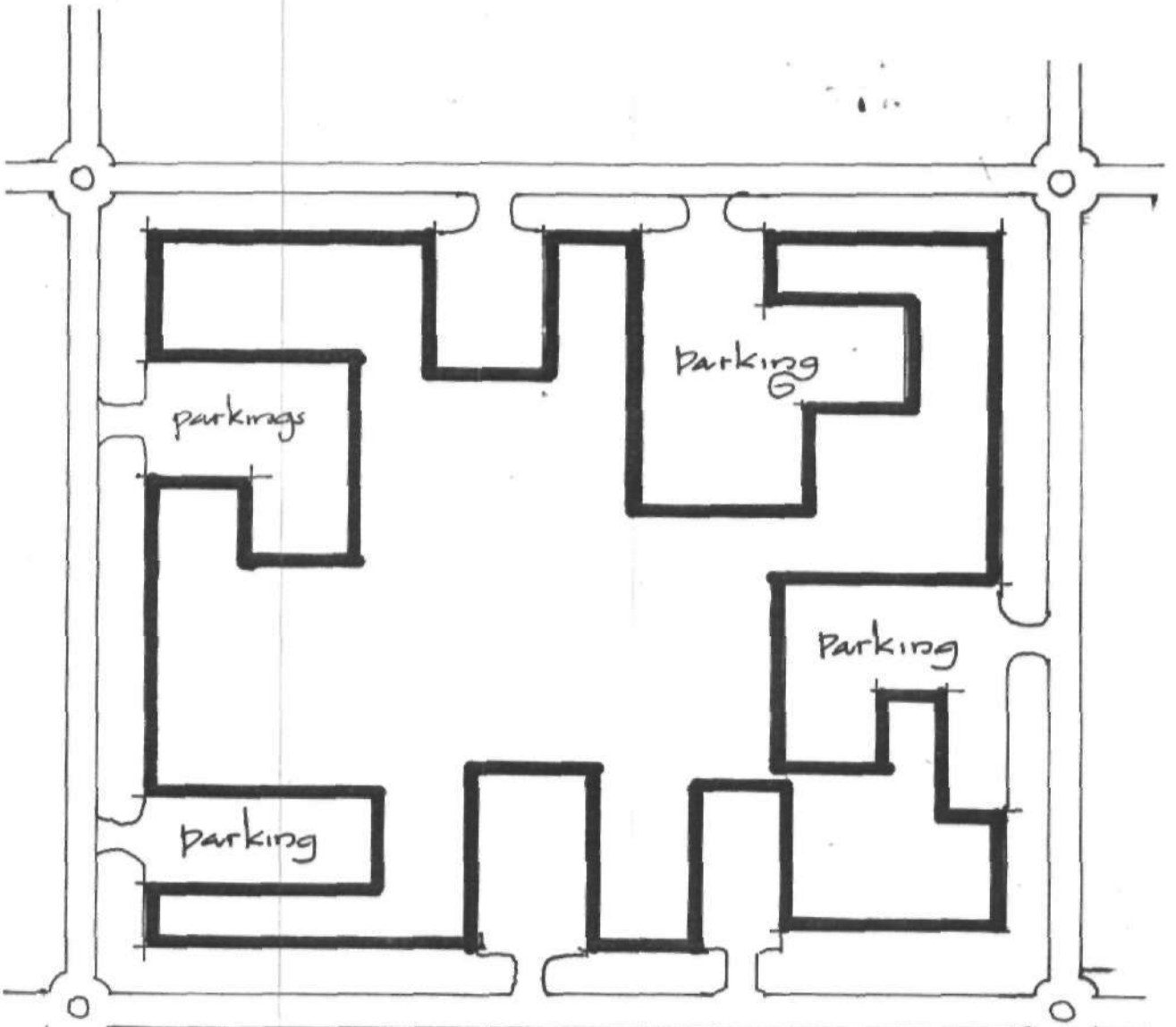
● CENTRE WITH CENTRAL TRAFFIC JUNCTION



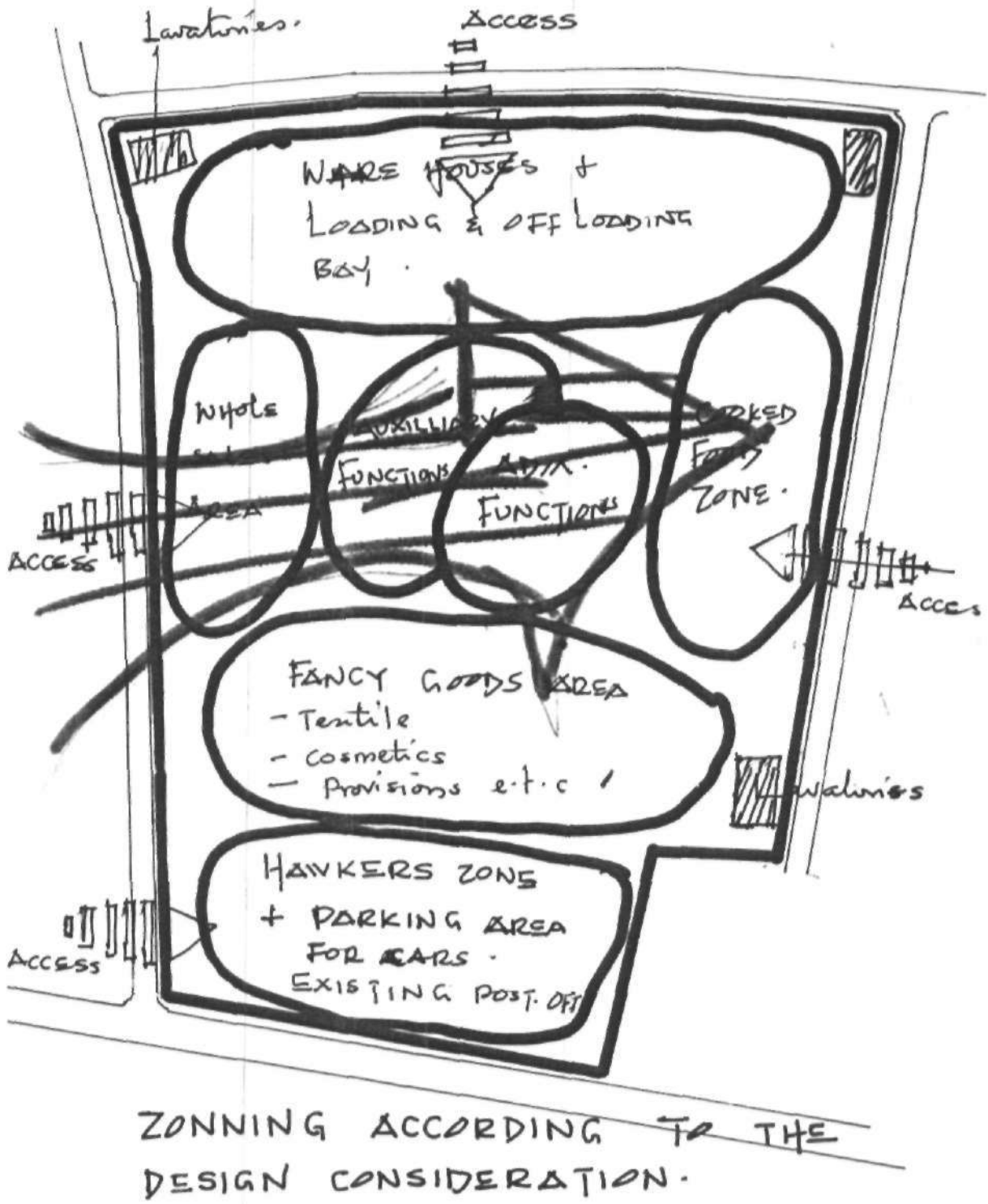
● PEDESTRIAN PRECINCT INTERLACED BY



● PEDESTRIAN PRECINCT WITH END PARKINGS.
i.e. TWO ENDS.



● PEDESTRIAN PRECINCT WITH ENCLOSED PARKINGS



ZONNING ACCORDING TO THE DESIGN CONSIDERATION.

The market should not be interrupted by traffic routes. Continuity of shopping activities should be allowed. The existing roads arounds the existing market should be utilized. The untarred road should be tarred. Thus given the market it shape.

1.6.3 **Ventilation**

The market should be well orientated to allow for proper ventilation, for comfort and removal of various odour. Revailing wind from the south-western side to be considered. Breeze penetration should be assisted.

1.6.4 **Design Criteria**

- The market should be easy to clean, and to wash (maintenance)
- There should be effective separation of vehicular and pedestrian traffic.
- Effective separation of light and heavy vehicles
- Effective parking areas
- Articulate drainage system
- Effective Refuse disposal/collection system
- Articulate fire fighting system
- Effective circulation pattern
- Effective and functional integration of various spaces
- Good planning to meet climatic/regional Demand of Offa.
- Good planning to incorporate some existing features in the new design.
- And lastly, the provision of design solution capable of solving the problem of maintenance in Owode market.

1.6.5 **Arrangement of the various functions**

- **Ware House and Smelly Stalls:**

Smelly stalls (Meat, fish and cooked food) should be down wind to the North/east of the site. These stalls together with the ware houses generally need easy acess for lorries. Best location is towards the eastward side of the site. See Sketch.

- **Fancy Goods Stalls**

Textiles, cosmetics and other fancy goods are clean and "impulse" Buy, should be lockable stalls and location should be sides facing Ibrahim Taiwo road/Oloffa way.

Provisions are necessity and thus could be placed inside the market as customers have to come to the them.

- **Services**

Lavatories, Rubbish dumps/collection points should be spaced out along the service road, they could also be place at strategic points throughout the market.

- **parking space**

Parking for cars and light vans along Ibrahim Taiwo and market road will permit easy access and convenience for the general public and delivery of light goods.

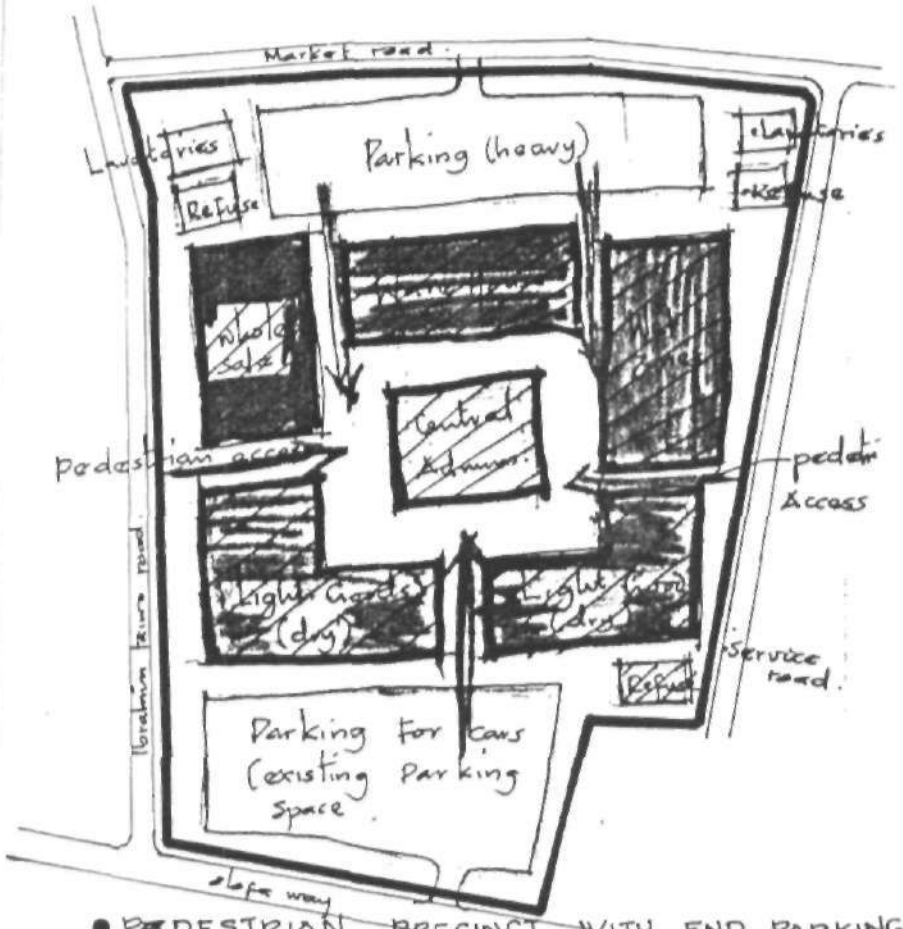
- **Auxillary/Administrative Function**

Should be well position for easy reach. They should be centrally located. see sketch below for the arrangement proposed.

1.7.0 Proposed Planning and Design Concept

From the general analysis and findings of the various merits and demerits of the different planning concepts, the pedestrian precinct with parking enclosed by ring road, pedestrian precinct with end parking and pedestrian precinct with enclosed parking were found very practical for the market design. However the three were analysed and incorporated on the site. The three concepts were later merged together for better conept for the redevelopment scheme. The concept produced from the other three concepts provides:

- Easy Access
- Proper traffic separation
- pocket parking (adequate)
- Hawkers stands (adequate)

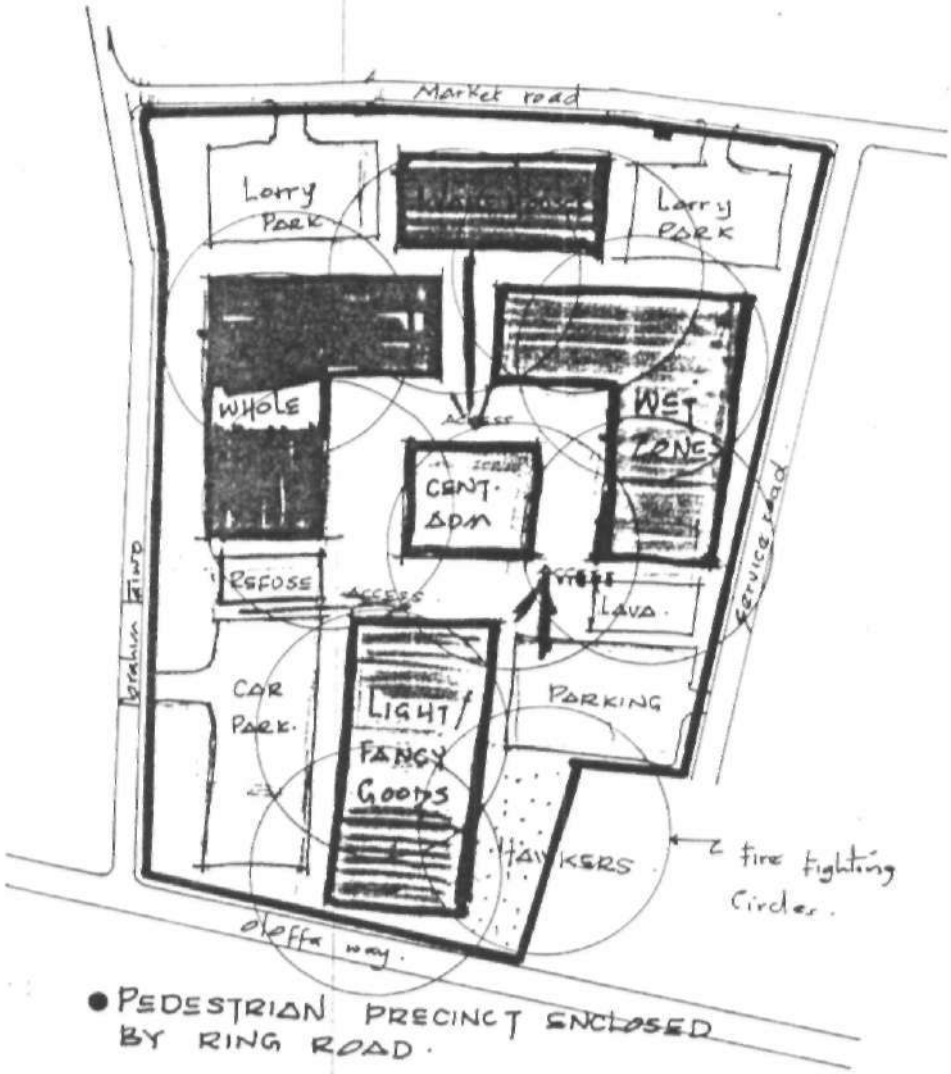


- PEDESTRIAN PRECINCT WITH END PARKING

- Proper separation of vehicular and pedestrian traffic.
- Centralized parking. (Circulation problem)
- Refuse collection should be located in strategic position.
- Parking should be in packets.

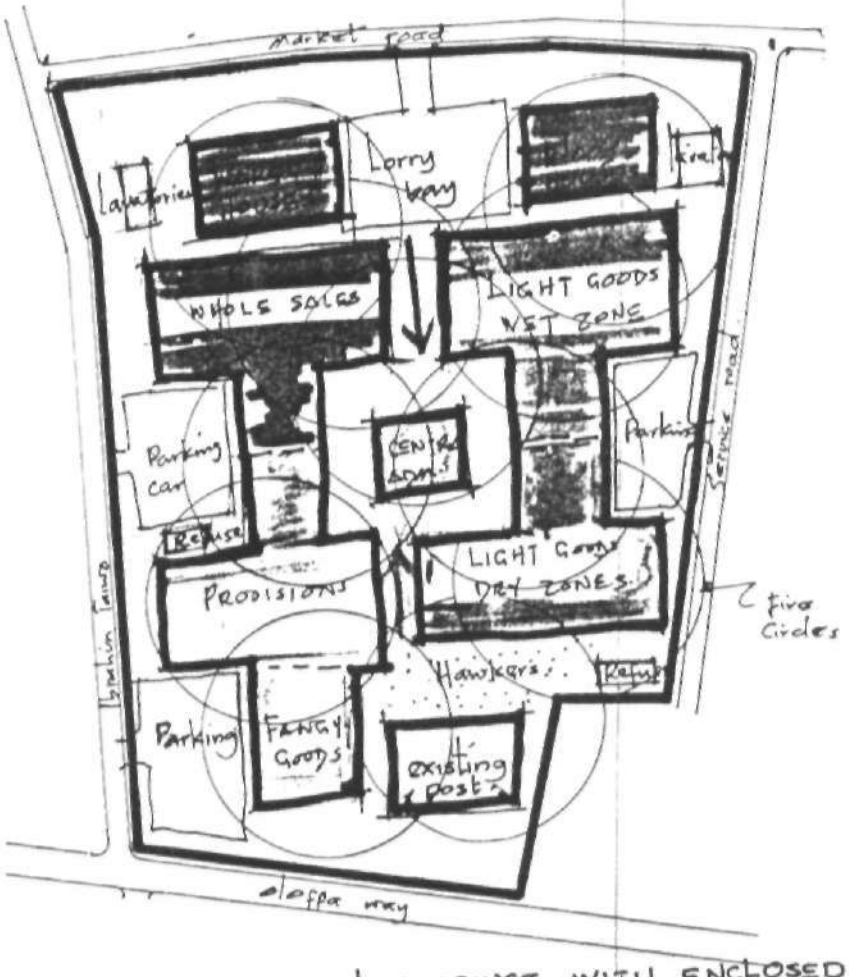
Concept to be modified.

Feasible for the design.



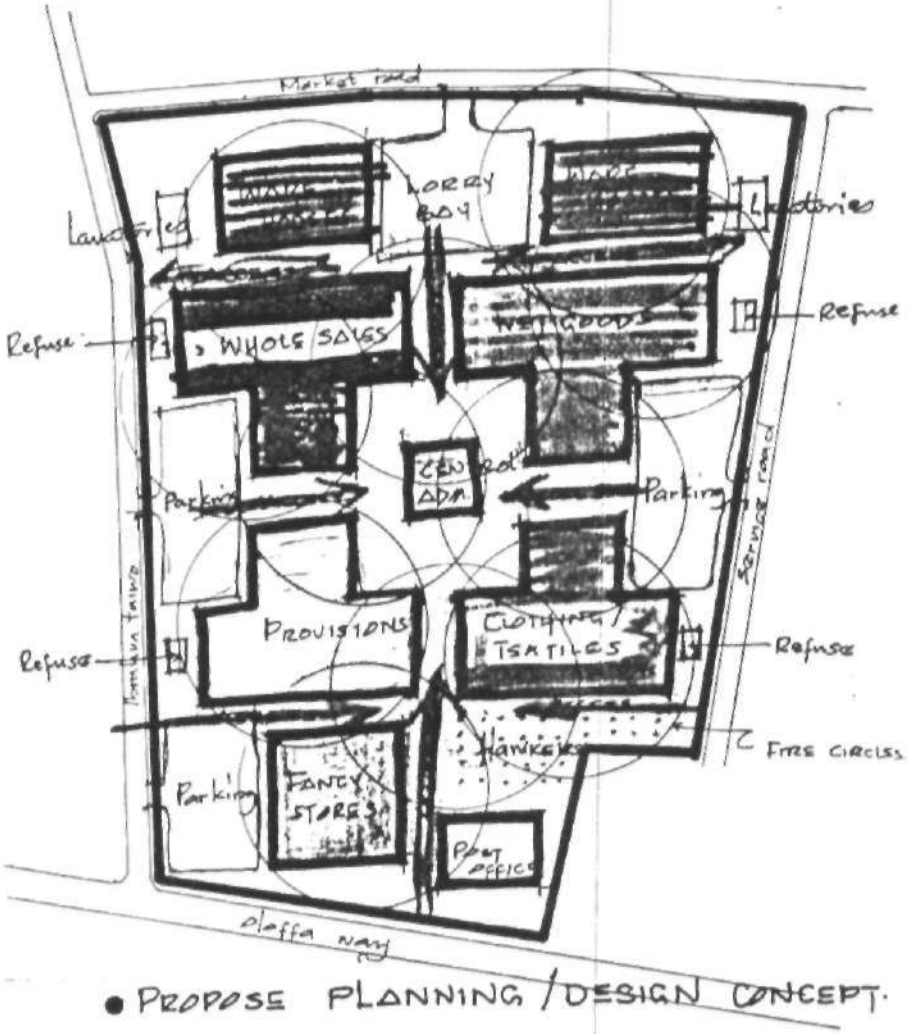
- PEDESTRIAN PRECINCT ENCLOSED BY RING ROAD.

- Proper separation between traffic
- Poor circulation
- LACK PROPER ACCESS
- ENORMOUS TRAFFIC PROBLEM.
- REFOSE POINT / LAVATORIES BADLY POSITIONED.
- ADEQUATE PROVISION FOR HAWKERS.
- EASY ~~FIGH~~ FIRE FIGHTING MACHINE ACCESS.



- PEDESTRIAN PRECINCT WITH ENCLOSED PARKING.

- MORE PRACTICAL CONCEPT
- PROPER SEPERATION OF VARIOUS TRAFFIC
- POCKETS OF PARKING
- PROPER ACCESS FOR FIRE SERVICE MACHINES
- REFUSE TO BE RESOLVED
- EXISTING POST OFFICE INCORPORATED.
- ADEQUATE PROVISION MADE FOR HAWKERS.
- MORE ACCESSES TO BE PROVIDED.



- PROPOSE PLANNING / DESIGN CONCEPT.

- EASY ACCESS
- PROPER TRAFFIC SEPERATION
- POCKET PARKING (ADEQUATE)
- HAWKERS STANDS PROVIDED
- ADEQUATE & PROPER REFUSE DISPOSAL
- ADEQUATE LAVATORIES
- ORGANISED CIRCULATION
- EASY ACCESS FOR ADEQUATE FIRE FIGHTING

related to the customers: Men's wears, Women's dresses, Children's dresses and Toys e.t.c.

ZONE FOUR **SHAWO ZONE**

House all sorts of whole sales. Various commodities have their own section within this zone. This zone is situated very close to the ware houses so as to facilitate easy distributions of various goods to this zone.

ZONE FIVE **OJOMU ZONE**

Fish and meat, perishable goods, cooked foods and raw foods have definite section within this zone, and the zone is quite out of the way, though easily accessible from all part of the market. This helps to cheek the propagation of odour to other areas. Within this section, different meats have been put in proper areas, Beef, Goat meat, and fish are in definite sub-sections.

ZONE SIX **OLANIPEKUN ZONE**

Houses the various ware houses and cold store that supplies the whole sale and the raw food section. They have been decidedly separated from the shopping zones.

The Adminstrative and General Management Office is located at the centre of the market and could be reached from all part of the market.

However with this efficient and thorough system of zoning, it will be possible to effect more trading transactions per square foot of selling space, and consequently more turn over and more transactions per hour . This will on the long run create employment and development.

CHAPTER TWO

CONSTRUCTION METHODS PROPOSAL

This chapter is concerned with various methods proposed for the custruction of the market. It also discuss the type of materials used for the walling, roofing, finishing, flooring e.t.c of the market stalls.

2.10 Ware House System

A factor in the successful planning of a modern market is the provision of adequate ware housing space for traders who require it. This enables the whole sale traders to purchase in bulk at favourable prices. Consequently, there will be increased turn over at the sales counter. Thus there will be a good margin of profit so that traders will be able to pay rents comfortably.

However for the scheme five ware houses blocks were provided. The sizes ranges from 60m x 24m, 36m x 24m to 12m x 24m. The clearance height of 8 meters is given to the blocks. The tenants for the particualar ware houses would be big companies that would be supplying various commodities in bulk to the whole sales and raw food section. Provision is made for a big cold store service for the supply of fish to the fish section.

The Advantage of this system

1. There is the shortest and quickest possible connection between forward sales stock and reserve stock rooms.

opening for high level windows and doors allowed for. Similarly pre-

ii. There is immediate and uniterupted supply of necessary goods to the other section of the market. Thus increase in turnover.

iii. Sales men and women would have the chance to easily check the size and assortment of available goods.

2.1.1 Structural System for the Ware Houses

Roof: The main structural support for the roof in single bay symmetrical pitch pre- cast reinforced concrete portal frames with a span of 24 meters and spaced 6 meters interval. Pre cast concrete purlins are laid across the frames to support roof covering and glazing.

Floor: For the flooring of the ware houses, Asphatic cement concrete spread over a 150mm reinforced concreate floor slab or crushed rock base to provide sufficient traction for the various goods and the movement of fork lift is to be used. The ware houses would also be given sufficient slope to drain properly.

Walls: For the walling, 225mm walls are constructed with opening for high level windows and doors allowed for. Similarly pre-cast reinforced concrete, or steel zed section sheeting rails are to be fixed to the pre cast concrete portal frame posts for side wall sheeting. The internal and external walls to be finished with sandtex emulsion paint.

Maintenance Generally the advantages of reinforced concrete portal frames are that they require no maintenance during the useful life of the ware house buildings and also the frames has a better resistance to collapse during fire out break than an unprotected steel frame.

2.1.2 Method of Construction of the Portal Frame

The concrete portal frames are industrial made according to specification and are later transported to site.

However for convenience in casting, transport and erection on site, pre cast concrete portal frames are generally cast in two or

more sections which are bolted together on site at the point of contraflexure in rafters.

2.2.0 **Whole Sale & Retail Stall Construction**

The construction of the stalls is on two floors. The first floor is however to be supported on columns spaced at seven meter centres to centres. The walls of the markets stalls are all non-load bearing walls.

2.2.1 **Roofs**

Two types construction were introduced for the roofing of stalls.

a) Lattice steel roof truss construction

b) North-lighting system of roofing (N-girders)

Lattice steel truss are to be jointed with the use of steel gusset plate that are cut into shape to contain the required number of bolts or rivets at each connection.

Standard I section steel columns embedded in concrete are to be used in the support of the roof Trusses. A steel base plate is to be welded or fixed with bolted or riveted connections with gusset plates and angle cleat to the base of the collumns. The column base plate is levelled on a cement grout on the floor slab to which it is rigidly fixed with four holding down bolts cast or set into the concrete floor slab.

A cap is welded or fixed with bolted trusses. A steel base plate is to be welded or fixed with bolted or riveted connections with gusset plates and angle cleat to the base of the collumns. The column base plate is levelled on a cement grout on the concrete floor slab to which it is rigidly fixed with four holding down bolts cast or set into the concrete floor slab.

A cap is welded or fixed with bolted or riveted connections to the top of each column and the bearing plates of truss ends are bolted to the cap plates.

Purlins are fixed accross the roof trusses to provide support for galvanised iron roof covering.

2.2.2 **Walling Material**

For the enternal walls: & 225mm sandcrete durarf walls are to be used for the construction. These are to be finished with 12mm cement said screed plaster. However for internal wall partitions for the various stalls, 75mm x 450mm precast concrete panels and

100mm x 100mm precast concrete collumns are to be assembled on the site for the partion joining of the various sizes of stalls. This would facilitate quickly and easy assembly. And would make the redevelopment process very fast, and early completion possible.

2.2.3 Flooring Finishes

Generally for the whole stalls, a reinforced concrete floor slab, 150mm is to be laid on a well ramped 450mm har core and 50mm blinding. The floor finish should be of 50mm coment/sand secreed trowel finish.

However for the first floor the flooring are to be constructed of reinforced concrete floor slab, 150mm thick in a complex grid patterns spanning seven meters between reinforced concrete columns. The floors are to be cast in-site. wth normal reinforcement, and this would form the base for the 50mm sand screed floor finish.

2.2.4 Lighting System

Natural Lighting

The system of roof design and wall design permits natural light penetration from the roofs and from the side walls. Although light value depreciates according to the depth of the stalls, but the combination of lighting system from the roofs and side walls facilitate easy penetration such that commodities display in any part of the market will easily be appreciable. This scheme allows light from above, at least for a large proportion of the market. And for the ground floor. Lighting is to be admitted from the upper floor by the introduction of glass blocks along the malls and shopping axis. Also lights is to be admitted in from the side walls and court yards.

These systems of lighting produces glare free, well difused natural light of reasonable illumination intensity for comfortable shopping.

Artificial Lighting

Night shopping is not usual in the market before. At dusk, traders pack and go home. But artificial lighting are to be introduce for the cold store, the central Administration, the cooked food area and the fancy goods section only. This will help to reduce incedence of fire out break due to fault.

2.2.5 **Refuse Disposal**

The existing refuse disposal system within Owode Market have become such a squalor owing greatly to the inefficient system of refuse disposal system.

Usually, storage of refuse in individual stalls is in dust-bins, which are later emptied into a large open dump from where the local Government's refuse collection lorry collects it. This however has not been working fine due to poor managment.

Proposal

- Each stall to have private dust-bins which should be emptied into the refuse dump house.
- Well designed refuse container, which are removable, are to be located at reasonable places along the shopping malls in concrete fixed casing with a hinged lid, such that shoppers can throw into them, old paper, leaves etc. These would however be cleared regularly by the maintenance staffs in each section of the market.
- Collecting lorries are to collect refuse regularly from the ground floor huge bin.
- Maintenance staff to wash and clean the refuse room regularly.
- The refuse dump floor should be hard granolittic floor.

Water Tower

A large quantity of water to be provided regularly for use at the cooked food, fish and meat areas. Lavatories and the mosque are to be provided with stand pipes, so also is the hawkers stand area.

CHAPTER 3

(IMPLEMENTATION STRATEGIES

This chapter recommends ways in which the redevelopment scheme could be handled, so as to work in perfect harmony for a better and conducive market atmoshere. The redevelopment scheme so far have been conceived and worked out into an architectural master piece that needs a helping hand to bring it into reality. All these are discussed under this chapter.

3.1.0 Supervision & Maintenance

One of the most vital aspects of any market development that ensures efficiency and good returns is the administrative aspect. In markets, the administration in respect of supervision and maintenance is however the most vital. The existing market situation in Owode market is bad. However apart from the absence of physical planning, there is no efficient system of administration. There only exist a revenue collector officer from the Local Government Secretariat, who is more concerned about the meagre revenue collection than with the efficient running of the market.

At it now exists within the market, the maintenance and the supervision system lacks control over

i. the general cleanliness of the market

ii. waste and garbage disposal

iii. general security of the various goods

iv. the general maintenance of the market structures such as walls, roof, floors, windows and doors.

It is however believed that if the general environment of a market is hygienic, tidy and pleasant, many more people will take delight in shopping. This would mean, highter sales and huge turnovers.

This thesis however proposed for the scheme a full-time administrative section and that will comprise of various market Officers such as, the market General Manager, Market Superitendent, Assistant Market Superintendent, a General Office, Accountant, Accounts Section, Revenue Collectors Officer, Health Superintendent, Cottage Clinic, Maintainance Office, Fire Service Office, Market Traders Union Office, a Police Post and Enuirey. Service such as Postal, Banking and Telephone Services are all already existing outside the market and are already incorporated into the design.

The general cleaning of toilets, refuse dumps collections are proposed to be given to cleaning company for better out put and better performance. The maintenance office would be incharge of the general repairs within the market and general security. The officer would need the employment of cleaners, watchmen and some plumbers, carpenters, electriciens e.t.c.

All the maintenance and supervision measures provided will be geared to wards improving the standard and lack of control that make the existing markets an eyesore.

3.2.0 Phasing

In order to realise the objectives of this market, the whole redevelopment scheme will be carried out in three phases.

Phase One

The development and construction of the fancy goods zone, i.e Oloffa Zone and the the Olanipekun Zone. Also the provision of various facilities such as:

a) Water tower

b) Laratories and

c) Security fence around the market

Reason:

The Oloffa zone is to be constructed on existing motor park open space which would means the displacement of the committer people to their permanent site at the outskirt of the town. The Olanipekun zone would be constructed on an open ground left for future expassion at the back of the market, and yet to be develop.

Time range

A total time of five years has been schedule for this particular phase. This would enable the local Government Authority be able to raise enough fund for the construction.

Phase Two

This phase would have the development of the Balogun zone which houses all sorts of provisions and drugs and also Shawo zone, which houses the whole sales section construction of the Central Administration is to commence at this stage.

Time Range

A total time of two and half years has been allocated.

Phase Three

This phase would be the development phase for Essa zone, which houses all clothing and textile materials. And also the Ojomu Zone which consist of fish and meat stalls, perishable goods, cooked food and raw foods area. Services such as parking for cars, bus stops, Mosque and hawkers' stands would be incorporated at this stage.

Time Range

A period of two and half years has been scheduled for the construction of this phase.

3.3.0 **Finance**

The financing of this kind of project normally are of the greatest couse of anxiety to developers financial institution always find it very difficult to loan a huge sum of amount for this kind of a project "**an ordinary market project**". This kind of a problem had been faced by several developers such as the case of Onisha Urban county council, when their consultant Engineers - Travers Morgan and partners proposed a new marker then at about £500,000. Luckily, some of their member found it a risk worth taking, they influenced it and it was done. The Eastern Region Development Corporation then was therefore influenced to grant the necessary loan. The total loan granted for the scheme was £530,000 then, payable in fifteen installments.

However from the total annual rental return of about $80,000, about £10,000 is spent annually on supervision and maintenance. The councils pays £35,000 annually and spends the balance on its other committments. Thus this proves that this is a sound commercial source investment. Yet it would never have been built if not for some of the influencial members of the Onitsha Urban County Council that influenced it.

Thus this proves that the fund can be raised by the Local Government Authority who are the clients through internal loan from Banks or other Financial Institutions.

To the investors, the enterprises quoted above have been a success. It had brought large profits to the respective council. And so also various people have been served through the provision of the various facilities within the market. However this is a big opportunity to all investors.

3.4.0 **Responsibilities of the Government**

In order for the market to effectively disseminate its functions, the government should ensure a logical and effective strategy towards

developing the market interms of finance, creation of institution such as marker board. Maintenance Unit and a public enlightment unit that would awaken the awareness of the people as regards the use of market facilities by organising various enlightenment programmes.

3.5.0 **Responsibilities of the Individual Groups**

The people should allow themselves to be well informed about the use of facilities provided for the use. They should:

a) Take Good care of their individual stalls very well and report any damage to the maintenance section of the market.

ii) Refuse bins in individual stalls should be dump in the general dump for easy collection

iii) They should try to fellow the various rules and regulations set by the marker Authority.

iv) The walls should be taking good care of.

3.6.0 **Responsibilities of Arctitect in the Market Design and Construction**

The Architect should be aware of his professional role in the physical planning of the market, and in the implementation of the scheme. This is due to the fact that he owns prerogative of evolving a design scheme that respond to specific needs and characteristics derived from an interplay of a number of variable which are carefully worked out in the process of logical analysis. He should however see to the construction and implementaion of what he has evolved. And the Architect must also make sure that the advice the client and users as to how they handle the various facilities he has provided in the scheme. The architects however must necessarily coordinate the designed market with an eye to the future with sole of resolving immediate and foreseable future problems.

CONCLUSION

The study has analysed the various anomalies in the existing pattern of Nigerian Market designs and Organisations. It also analysed the Owode Market existing situation and highlighted the various problems associated with the market which includes, lack of adequate Management and Maintenance, traffic and stall congestion, poor sanitary and drainage system, small into area management. Lack of adequate utilations and services, the presence of hawkers and squatters poor circulations e.t.c.

The study however, sellected the Kaduna Central Market, the Railway Station Market, the Owode Market and the Oyun Market, to show the basic maintenance problems associated with sellected Nigerian Markets. Four markets were also considered for case studies viz, Sokoto Central Market, Babako Market Ilorin, Jos Main Market and Makurdi Market. These have shown the basic problems associated with maintenance in Nigerian Market interm of forms, structure,planning, provisions of various facilities, e.t.c.

However, after considering the various forms and planning of the existing Owode Market, planning and design concepts were evolved for the Redevelopment scheme. Maintenance of the market was given a special requirements through the provisions of adequate facilities and proper management. The structures were more very simple and divided into various zones for easy maintenance.

Hawkers were also given a special sections within the market, since they have been identified to form a significant part of the market.

However, a lasting and viable solution to all the various problems associated with maintenance in Owode market is certain with careful and proper implementation of all the advocation in this write-up.

in conclusion, it is believed that the dynamism in the Nigerian society, demands a new philosophy and approach to the design, organisation and management of the Nigerian markets.

To provide an effective system in the Nigerian Market design. It is recommended that the architect should have a good knowledge of the Market, the Merchandise, the traders and most importantly the shoppers.

The Management should be very efficient. It should see to the smooth running of the Market. It should be able to provide adequate maintenance in terms of repairs of the Market structures, cleaning of the Market environment and proper care of the available facilities.

For the traders, the Market conditions should be created to attract and retain them, since they are principally in the Market to make money. Proper security of the Market should be provided and the rent should not be too high. Since the traders can only make a reasonable margin of profit only when good and steady flow of customers are forthcoming, thus the environment should be such as to provide patronage of the shoppers.

Easy access should be provided so as to conduct goods safety to the selling zone without heavy risk of damage.

The building should be capable of providing shelter for both the users as well as for the goods. It should be a conducive and delightful place for buying and selling. It should provide good illumination to make the Merchandised displayed clearly appreciable.

The shoppers, who are mostly difficult to handle in the design of the Market due to the fact that the designer can not predict what classes of people visits a Market should be well considered.

For shoppers who are always in a hurry, proper zoning of various commodities would eliminate wasted time. However, to the window shoppers, pleasant and interesting environment should be created. To both categories, continuous motion in all direction without any obstruction is very essential.

To the Architect, again, the architectural design of the Market space should be of high standard, well lit delightful and clean. These would however bring in many customers, which means large output and high margin of profit. These desirable aspects of a market have been provided and ensured in the project.

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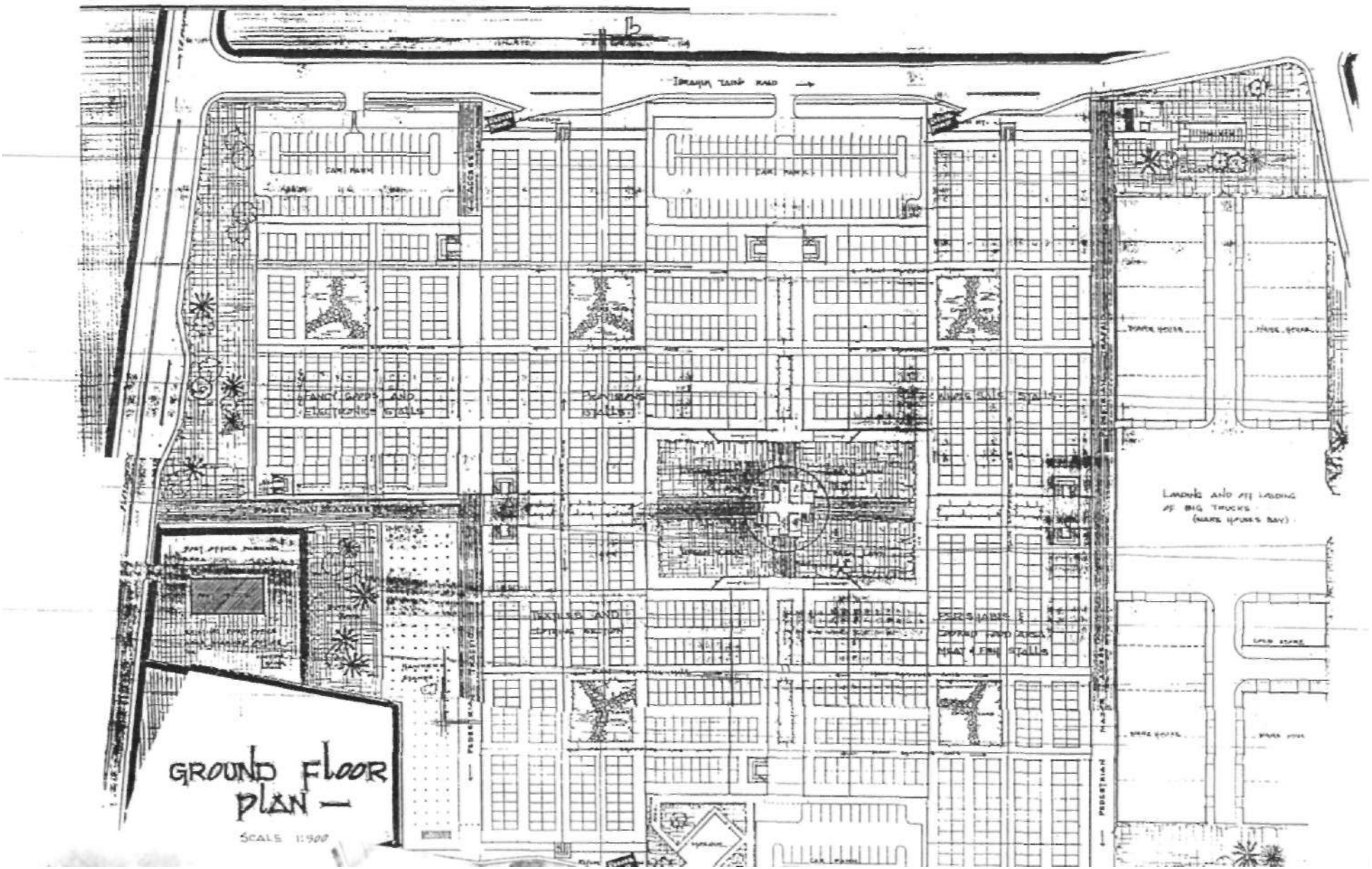
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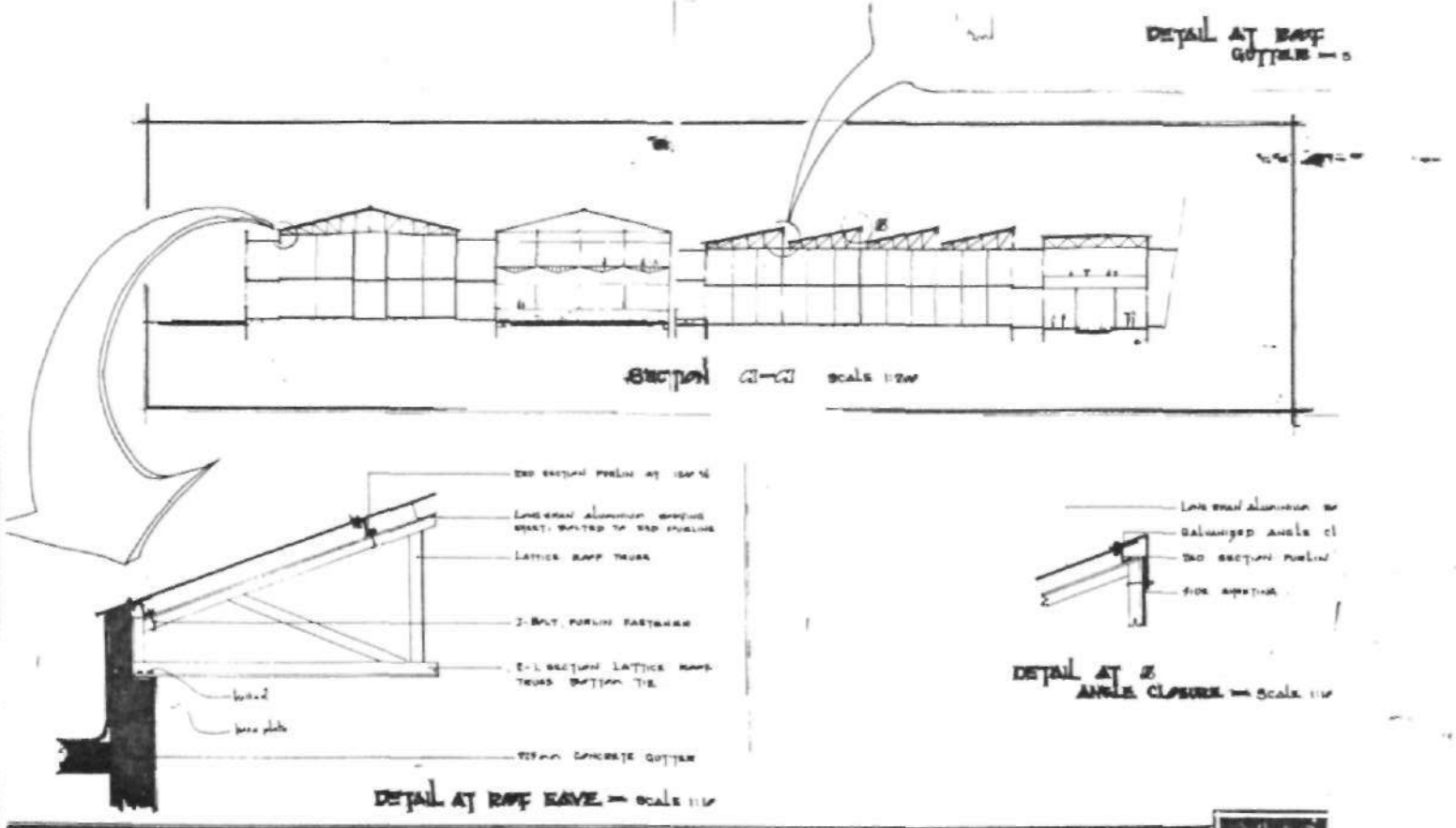

GROUND FLOOR PLAN —
SCALE 1:500
LANDING AND PIT LOADING OF BIG TRUCKS (MARE HOUSE BAY)
PEDESTRIAN

ODE MARKET REDEVELOPMENT SCHEME

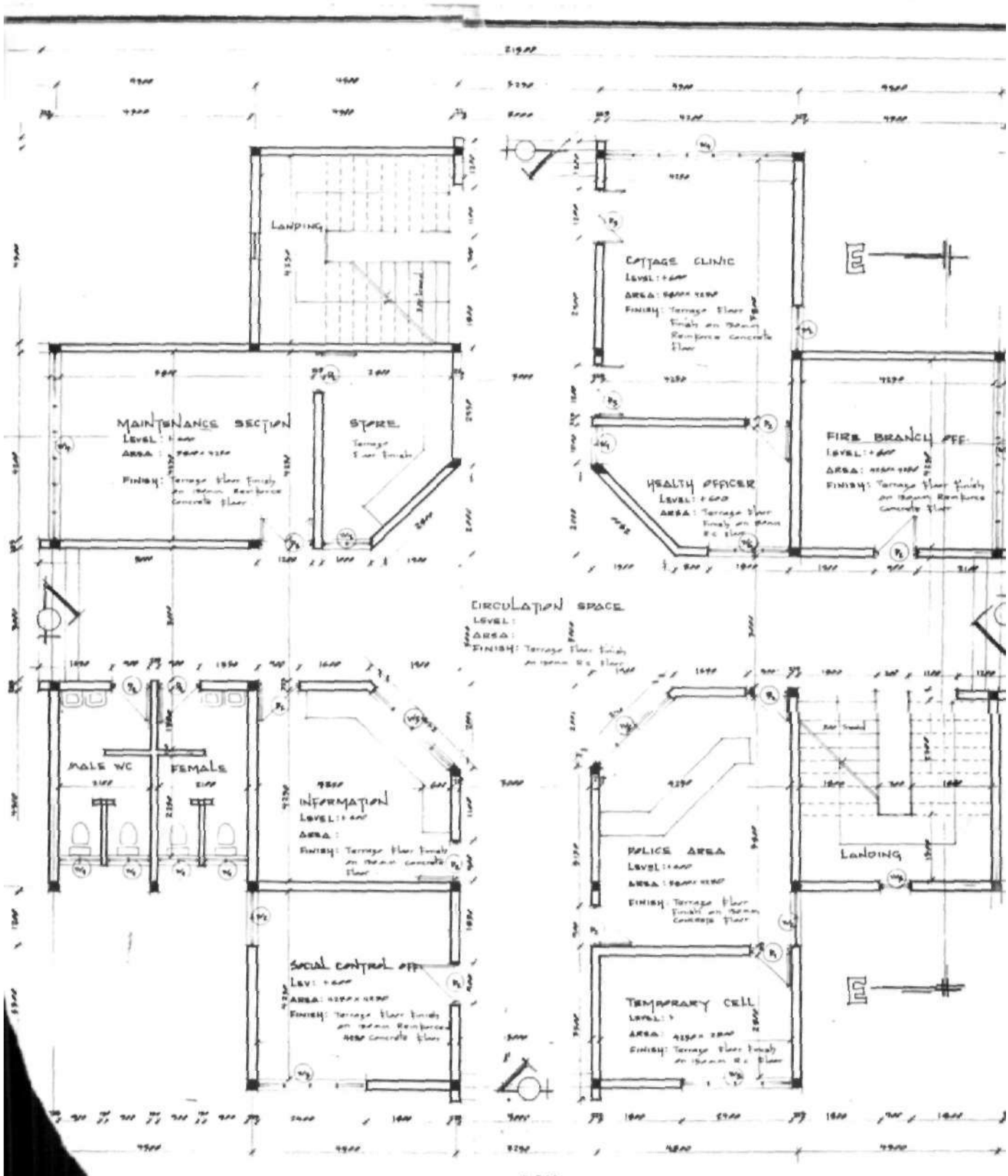
North eastern elevation (along up)

South-western elevation

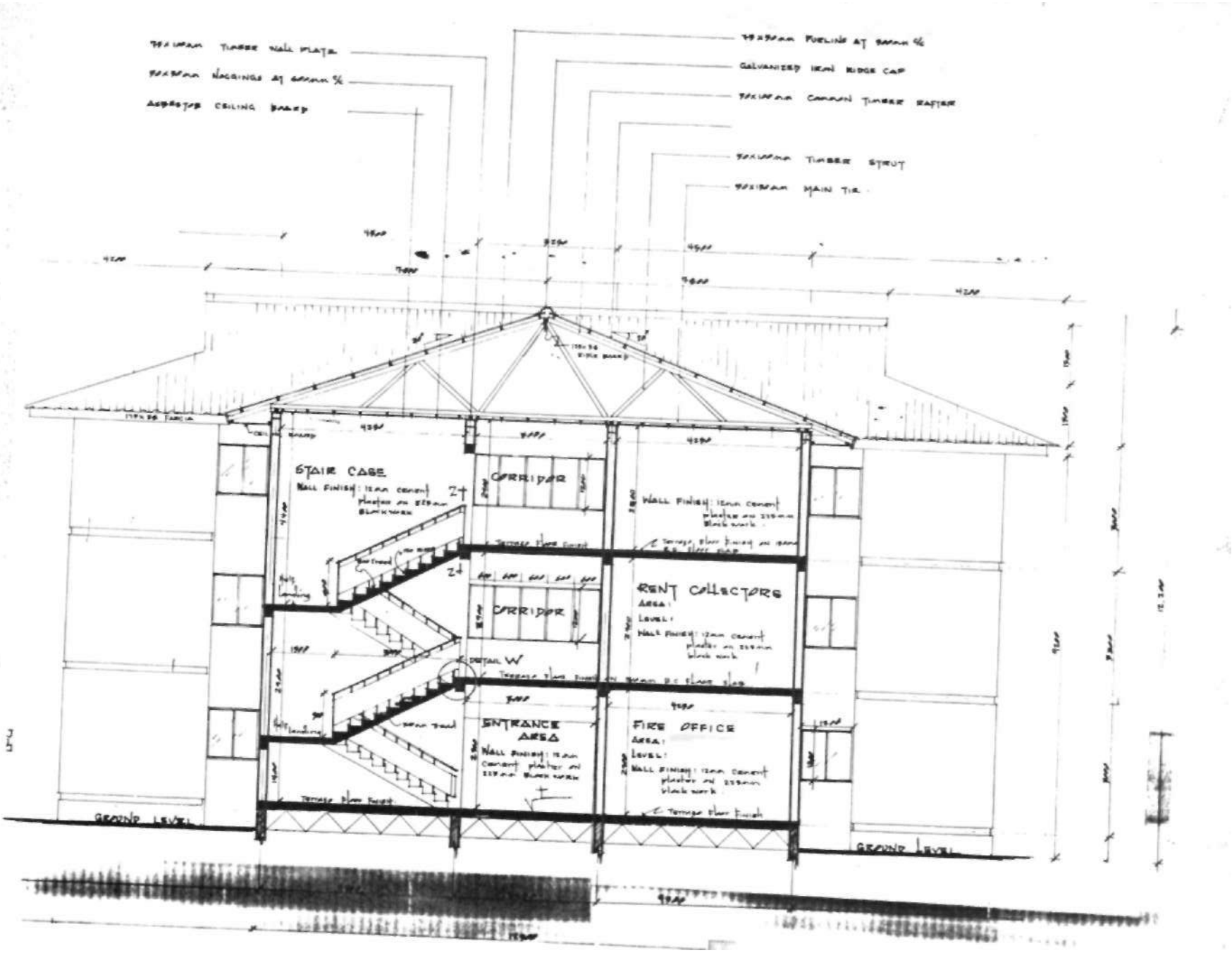
North western elevation 1

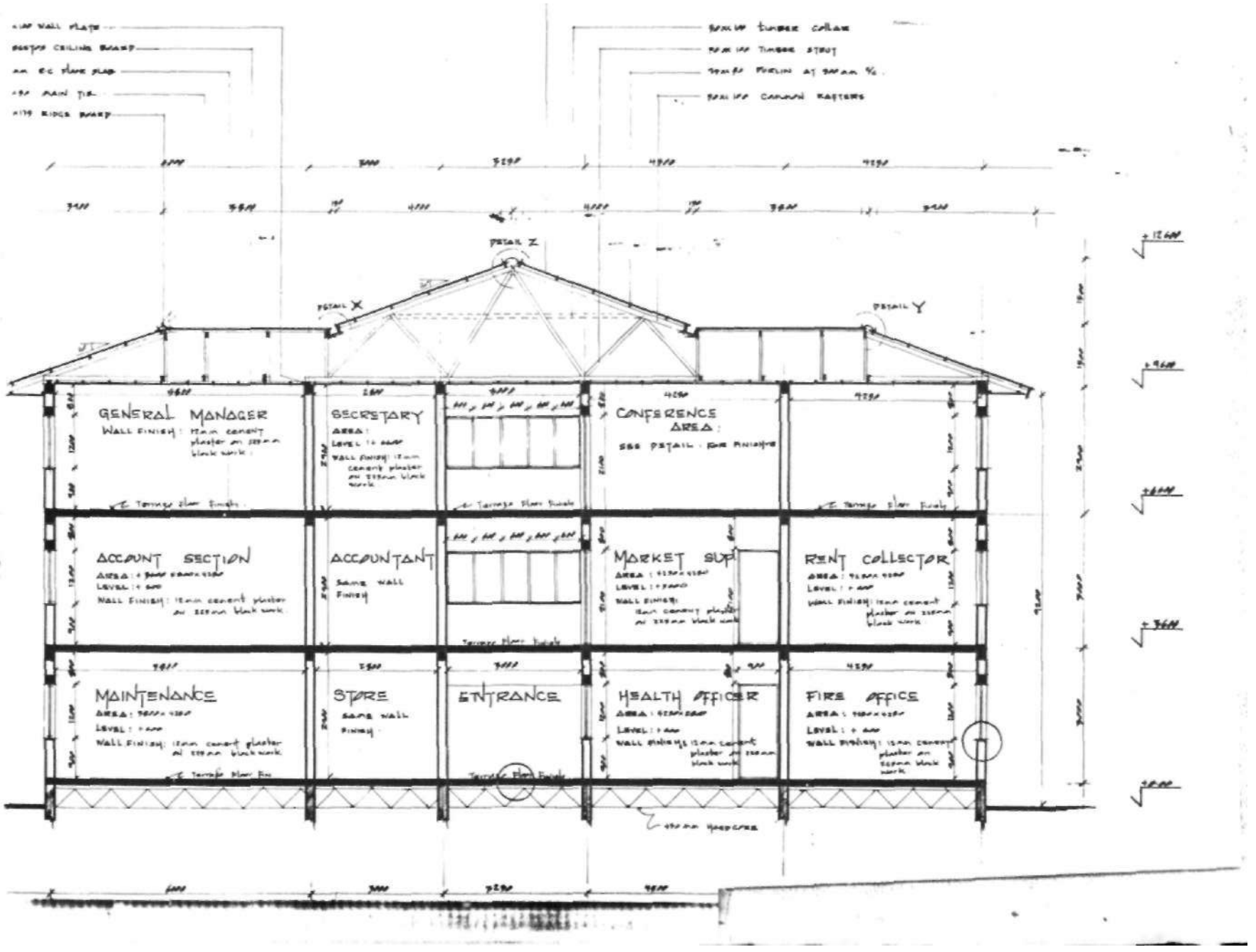


ODE MARKET REDEVELOPMENT SCHEME



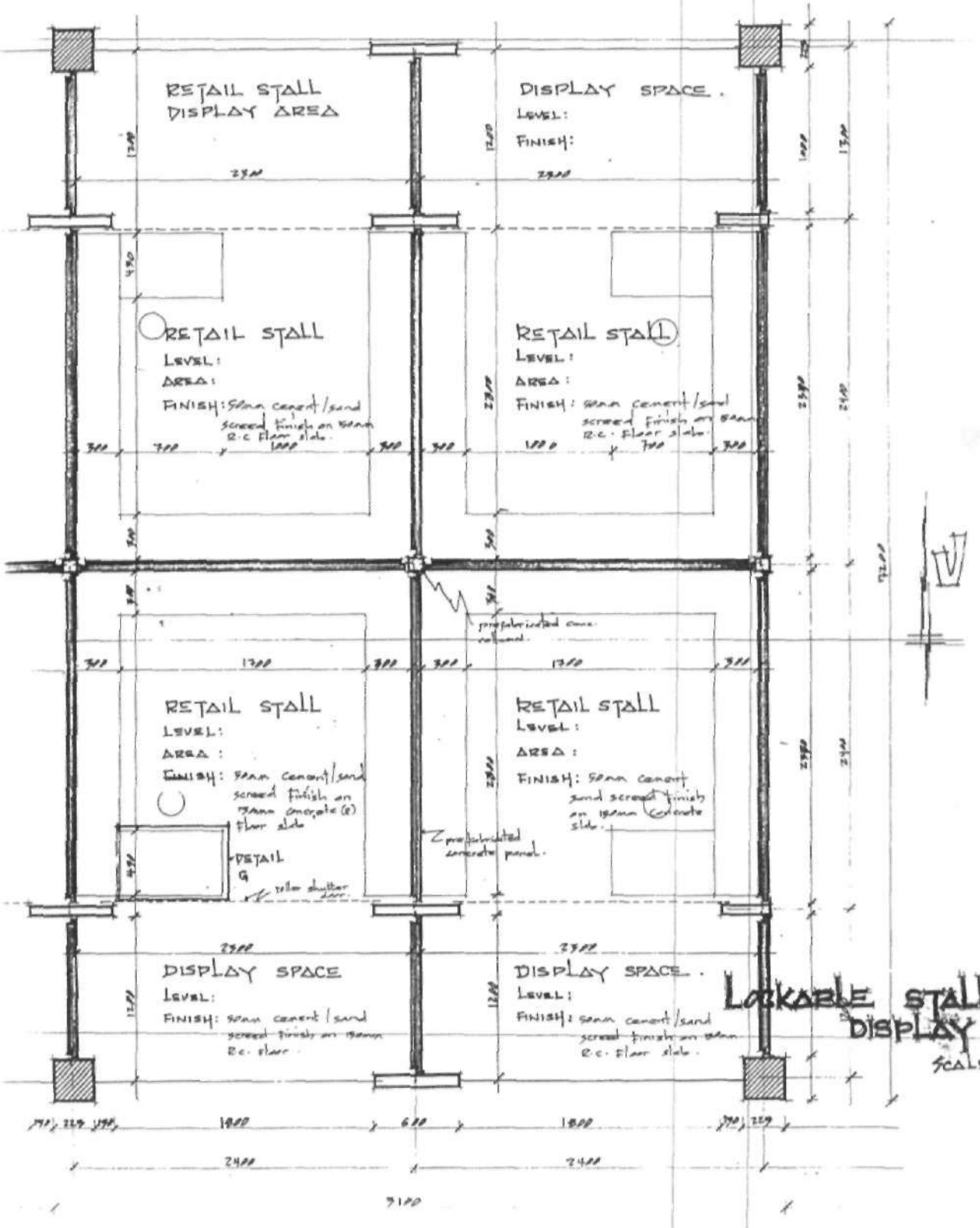
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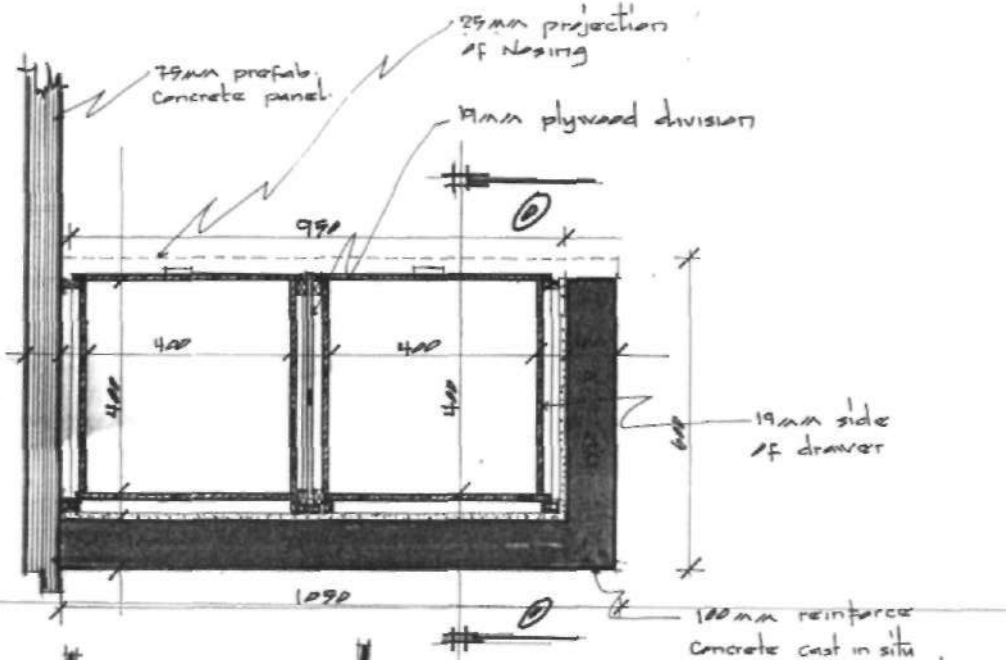

TIMBER WALL PLATE
NAILINGS AT
ASBESTOS CEILING BOARD
PURLINS AT
GALVANIZED IRON RIDGE CAP
COMMON TIMBER RAFTER
TIMBER STRUT
MAIN TIE
STAIR CASE
WALL FINISH: 12mm cement plaster on 225mm blockwork
CORRIDOR
WALL FINISH: 12mm cement plaster on 225mm blockwork
RENT COLLECTORS
AREA:
LEVEL:
WALL FINISH: 12mm cement plaster on 225mm blockwork
DETAIL W
CORRIDOR
ENTRANCE AREA
WALL FINISH: 12mm cement plaster on 225mm blockwork
FIRE OFFICE
AREA:
LEVEL:
WALL FINISH: 12mm cement plaster on 225mm blockwork
GROUND LEVEL
GROUND LEVEL


GENERAL MANAGER
WALL FINISH: 12mm cement plaster on 225mm block work
SECRETARY
AREA:
LEVEL: +
WALL FINISH: 12mm cement plaster on 225mm block work
CONFERENCE AREA:
SEE DETAIL FOR FINISHES
ACCOUNT SECTION
AREA: +
LEVEL: +
WALL FINISH: 12mm cement plaster on 225mm block work
ACCOUNTANT
SAME WALL FINISH
MARKET SUP
AREA: +
LEVEL: +
WALL FINISH: 12mm cement plaster on 225mm block work
RENT COLLECTOR
AREA: +
LEVEL: +
WALL FINISH: 12mm cement plaster on 225mm block work
MAINTENANCE
AREA: +
LEVEL: +
WALL FINISH: 12mm cement plaster on 225mm block work
STORE
SAME WALL FINISH
ENTRANCE
HEALTH OFFICER
AREA: +
LEVEL: +
WALL FINISH: 12mm cement plaster on 225mm block work
FIRE OFFICE
AREA: +
LEVEL: +
WALL FINISH: 12mm cement plaster on 225mm block work
DETAIL X
DETAIL Y
DETAIL Z
+12.60M
+9.60M
+6.60M
+3.60M
+0.00

DETAILS ....

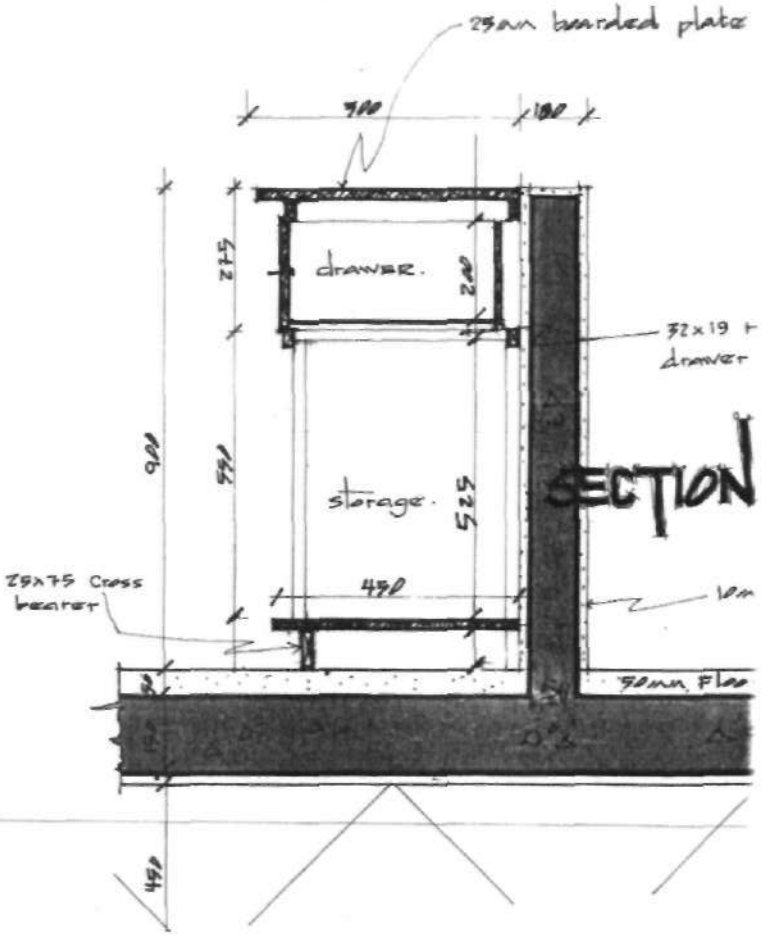
RETAIL STALLS : PROVISIONS & TEXTILES

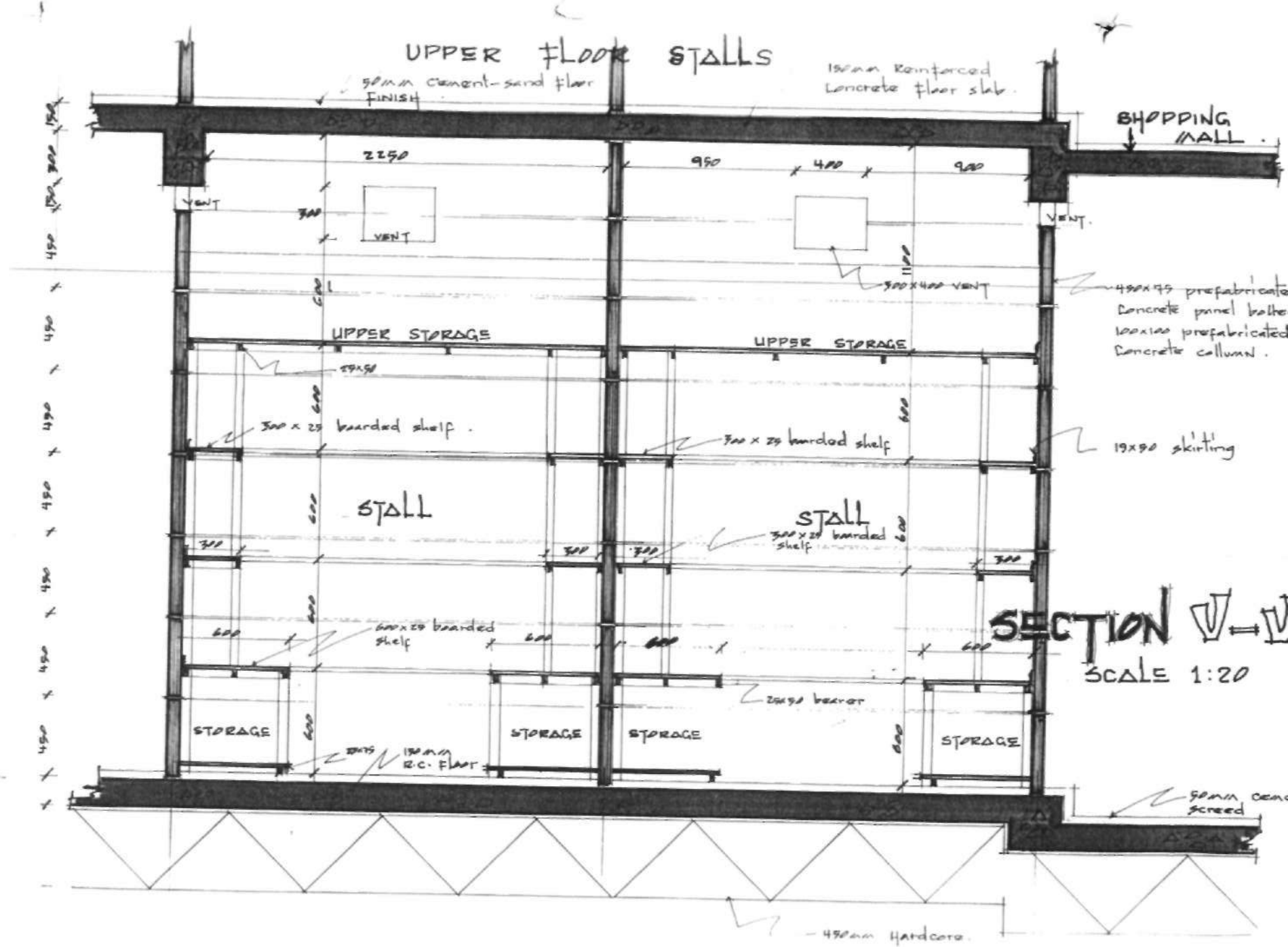


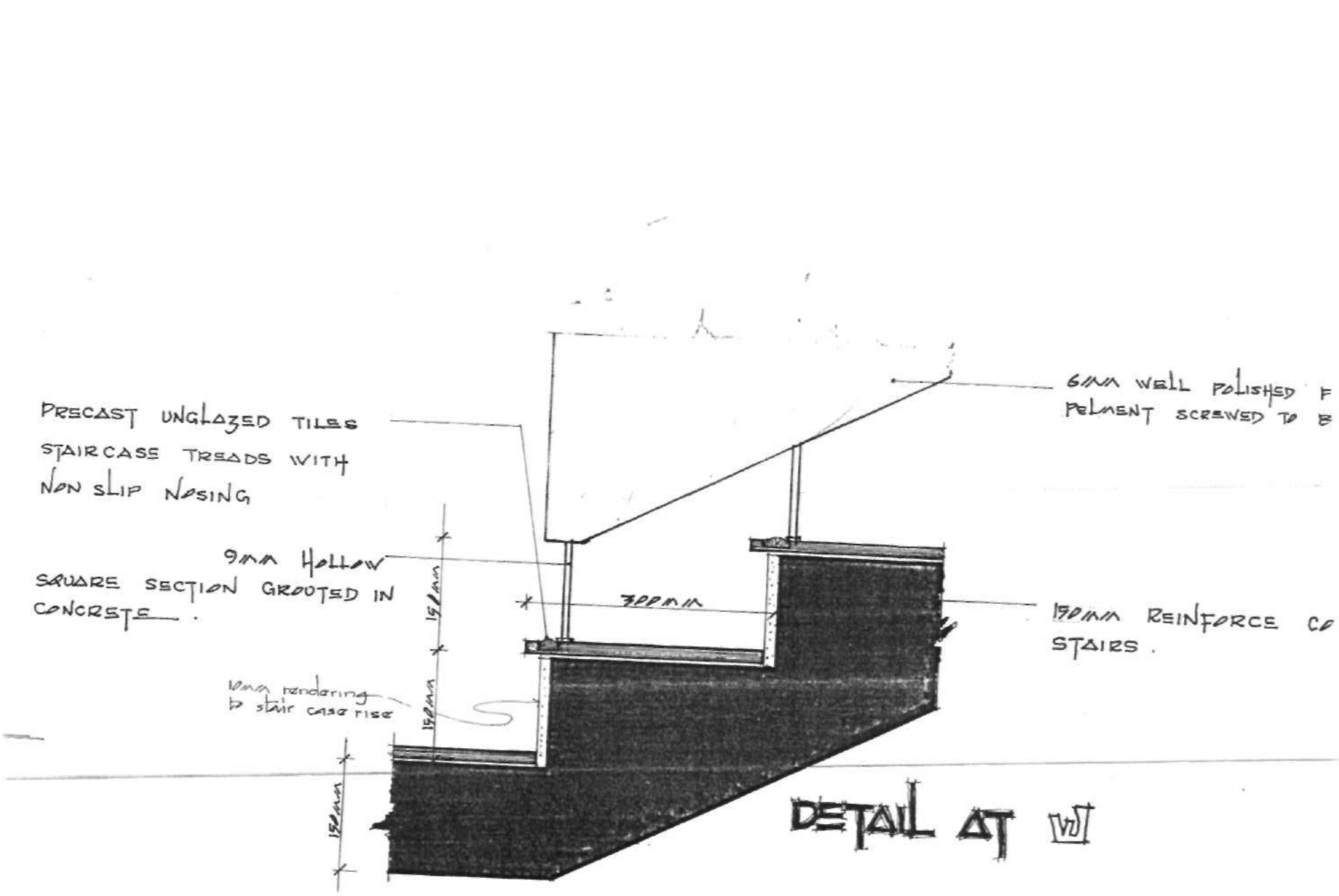


SALES COUNTER

SCALE 1:10

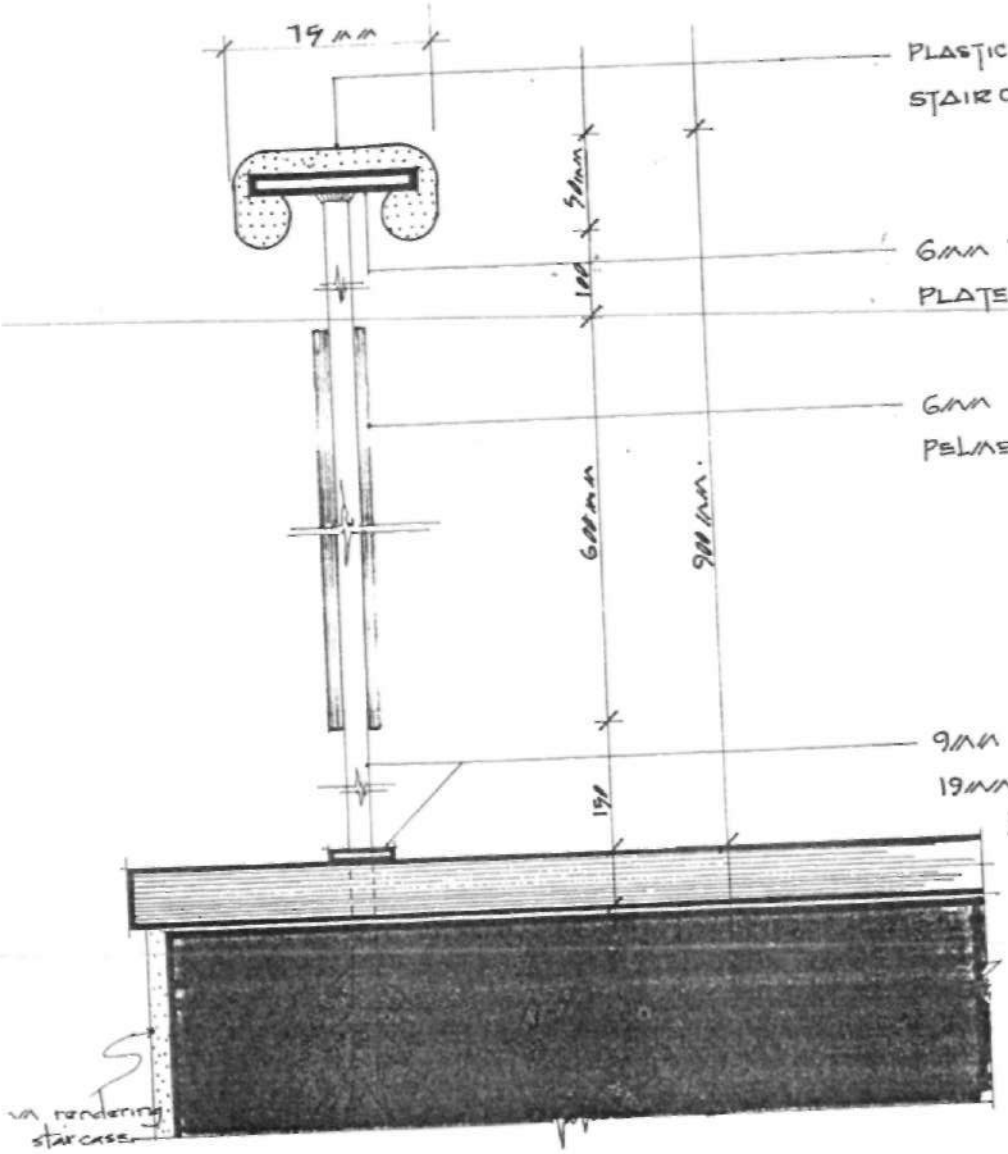



UPPER FLOOR STALLS
50mm cement-sand floor FINISH
150mm Reinforced Concrete floor slab
SHOPPING MALL
2250
950
400
900
VENT
VENT
VENT
300x400 VENT
450x175 prefabricated Concrete panel bolted
100x100 prefabricated Concrete column
UPPER STORAGE
UPPER STORAGE
25x50
300 x 25 boarded shelf
300 x 25 boarded shelf
19x50 skirting
STALL
STALL
300x25 boarded shelf
600x25 boarded shelf
250x50 bearer
STORAGE
STORAGE
STORAGE
STORAGE
150mm R.C. floor
50mm cement screed
450mm Hardcore
SECTION V-V
SCALE 1:20



DETAIL AT W

SCALE 1:5



PLASTIC HANDRAIL COVER TO STAIRCASE BALUSTRADE.

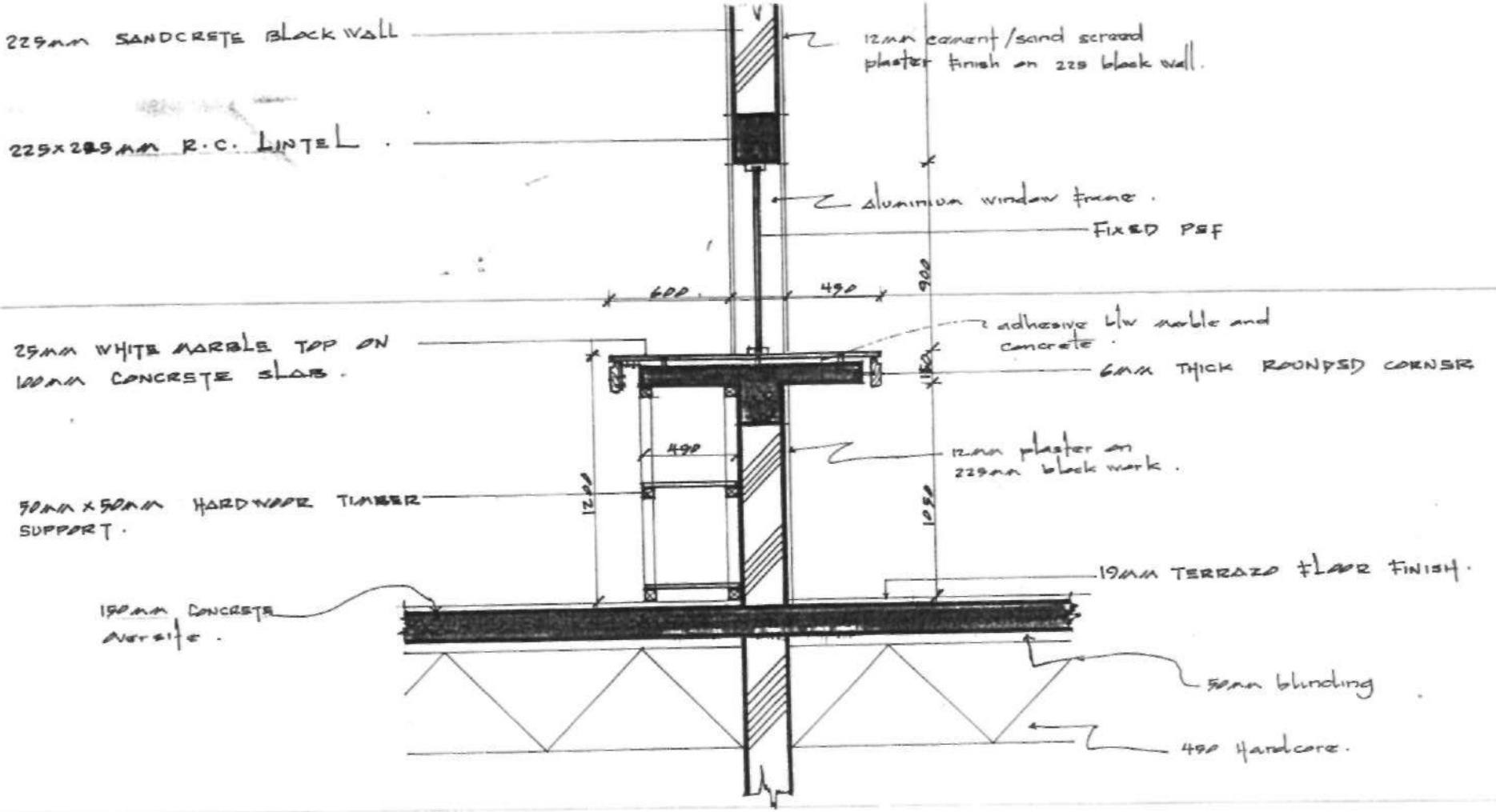
6MM THICK WELDED STEEL PLATE TO 9MM SQUARE SECTION BALUSTER.

6MM WELL POLISHED PLYWOOD PELMENT SCREWED 4 TIMES TO BALUSTRADE.

9MM SQUARE SECTION PAINTED BLACK WITH 19MM Ø WELDED BOTTOM PLATE AND GROUTED DOWN IN CONCRETE.

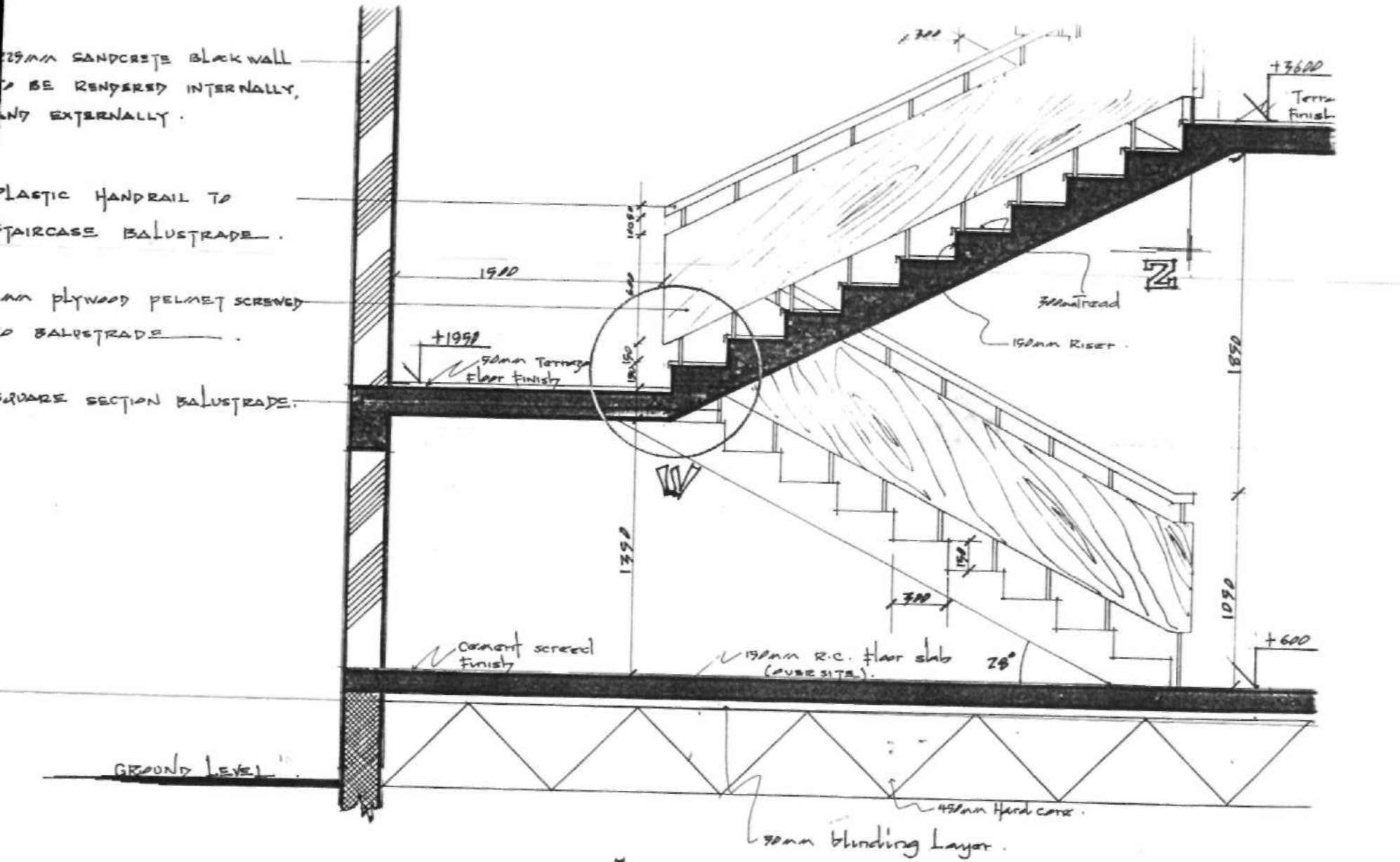
BALUSTRADE DETAIL AT Z-Z

SCALE 1:2



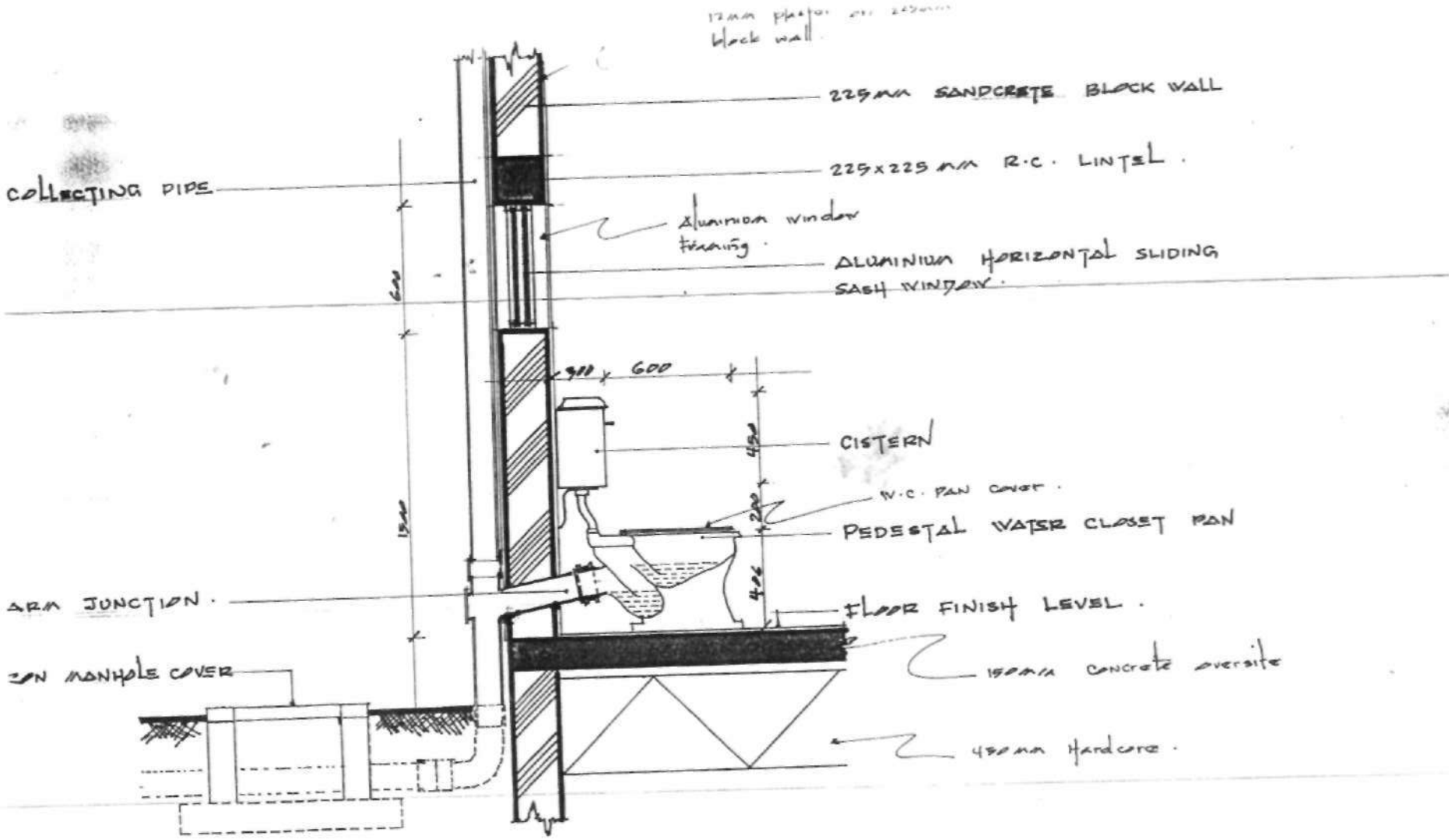
SECTION THROUGH COUNTER AT INFORMATION OFFICE.

SCALE 1:20



STAIRCASE DETAIL FROM SECTION E–E

SCALE 1:20



SECTION THROUGH THE LOW LEVEL W.C SUITE

SCALE 1:20