CONTRACT ADMINISTRATION,FOR PUBLIC PROJECTS

BY

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DIGITIZED

DEPARTMENT OF BUILDING

We certify that we have read this thesis and in our opinion it conforms to acceptable standards of scholarly presentation and is fully adequate in scope and quality, as a thesis for the degree of Master of Science in Construction Management.

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DECLARATION

I hereby declare that this thesis has been prepared by me and that it is a record of my own research work. It has not been presented in any previous application for a higher degree.

All quotations are indicated and the sources of information are specifically acknowledged by means of references.

Sign:.....
Hafizu Ilyasu MOHAMMED

NOVEMBER, 1984

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ABSTRACT

The main topic of this dissertation is Contract Administration for Public Projects. The main objective of this work is to study the practice of Contract Administration in public organizations and to find reasons for consistent failures by public organizations to achieve their building construction projects Some of which have been attributed to poor management.

Several literature on the subject were reviewed with a view to establishing the normal practices. The Field Survey to establish was obtained in reality was conducted by means of questionnaires and interviews. Interviews were used so as to make direct contact with respondents and to eliminate the questions of bias.

Cases were afterwards analysed and recommendation made.

It is hoped that dissertation will be of assistance to any user of the work.

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1. INTRODUCTION

1.1 BACKGROUND:

During the first decade after independence i.e 1960 - 1970, the volume of construction activities in Nigeria was evenly distributed between the Private and Public sectors, because the Housing sector was placed very low on the government's list of priorities; it was almost totally a private affair. During the past decade however, the volume of construction activity in Nigeria rose very markedly and came to a peak in the middle seventies and continued unabated during the implementation stages of the Third National Development Plan 1975 - 1980. Factors responsible for this construction explosion are not too fr to seek, and the reasons for development plans failing to achieve their objectives are not that for too.

a) The creation of States gave rise to a greater demand for development projects and ever introduced an element of competition amongst state governments on the one hand and the State and Federal Governments on the other hand, to develop quickly the areas under their jurisdiction. Some of which have for long ben neglected by previous governments. It was also during that decade that Nigeria witnessed he creation of Housing Authorities and Development Boards all over the country.

b) At the end of the civil war, (1967-1970) there was increased economic/reconstruction activities most especially in the war affected areas.

c) Underlying the tempo of economic activities was the phenomenal increase in revenue consequent on increased crude oil prices and volume of producion.

d) That explosion in the volume of construction activity infrastructural facilities, communications, water supply and electricity all yawning for development. Governments and even the private secor were therefore in a hurry to develop these facilities and provide other basic needs of the people. Therefore, the rate of increase in construction activity far out-stripped the rate of production of skilled and qualified professional local manpower to successfully accommodate the increased activity. Nigeria turned to be a country in a hurry.

e) Consequently and in most cases no proper fesibility studies, and in some cases none to establish the aggregate social and economic material benefit of schemes marked for development was done.

f) The prosperity at the time was for prestigious designs for development projects without any

or much regard to cost consideration or what may referred to as reasonable cost in our own circumstances as a developing nation.

g) Contracts were awarded at exhorbitant costs compared with similar projects elsewhere. In some cases, projects were abandoned because of inexperience or insufficient preparation and lack of sufficient funding and were later re-awarded at greater costs.

h) There were also some cases of mobilization fees running into millions of naira, that were not properly secured which were made away with, and are yet to be recovered.

1.2 THE NEED FOR THE RESEARCH: However, if the early seventies saw an explosion in construction activities, the late seventies and early eighties saw an explosion in the amount of money being paid for construction works (Contract Sum). In almost all the states in Nigeria the civilian governments (1979-1983) launched ambitious, unrealistic, non-feasible and expensive plans and programmes which involved a lot of building construction works. However, uptill the time they were deposed most of the projects initiated by the various governments stood uncompleted. This failure to realise projects has been blamed on many factors;

1) ambiguous policy statements;

2) lack of sufficient data about requirements of the project;

3) lack of funds to provide the required services or facilities or shortage of funds to provide -

basic minimum requirements;

4) shortage of skilled manpower and executive capacity;

5) award of contracts to incompetent or over stretched contractors;

6) disregard for tendering processes and procedures;

7) bureaucratic bottlenecks in processing payments for works done;

8) diversion of funds into none pressing and lucratic ventures, thereby starving other projects of funds;

9) ignorance of scientifice appreach to project management e.g. the critical path method;

10) poor communications, bad road network to sites causing all sorts of delays;

11) the winning of contracts by alien contractors who were not contractors in their countries of origin and whose bona fide credentials were not properly ascertained;

12) the payments of huge mobilization advances which some contractors absconded with;

13) the lack of law in ensuring that performance bonds as well as mobilization advances are properly secured;

14) the introduction of industrialised building systems which contractors who won the contracts were not themselves conversant with;

15) making of stage payments to contractors periodically and not in relation to work done.

Today the public sector which comprises Government ministries, departments, parastatals and quasi-governmental agencies, is the largest investor in the building construction in-

dustry and because of the successive failures of the public sector to realise building construction projects it is necessary to undertake a study into all or one of the many and varied causes that may have been responsible for this non-achievement of projects. It is in the light of this, this dissertation has focussed on one of the asnects of the management of Projects i.e, Contract Administration.

1.3 THE OBJECTIVE AND SCOPE OF THE RESEARCH:

First and foremost it is the objective of the dissertation to review the practice of contract amdinistration and all relevent works on the subject in order to identify the problems in the administration of contracts (practices and applications) faced by public organisations in the course of realizing projects i.e Public Projects. It is disheartning to note that despite the fact that the public sector invests millions of naira in Consultancy fees and almost the same ammount in the employment directly of the services of Professionals such as Architects, Quantity Surveyors, Building and Structural Engineers, building and public utilities are poorly designed or absurdly designed, costs are not determined or controlled throughout the contract period and buildings exhibit signs of poor construction (i.e bad quality) and structural failure. It is the objective of this dissertation to attempt to find reasons for the aforementioned.

This work is also a critique of the present system identifying in part what things are wrong and how those particular things could be made right and workable. We also intend to study how practices and their applications, have reflected favourably or unfavourably, on the output of the organization. It is the objective of this paper to propose an alternative model for the administration of Contracts, that could be adopted and adapted, in parts, by public organizations for the administration of public projects. It is also our intention to present a work that would be a worthwhile academic exercise and at the same time a useful practicaltool for use in contract Administration and policy formulation. The book as a whole may not be a solution but parts could be adopted for better results.

Areas to be investigated by this paper include:-

1) organization and staffing of departments handling projects in public organizations;
2) policies and guidelines for the initiation of projects;
3) types and nature of projects;
4) tendering procedures and processes;
5) award and placing of contracts and the contract agreements in use;
6) supervision of projects;
7) control/monitoring of progress and finances of capital projects;
8) payments to contractors;
9) delays and disputes;
10) the relationship between professionals and administrators.

1.4 METHODOLOGY: The study was conducted through re earph and field work by means of:-

1) Literature review

2) Questionaires

3) Interviews.

However, many problems were encountered in the process of collecting relevent data.

To start with, the questionaire is the most common method of gathering information. However, there is the problem of not having any direct contact with the respondents who may interprete questions differently from researchers intentions. The questionaire may also raise the question of bias. The interview was used becuase it provides high quality information that is generally free from bias. To get desired results, interviews were scheduled at the offices of the respondents after closing hours or at their homes so as to make them informal, a questioning scheme was designed and memorised and very little notes were taken. Collating information from interviews and intergrating information with responses from questionaire was one of the most interesting and problematic aspects of the research.

2. CONTRACT ADMINISTRATION AND THE CONSTRUCTION PROCESS

2.1 CONTRACT ADMINISTATION: In Public Organizations, a contract is usually awarded for most building construction works. These works are generally refered to as 'projects'. A project can be defined as " a specified amount of construction work with a definite beginning and end, which can be divided into component tasks. It includes the totality of all phases from conception through designs, construction, operation, maintenance and evertual demolition." (1)

The terms 'building contract' and ' building project', could be taken as synonymous in as much as they refer to a specific projects; in that light the administration of building contracts could mean more or less the administraction of building projects.

Contract Administration simply defined is the organization and direction of persons in order to accomplish a specified end, which in this case is the building project. Perhaps the simplest and shortest definition/example of administraction is the one which says that "when two men cooperate to roll a stone that neither could move alone, the rudiments of administration have appeared." (2)

An idea of the construction process is very fundamental to the understanding/appreciation of the practice of contract Administration because it involves the understanding of the interplay of the various parties involved in the Construction work, (from conception to completion), the process and practices controlling and regulating their association.

2.2 THE PROJECT (CONSTRUCTION PROCESS):

The evolution of phases in a project are refered to as the construction process. Essentielly there are three important steps in a project. These steps are:-

a) Project Conception stage:

b) Project Design Stage;

c) Project Construction Stage.

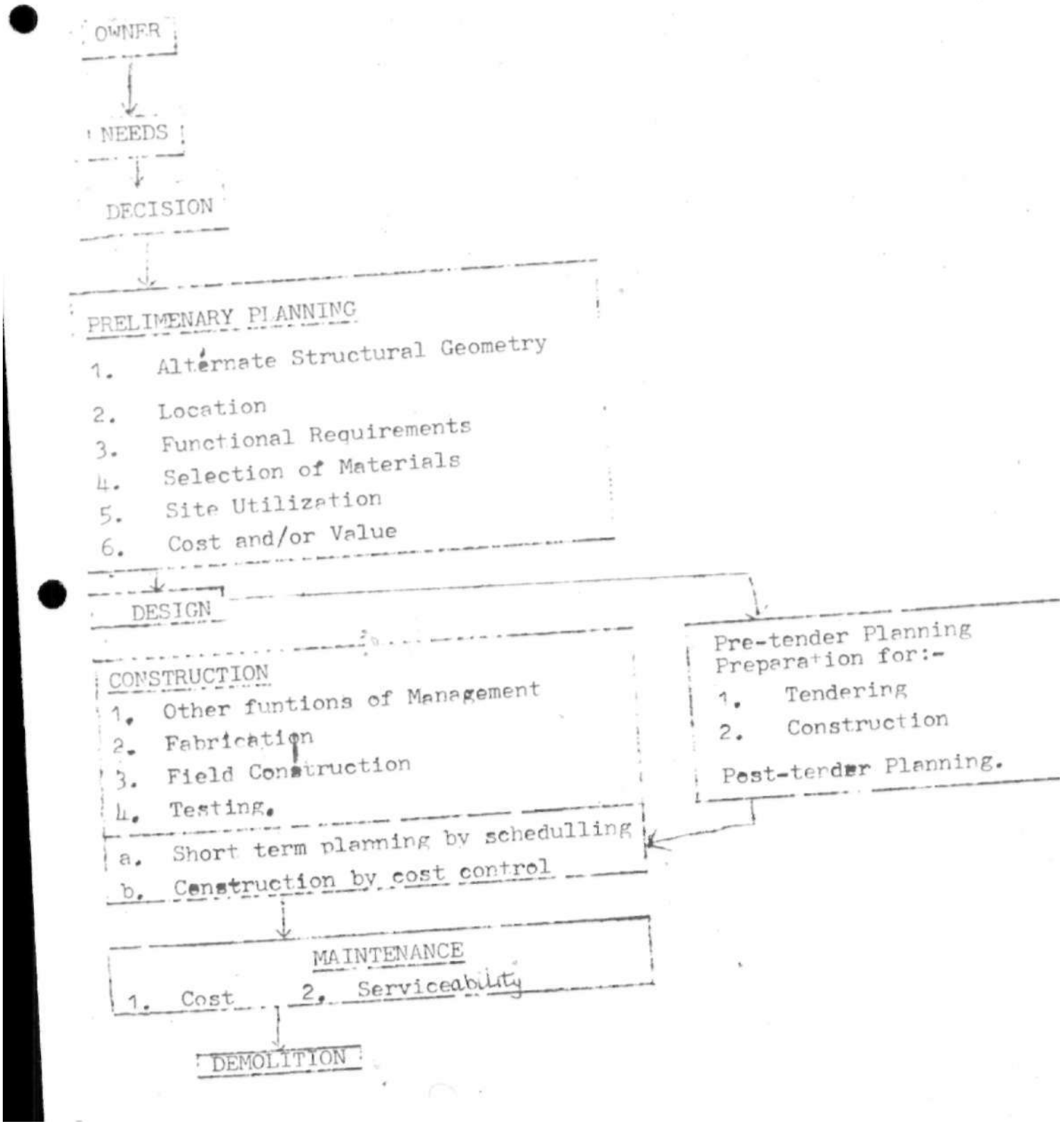
Project conception is the understanding of a need or goal which can be satisffed by a structure physically. The project design stage introduces the idea of the concept into an expression satisfying the need of the client at a reasonable cost.

The project construction stage is the physical representation or transformation of both project concept and project design.

This whole idea can be show diagramatically. (see fig. 2.1)

FIG..2.1

THE CONSTRUCTION PROCESS[1]



2.3 THE PLANNING ASPECT OF THE CONSTRUCTION PROCESS:

The first step in any project is its identification. This identification covers broadly the needs and importance and viability of the intended project .

Next is the undertaking of feasibility studies. After the project has been identified and feasibility studies have been completed, planners then move into give the project a recognition relative to its intended requirements. For example, a multi-propose building should be seen instantly with the necessary facilities to justify it nature. Similarly, planning of a highway should be recognised with due consideration to the rate of traffic congestion.

The organization and management of operations, expected during or in the construction process, are many and varied. Fundamentally two approaches have been identified and they are:-

a) The Traditional General Contractor Approach, and

b) The Construction Management Approach.

A self-explanatory schematic diagram of the two system is shown in fig. 2.2 and fig. 2.3, respectively.

GENERAL CONTRACTOR APPROACH

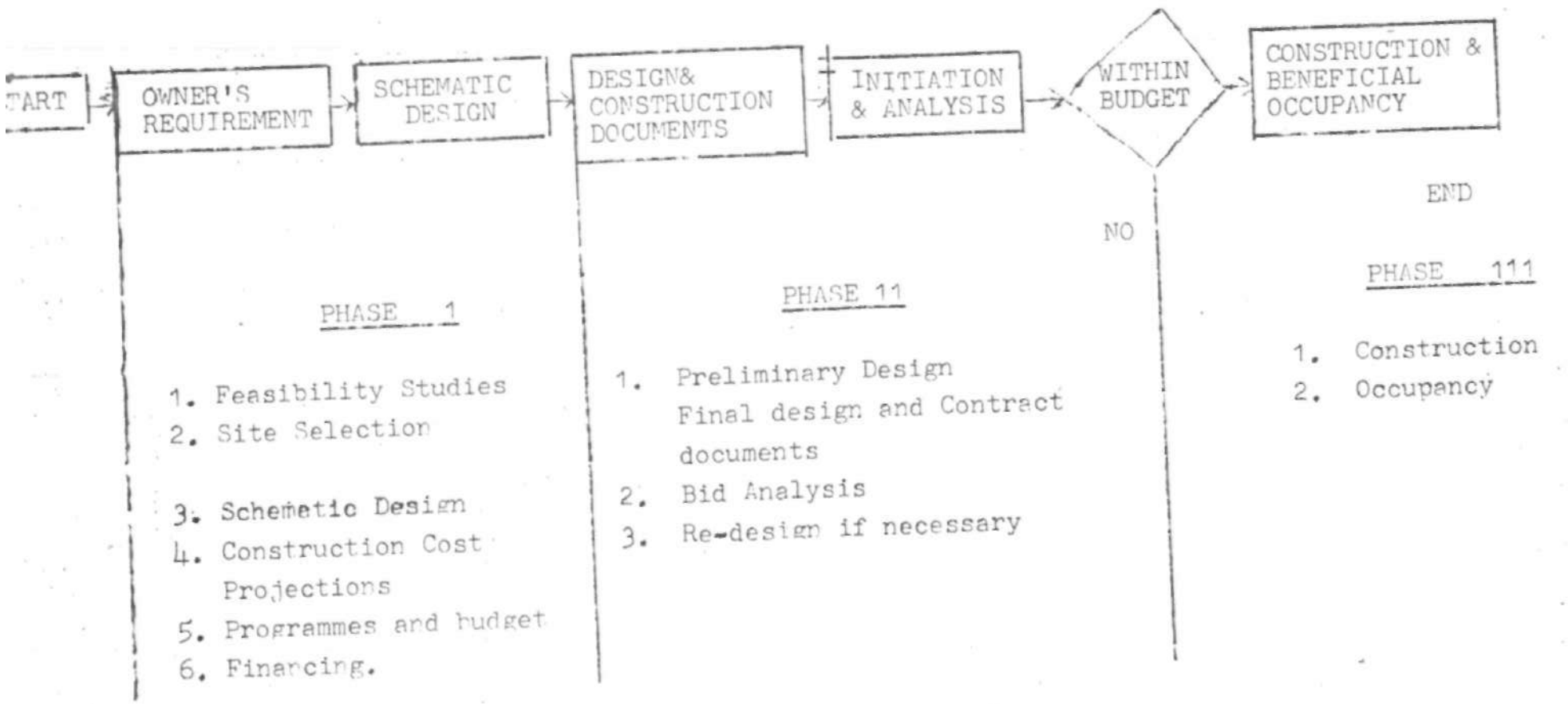
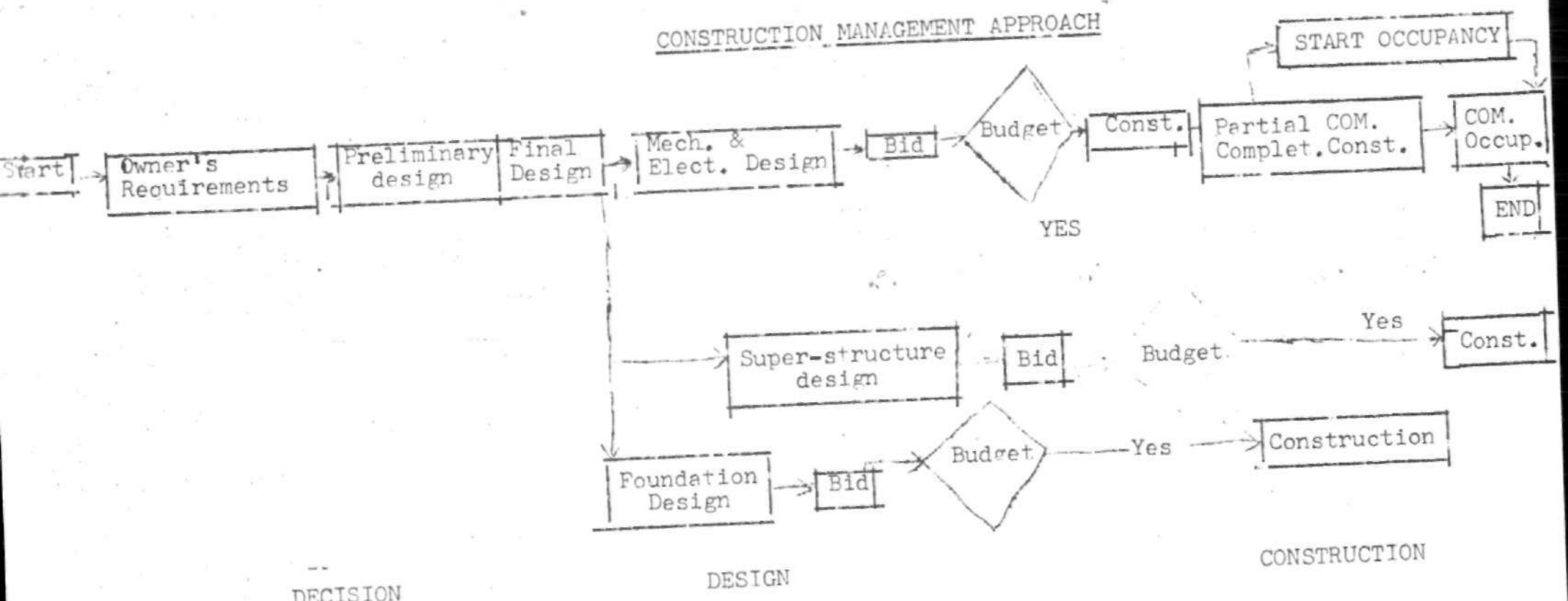


FIG. 2.2

FIG. 2.3


CONSTRUCTION MANAGEMENT APPROACH
Start
Owner's Requirements
Preliminary design
Final Design
Mech. & Elect. Design
Bid
Budget
YES
Const.
Partial COM. Complet.Const.
START OCCUPANCY
COM. Occup.
END
Super-structure design
Bid
Budget
Yes
Const.
Foundation Design
Bid
Budget
Yes
Construction
DECISION
DESIGN
CONSTRUCTION

2.3.1 POLICY PLANNING: Planning in building Construction aims to lay down the direction in which a move is made forward, taking into account the resources that are available. Nothing can result without a plan in any form of production, as activities will not be related and persons will go their own ways - that results in chaos and disorder. Any plan produced can only be a guess as to what is likely to happen but by the use of and collection of all relevent information and its critical examination, this guess becomes a much more calculated one, with a high degree of accuracy and foresight of problems and possible delays. Above all it will enable set standards to be laid down which will produce a control system. The planning systems used in the building industry are varied and considerable.

2.3.2 CONTRACT PROGRAMME: Another essential detail of any project is to ensure completion within the specified time (completion Period). The more complex the job, the more difficult this becomes as so many more things can go wrong. To help prevent problems arising in the form of delays and general co-ordination, a master plan is prepared to show all concerned with the project what should happen, when it should happen and by whom it should be carried out. This master plan can be prepared by the use of several forms of planning techniques and will result, whatever method is adopted in a visual diagram of project activities and other related information. However, this is not usually prepared by client but by the contractor. It is prepared by the Contractor in conjunction with the Client's Representatives.

An outline programme prepared early enough could be used as a foundation in the preparing of a more detailed master plan. The decisions and careful examination of all aspects of the work will most certainly result in the saving of money and time in the project period.

The above descibes an ideal situation irrespective of the nature of the Client i.e whether it is a private organization and individual or a public organization. Planning however, in public organizations varies a lot from that of private organizations and individuals because different factors are stressed. Take for example the case of financing; private organizations and individuals embark on projects when adequate arrangements for funds to see the project through to completion have been made. Whereas funds available to government have varied sources(levels of which cannot be accurately predicted) and have many sectors to be applied to. In this way, the financing of project, affect plans and programs in public organization.

2.4 THE BUILDING TEAM: Organization that make huge investments in building construction and who employ professionals permanantly or the services of Consultants have one important problem comfronting them for long. This is the need for improved co-ordination and organization between the Client and other professionals involved in the various stages of the construction process. Many people are involved in the Complex processes of construction and contract Administration.

This people could be classified into two or three depending on the special characteristic of the parties involved.

They are listed in the fifth edition of Contract Administration for Architects and Quantity Surveyors prepared by the Aqua Group.

2.4.1 The Client: The Client may be an individual, a local authority, a government department or a quasi-governmenal agency.

2.4.2 The Design Team: This team includes architects, quantity surveyors, services engineers whose role is to interprete the Clients requirements into specific designs or schemes and generally take over the task if seeing that they are carried through to their conclusion.

2.4.3 The Construction Team: This is principally the main contractor who may all upon the services of sub-contractors and specialists.

This is a broad outline of the parties concerned. Take for example, governments departments as they are generally constituted today, the Client and the design team are one. (Whose professionals are employed permanently by the Client). This gives rise to two arrangements Fig. 2.4. and Fig. 2.5., which give us a partial impression of the relationship between the members of the building team.

PARTIES INVOLVED IN A BUILDING CONTRACT

(SCHEME 1)

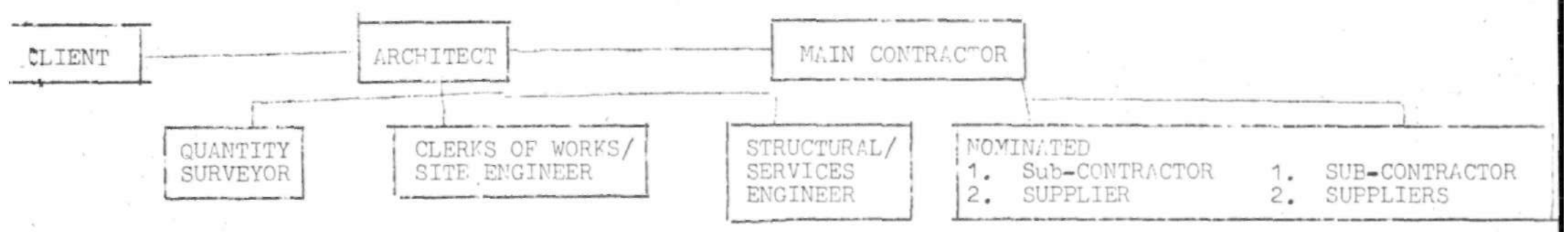


FIG. 2.4

PARTIES INVOLVED IN A BUILDING CONTRACT:
(SCHEME 2)

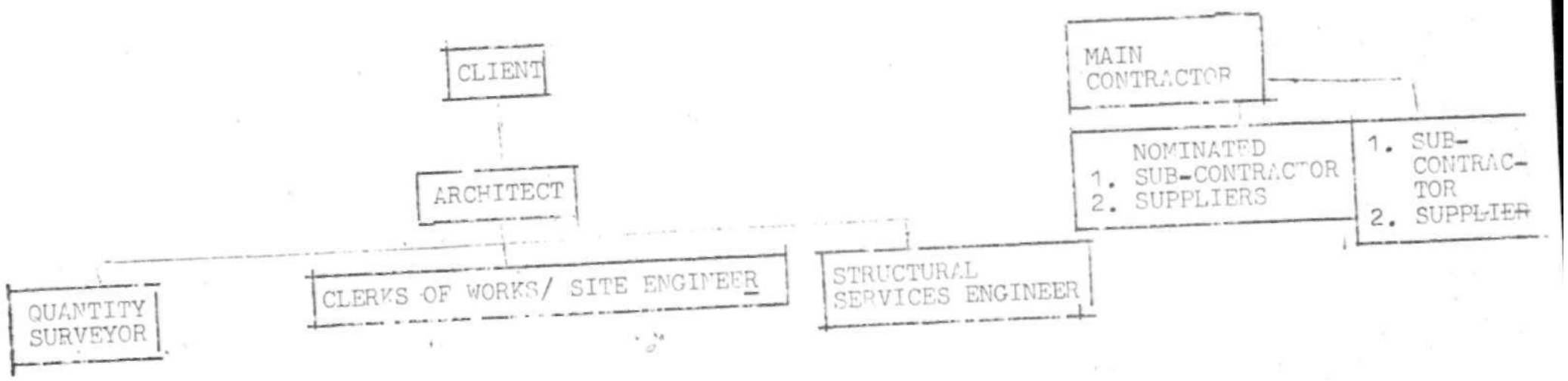


FIG. 2.5

2.5. RESPOUSIBILITES AND DUTIES

Though the various professinoals are mentioned in the form of building contracts, it is only in their relation to either the client or the main contrator that thay are mentioned. It is well to remember that the contract is between the client and the main contractor. Figure 2.5 clearly shows this relationship.

2.5.1 CLIENT;

At the comnencement of the construction process, the clients' major task is to analyse and collect all relevant information in order to give the Design Team the clearest picture of his requirements. In dcing this, he has to give special attention to the space available, the location, the cost of the project and the use of the new facility and the time limits for construction. The dient also has to consider carefully the financial aspect of the project with regard to drawing regular sums of money to meet the contractor's payments.

The client must primarily ensure that the architect is in possession of all the facts about the project. This will enable the client to know the architects views on type, size and cost of the facility and time when the project should proceed. Upon receiving the architects views, if the project proceeds, the client

sign the contract after agreeing to tender figures, by winning contractor, then any insurances required by the client are arranged.

During the contract period and at completion, the client at required times as specified in the form of contract meets the necessary contractural payments by honouring certificates, such as the pemultimate certificates, extra-contractural claims, settlement on final certificates, and professional fees.

2.5.2 ARCHITECT:-

The architect is first charged with the responsibility of formulating the clients requirements into an understandable form, having in mind any statutory conditions that may apply such as Urban and rural planning laws. He could either show the client physically or by means of sketches and (or) model of similar work which is often difficult to comprehend.

It is the duty of the architect to work with a team of other professionals to give specific guidance on certain points such as the quantity survey and structural engineering services of the facility etc.

When the cost limits and time scale have been assessed, sketch plans can be prepared enabling the client to approve or otherwise, before final sketches are prepared. The cost analysis is broken into elements at this stage to enable any cost reduction to be

done in sections. When agreement has been reached between the desingn team and the client, the architect can then proceed to produce his contract drawings for tenders to be obtained. Upon completion of the project drawings and bill of quantities, the work can now be put out to tender. Tenders that are received are checked on receipt and upon the acceptance of one, an inuagural meeting is arranged to clear up salient issues that may be raised, including a pre-planning period before the project takes off.

As the project progresses, the client is informed and the interim certificate of payments as stated in the formal contract are issued to the main contractor. At the end of the project, the architect issues a certificate of completion and certificate of making good all defects; normally six moths after completion.

2.5.3 CLERK OF WORKS/SITE ENGINEER:-

The client is entitled to appoint a clerk of works/site engineer to act as inspector on his behalf nuder the directions of the architect. Though the clerk of works/site engineer can on his own give instructions but when he gives instructions or directions it shall be of no effect unless it is with regards to a matter in respect of which the architect is empowered.

The clerk of works/site engineer's duty is to inspect the quality of works in accordance with drawing and specification. He will make regular reports to the architect and it is important that he keeps a diary throughout the project which will be valuable in case of any dispute.

4. QUANTITY SURVEYOR:-

Though the quantity surveyor is a member of the Design team, he must have a very close relationship with the builder when the tender is accepted, it will be his duty to cost valuations, variations and the like, in so doing, harmonising his role of project accounting.

At the commencement of the project the quantity Surveyor is invited because of his knowledge of costs. He prepares an approximate cost from sketch drawings, assembling element costs, so that cost cut can be easily done to meet the clients budget.

The quantity Surveyor prpepares a bill of quantities in accordance with the current standard of measurements if the client accepts the costs and scheme proposed by the architect. When a tender is finally accepted; the bill is priced and the quantity surveyor checks the accuracy to ensure that the builder has not made any serious errors that could cause complications at a late date.

Any correction is reported to the architect.

During the contract period the quantity surveyor will carry out Monthly valuations, pricing of variation orders and inconjuction with the contractor who is allowed to be present at such times, enabling him to receive payment from the client through the architects' interim certificates at regular intervals. The quantity surveyor will also keep the architect informed as to the running cost of the project.

At the completion of the project he write the final accounts with the aid of the bulder's receipts and other documents. He also assists the architect in discussions with the builder as to extra contractural costs.

2.5.5. STRUCTURAL AND SERVICES ENGINEER:-

The Structural Engineer takes part in the design of the project within the scope of his specialist field. He produces designs, information or other relevent data that may be required to assist the architect in his design. During the contract, if need by, he assists either by modifying or redsigning work.

2.5.6. MAIN CONTRACTOR/BUILDER:-

The first reponsibility of the Main Contractor on receiving the application to tender is to decide whether or not with the resources manpower and general manàgement at his disposal , to take up the project if successful, complete it according to the architects'

specifications as stated in the bill of quantities and drawings.

Before the tender is completd, it will be advantageous to carry out a ful site investigation so as to identify any unforeseen problems that can cause delays or extra costs once the contract is under-way.

When the estimate is completed, which is prepared from accurate study of the bill of quantities, drawing, site investigation, suppliers and sub-contractor's quotations. The principal of the firm will decide upon the final tender figure. The estimate is then sent to the architect for his decision which he either accepts or reject depending on the other tender prices already submitted, if the tender is accepted the quantity surveyor will require a copy of the priced bills to enable him to satisfy the architect that there are no faults or omissions in the make up of the tender figure. If an error is found the builder will be given the opportunity to correct it or, if he is satisfied with price, he allows it to stand.

The architect and the builder being satisfied with the price , Condition of contract are discussed then signing soon takes place when all problems have been solved. During the contract the builder's main responsiblity is to contral labour. Sub-contractors, and materials for the realizatian of the project, ansuring that programme and costs are maintained. Whilst at all times ensuring that all legislation affecting

the construction of building is adhered to.

2.5.7. SUB-CONTRACTORS:-

The duties of the sub-contractor is basically under the same conditions and responsibilities as the main contractor but generally ensuring that he complies with the programme of the main contractor because of the necessity and difficulty of Co-ordinating Sub-contractors into the agreed Master programme.

2.5.8. SUPPLIERS:-

The supplier is charged upon being asked to quote for supplying materials, be satisfied that he can complete all supplies on agreed delivery dates, issuing advice notes as required. Before supplying the bulk goods, he will make sure that the samples sent out are a fair reflection of bulk goods.

The supplier will also make cash and trade discounts available and finally submit accounts on time for prompt payment.

3. THE CONTRACT:

Organizations normally award Contracts for the execution of their building Construction work. The Contract is normally between the Client and the Contractor.

3.1 THE BUILDING CONTRACT:

In any building contract the contractor agrees to construct the building for the Client in return for the payment of an agreed sum of money on an agreed basis of evaluation and in accordance with the specifications contained in the contract documents. Based on the method of arriving at the contract sum, building contracts can be divided into three main groups according to the 2nd edition of Elements of Administration for Building Students by John T. Butler.

3.1.1 a) Lump Sum Contracts:

This is a type of contract in which the contractor agrees to execute the whole of the building works in consideration of payment of a fixed sum of money, based on the contract documents.

3.1.2 b) SCHEDULE CONTRACT:

In this type of contract, a schedule of all the items which are expected to be required is prepared giving descriptions similar to those in a bill of quantities but without any quantities. This type of Contract is called ' measure and value ' or Re-measurement' contract.

It is used when information available is inadequate to enable an accurate price to be assessed at the tender stage. The schedule may be an 'ad-hoc' schedule for a particular job based on past experience of similar jobs or a standard schedule designed to cover a wide range of jobs.

It may be given unpriced to a contractor for the purpose of tendering, in which case the contractor tenders by inserting a rate against each item. Alternatively the schedule may have been priced by the quantity surveyor before giving it to the contractor in which case the contractor tenders by quoting a percentage on or off the surveyor's rates.

It should be noted that it is not possible to determine which tender will give the lowest cost from a knowledge of the rates alone, therefore, a comparison must be made mainly between the major items e.g. concrete and block work as the minor ones like planking and strutting, hinges and ridge capping will have little or no effect on the result. As the work proceeds, measurements enable quantities to be inserted and the cost evaluated. Thus, the precise cost of work is not known until after completion.

3.1.3 (c) COST REIMBURSEMENT CONTRACT:

Another name for this type of contract is the prime cost contract. It is a type of contract in which the contractor is paid the actual cost of labour, materials and plant plus either a previously agreed percentage or fixed fee to cover his establishment charges and profit.

It is important in this type of contract to define what items are to be covered in the fee and what is to constitute prime cost.

It will be necessary here to keep a close check on the contractor so as to ensure that he is employing his resources efficiently. Cost reimbursement contracts are usually used on small or extremely urgent jobs where no other method is possible or used where the work cannot be defined in advance. Also when there are too many risks involved in a job such that the contractor would not feel safe taking it this method is often resorted to.

It is important to note, however, that very rarely is any contract discharged entirely by one of the methods Usually, a combination of methods is employed and the contract is often named according to that which predominates.

3.2 THE BILL OF QUANTITIES:

The bill of quantities which is a contract document and a basis for awarding a contract is a legal document between the Client and the Contractor. The essence of providing a bill of quantities is to treat every prospective contractor fairly and also to facilitate easy comparison of different tenders.

In a number of cases, bill of quantities fail to justify comprehensive documentation, because of the Quantity Surveyors' mistake in preparing quantities . Since Contractors rely heavily on the quantities provided, the risk of wrong feeding of quantities is borne by the successful tenderer.

On the other hand the client benefits in two ways. One he has the advantage of comparing the quoted bill of quantities and two, the risks of incorrect information as regards quantities by-pass him.

3.3 SELECTION OF CONTRACTORS:

The powers of selecting contractors to tender for projects are vested on the client. However, the method may be any of the following:-

a) Open competitive tendering

b) Selective competitive tendering

c) Negotiated contracts.

The methods above are generally used whether the Client is an individual or a Public Organization.

Experience reveals that selective and negotiated contracts are frequently favoured by individual Clients while public contracts are based more on open - Competitive tendering. Open - Competitive tendering requires every qualified contractor to tender but having satisfied the conditions of pre-qualification.

In general, pre-qualification is based on technical capability, current work load and room for more.

On Selective - Competive tendering, the architec invites a number of contractors privately to collect tender documents of the proposed project. Their responses depend largely on their interest and willingness. This type of tendering gives the architect the opportunity of dealing with one contractor at a time. Contracts awarded under this system are normally constructed under a single contract or by means of several contracts. This has an advantage of centralised responsibility for the purpose of management. On the other hand it has some negative effects. One it pollutes the good atmosphere between the architect and contractor on the one hand and the client and contractor on the other. This is in the context of the fact that the contractor may try to minimize his cost commitments to the project in order to maximise his profit. Secondly, selective tendering results in separation between design and construction thereby hindering the possibility of feed back from the participants. Thirdly, it eliminates contractor from building a reputation for another project except if he has the lowest tender.

In negotiated tendering, the contractor is invited and even before the design is completed. Such a case allow room for easy handling of possible complications. It also provides a forum for good relationship between the architect and the Contractor.

.4. TENDER DOCUMENTS AND SUBMISSION:

Tender documents are issued to the contractors for inspection and thorough examination within the specific

time up to the closing date. Tender documents very from one project to the other. However, tender documents in most projects cover the following:-

1) A set of scale design drawings
2) A tender form
3) Bills of quantites (where applicable)
4) Specifications where applicable
5) General conditions of contract.

From the documents above, the contractor is furnished with every bit of information needed with respect to the contract. A copy of scaled design drawings is supplied to contractors where bill of quantities are applicable. In the case of non-availability of quantities, the contractors are supplied with sets of drawings and specifications from where they are expected to prepare their own estimates.

Criteria used in considering and award are as follows:- (These are generally used by Private Organizations and individuals)

a) Adequate resources possesed by the tenderer e.g plant and equipments, financial stand and personnel.
b) Project being executed,
c) Performance on similar project previously with the client or elsewhere.
d) Whether previously registered with the client.
e) Contract quoted figure and duration.

Both the client and contractor sign the contract basing their obligations to each other on the contract documents. It is during the signing of the contract that the amounts of liquidated damages and ascertained damages are inserted and clearly spelt out. Liquidated and ascertained damages are the amounts of money charged on the contractor for failure to complete the contract within the agreed duration. Retention money is also set aside. This is the money deducted from the amount due to the contractor and kept by the client to pay for the cost of carrying out remedial work on the project. Formal " offer and acceptance" between the client and the contractor is reached when the former collect the signed contract documents from the latter.

Tenders are submitted either by post or by hand. These days, tenders are submitted by hand so as to eliminate the risk of misplacement. When submitting tenders, some requests are made by the client to the contractors. These requests include:-

1) Photocopies of registration certificate
2) Project completed in the last three years including information like the clients, locations and values.
3) Projects being undertaken indicating clients, the project duration, total contract values and present stage of construction.
4) Workforce indicating their number, skill and qualifications.
5) Details of available facilities and locations e.g. workshops and plants.

These request are mostly made by public organizations such as ministries and government departments. Tenders are opened in the presence of an administ ing committee with the tenderers in attendance.

3.5. CONTRACT AWARD:

The contractis awarded to a competent contractor after careful examination of various informations supplied. The award is based on many factors and these factors depend on the type of project being awarded.

The submitted tenders are passed to the quantity surveyor for his appraisal and comments. Tenders are checked for possible errors and corrections effected accordingly.

Recommendation is then passed to the client for approval. However, the recommendation for the award does not bind the client as he is at liberty to use his discretion for making the award.

3.6 SITE SUPERVISION

The essence of site supervision is to ensure that the clients' requirements as expressed in the contract documents are correctly interpreted and that the problems that may arise are satisfactorily resolved. The responsibility for supervision is shared between the main contractor and the design team. They are both bound by the conditions of the contract which would not be possible without a degree of supervision. The extent and nature of the supervisory arrangements will depend on the compexity and size of the contract works.

3.7 INSTRUCTIONS AND VARIATIONS:

In spite of complete planning and documentation at the pre-contract stage, it will be probably necessary from time to time for the architect to issue further drawings, details and instructions. It is important that these instructions should be clear and where revised drawings are issued, the revision should be specifically referred to. There are instructions which involve variation. Variation means the alteration or modification of the design, quality or quantity of works as shown upon the contract drawings and described by or referred to in thecontract bills, and includes the addition, omission or substitution of any work, the alteration of the kind or standard of any of the materials or goods to be used in the works and the removal from the site of any work, work materials or goods excuted or brought thereupon by the contractor for the purpose of the works. The architect's instructions will describe th varied work, state any item to be omitted and record any new or recommended drawings which are to be worked to. These variations will however, surface after the final accounts of the quantity surveyor when he is preparing the valuation certificate.

3.8 DELAYS AND DISPUTES:

The delay in the completion of contracts is one of the most common causes of disputes during the administration of contracts. It is also the most justifiable cause of the contract system and construction industry in Nigeria.

Delays can be caused by three major participants in the construction process i.e

a) The Contractor,

b) The Client,

c) The design team and

d) Outside causes which are beyond the control of the parties to the contract or their representatives.

The Contractor can avoid delays by proceeding diligently and efficiently with the construction works ensuring he has the required menpower, machinery and materials.

Delays outside the control of the major participants in the construction process are mainly FORCE MAJEURE which include floods, strikes and any direct legislative or administrative interference.

4. CONTRACT ADMINISTRACTION IN PUBLIC BUILDING PROJECT

4.1. A CASE STUDY OF TWO PUBLIC ORGANISATIONS:

In studying contract administraction in Public projects one has to go back to the basics i.e., to talk about administration generally.

Administration must exist in any organisation set up for a defined purpose or objective. Whether you think of a University, and Industrial Enterprise or a purely Social Organisation, there has to be Administration because each one consists of human beings brought together in a hierachial set up, making use of tools, equipment, human and material resources, all in the quest to attain the objective for which the organisation is established. The heads of these organisation i.e. University, Industrial enterprise and public organisation, each with functions and responsibilities for the accomplishment of the objective or purpose of the organisation.

This process requires planning, organisation, command, co-ordination and control. All these constitute administration. Every organisation in modern society consist of many different groups of people woven together in a complicated process to achieve the objectives or purpose of the organisation. Therefore, the study of contract administration in public Projects is the study of the roles and practices of the various parties involved in a construction process to realise a project.

In any study of contract administration therefore the basis elements of contract administration as outlined in chapter two and the questionaire are the variables to be studied and analysed. The two public organisation which are being used as case studies are the:-

1. Kaduna State Housing Authority, and the
2. Kaduna State Health Management Board.

They are most suitable because they are public organisations with clearly defined goals and objectives. They share the same management structure with the civil service but operate outside the civil service structure in order to reduce red tape and bureaucracy for impoved efficiency. The Kaduna State Housing Authority and the Health Management Board are herein after referred to as KSHA and HMB respectively. Contract Agreements/-Conditions refer to the JCT Form of contract (1963 Edition) and the Standard Form of Contracts.

It is not difficult to determine from the edicts setting them up that their goals and objectives are clearly defined.

(a) The Kaduna State Housing Authority was established by Edict No. 3 of 1975 which came into operation on the 1st day of April 1975 and was charged with the following responsibilities (Extracts):-

(a) Undertake the Development, Construction and Management of Housing Estates.

b) Construct and maintain dwelling houses and other buildings that are necessary or desirable for the performance of the functions of the Authority;

c) Provide and maintain roads, footways, bridges, drains, sewers and other water course for or in connection with any housing estate or building owned, constructed or managed by the Authority;

d) Acquire, construct, maintain or repair any works, plant or apparatus necessary or desirable for the provision of electrical, water or sanitary services for or in connection with any housing estate or building owned, constructed or managed by the authority".

Source: North Central State of Nigeria, Gazette No. 22, Vol. 9 of 29/5/75.

Supplement Part A

(b) The Kaduna State Health Management Board was estetlished by Edict No. 7 of 1978 with the sole purpose of "the overal maintainance and management of health services throughout the State within the framework of national and state Health Policies". And also the board may enter into contracts in respect of the following matters. (Extracts):-

a) Engeneering works whethe building, civil, mechanical or electrical;

b) Construction, repairs and maintenance of buildings."

Source: Kaduna State of Nigeria Gazette No. 13 vol. 6 of 1978.

4.2. POLICY STATEMENTS

KSHA: Prior to the advent of the civilian administration in October 1979, all policy statements on housing were contained in the yearly estimates of the Authority and that of the ministry of Works and Housing. This however did not go beyond the ammount of monies to be expended on housing and the places to benefit. However, with the civilian administration, it was necessary to issue categorical policy statements i.e Programmes. The first civilian government stated that it intended to build 200 (two hundred housing units) houses in each of the (14) local government areas of Kaduna State and 1000 units in the capital yearly. The statements did not specify the types of housing units and where specifically and the monies voted for such endeavours could only be found in Government estimates. Every year the government maintained such a statement upto the time when new local government areas were created making the new total from 14 to 70. Did the government mean that the 200 housing units were going to be built in each of the 70 local government areas or did it mean that the total for the 14 was going to be shared amongst the 70.

There was also absent of a clear cut guideline for the siting of housing units i,e need, population, vocational or Industrial establishment or otherwise. The siting was done from the office of the Governor.

HMB: Before the taking off the HMB in 1980, all hospital projects were handled by the Ministry of Health. However in 1980, the Kaduna State Government issued a statement that it had embraced the "Health for all by the year 2000" programme and with that came heavy investment in the construction of hospitals and health centres. "Policy Statements" were only contained in the yearly estimates of the Government and the revised fourth National Development Plan.

4.3 MANPOWER UTILIZATION AND ORGANIZATIONAL STRUCTURE

4.3.1 BACKGROUND:

The professionals whose responsibilities and duties are to be outline cannot function effeciently without coordination and direction and that is why they are woven together as a department or an organisation for easier interaction and harmonising of their activites. Like in most Public organisations, they are arranged hierachially in order of seniority and assigned professionally in order to achieve the objectives of the organisation. However, at the top of the hierachy is the head of the organisation or the department. Who is responsible for ensuring proper utilization of manpower. As stated earlier it is our objective to find out whether the professional bias of the head affects output of other professionals? Whether the duties assigned to each really makes the best use of them? and whether the functional and hierachial relationship in which they find themselves affects their schedules and consequently their performances.

4.3.2 DUTIES AND RESPONSIBILITIES OF PROFESSIONALS:

(A) IN THE (KSHA)

ARCHITECTS: Designs (mainly the revision of drawings inherited from defunct Northern Regional Government). Pre and Post contract administration and administration of Section or units.

QUANTITIES SURVEYORS:

Preparation of tender documents, valuation for interim certificates, measurement of variation and assesment for housing loans.

DISTRICT MANAGERS (KSHA):

Supervision of project in the local Govern - ment areas, preparation of monthly progress reports, collection of rents and responsibility for administration and staff welfare in the field. (May be Civil or Building Engineers initially).

IN THE (HMB)

ARCHITECTS:

Designs of minor components of hospitals and health centres. Liasing with Consultants in preparation of comprehensive Designs for hospitals. Supervision of projects. Post Contract Administration.

QUANTITY SURVEYORS:

Establishing specification, Cost Estimation of projects cost planning, cost control, preparation of tender documents, preparation of valuation certificates,

ZONAL ENGINEERS:

Supervision of projects, preparation of monthly progress reports, preparation of valuation reports but cannot authorise extra-work. (Mostly are civil Engineers.

STRUCTURAL/SERVICES/ELECTRICAL ENGINEERS:

In both the KSHA and the HMB the Electrical, Structural and Services Engineers are mainly employed for the supervision of works already designed by Consultants. They are however, involved in designs when revisions of designs and Extentions are made. They are an auxillary unit even in works departments.

4.3.3 ORGANIZATIONAL STRUCTURE:
(Source HMB.

HEALTH MANAGEMENT BOARD



FIG. 4.1

FUNCTIONAL AND HIERARCHIAL RELATIONSHIP.

KADUNA STATE HOUSING AUTHORITY
(Source KSHA)

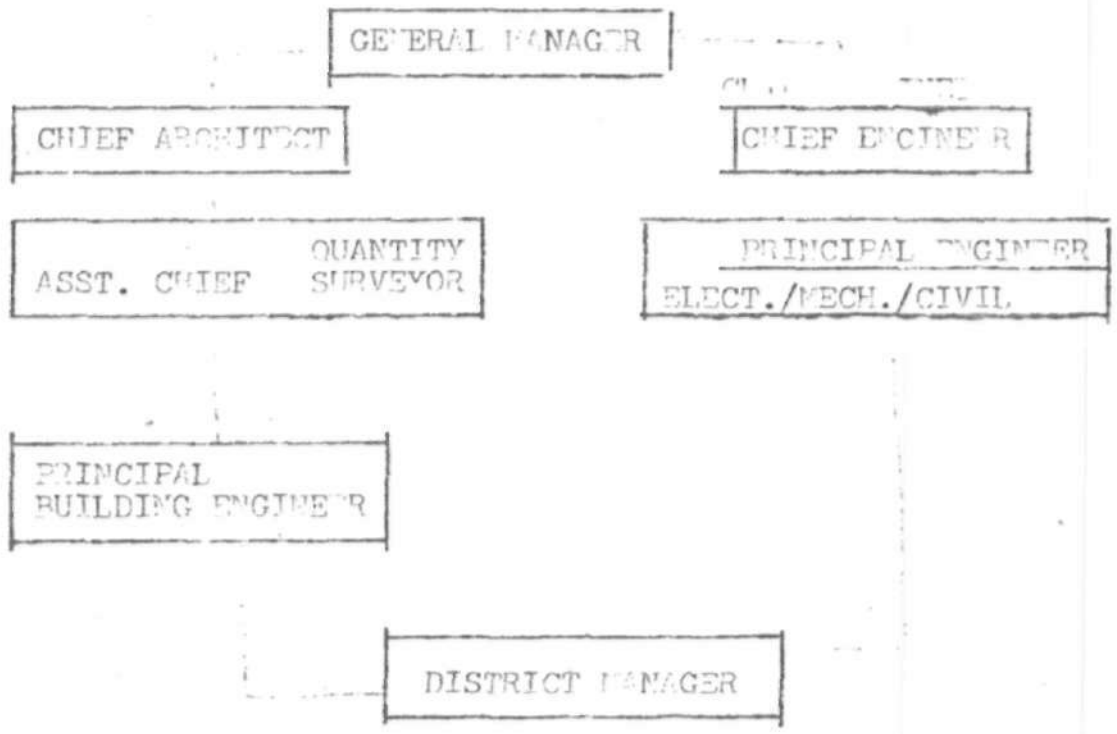


FIG. 4.2

FUNCTIONAL AND HIERACHIAL RELATIONSHIP.

ANALYSIS

One may wonder how the organisational structure of an organisation or a department could affect the practice of the Administration of Contracts. However, in a bureaucratic set up, posts, ranks and seniority affect the roles, functions and responsibilities of the members.

There is a general agreement in the construction industry as to the roles played by each memeber of the building team. Naturally, an Architect is ecpected to head the building team but a close look at the organisational structure of the KSHA and the HDB one would find that it is not so. The organisation and the professionals are aware of their duties and functions; this is however not strictly adhered to and as a result duties and responsibilities overlap resulting in reduced efficiency. Many at times professionals in specialised fields find themselves administrative heads of their departments and may assign roles to various professionals at various stages of the construction process from a narrow point of view.

Take for example, the post of Zonal Engineers, builders or Architects should be appointed zonal engineers. Moreover, in reality anybody is appointed, even Electrical, Mechanical and Civil Engineers are appointed as zonal engineers.

Fig. 4.1 and Fig. 4.2. shows the functional and hierachial relationship in the KSHA and the Works Department of the HDB. In the type of set up we find qualified professionals performing the wrong roles. This affects the ability of a person to discharge his duties effectively and efficiently thus causing great impediment to the process of contract Administration.

4.4. TYPES OF PROJECTS AND SCOPE OF CONTRACT:

KSHA: All houses built by the authority are for low income earners.

	PROJECT	COST (₦)	NO. PER ESTATE	DESCRIPTION
1.	3-Bedroom Muslim type Quarters	32,000.00	15-20	Contain two or three bedrooms and a court-yard. Maximum of two toilets, one kitchen and one living room. Mostly detached.
2.	2.-Bedroom Muslim type Quarters	21,000.00	30-35	
3.	Generator House for an estate of at least 50 houses	78,000.00	1	Single structure to contain generator, switchgear and auxil-lary appliances.
4.	Roads and other civil engineering works for an estate of at least 50 houses	74,000.00	1	Are such that each and every house in the estate is acces-sible by road and is properly drained.

H.M.B. The sizes of projects undertaken vary greatly with the size of facility.

	PROJECT	COST (₦)	NO	DESCRIPTION
1.	Katsina Specialist Hospital	3.5 million	1	Contain 200 beds (ortheopeadic, pediatric, general ward, operating threatres), housing facility, generator house, permanent fence, Roads, Elevated water tank etc.
2.	Malumfashi Hospital Pediatric	1.5 million	1	Contains 100 beds with the pediatric ward containing 50 beds.
3.	Giwa Orthopeadic Hospital	1.5 million	1	Contains 100 beds with the orthopeadic ward containing 50 beds.
4.	Comprhersive Health Centres	700,000.00	10	Simply a 50 bed general hospital.
5.	Primary Health centres	350,000.00	10	A 30 beds general Hosspital.
6.	Basic Health Centres	96,000.00	22	Contains 10 beds for limited observation.
7.	Intermediate Staff Quarters	(20-30),000.		Comes in 2 or 3 Bedroom versions. Designs belong to the KSHA.
8.	Wells	2,000.00		For the provision of water where there is no water supply
9.	Pt latanes	4,000.00		Toilet facilities in rural Health centres.

ANALYSIS

In the HMB Projects include Pit Laterines, Wells, Basic Health Clinics, Primary Health Centres, Comprehensive Health Centres and General and Specialist Hospitals. Costs of the Project range from two thousand naira to three and a half million naira.

Most of the projects designs were inherited from the Ministry of Works Northern Nigeria. There are standard designs for the various components of the hospital e.g., theatre, male-ward, out-patient department and X-ray room. These designs are revised from time to time to accommodate the extention and contain changes in building materials and new equipments. However, in the cases of complex projects like the Katsina Specialist Hospital, the Malumfashi peadiatric Hospital and the Giwa orthopaedic hospital designs were a little different from the usual.

For the KSHA projects are mostly two and three bedroom low cost houses spread over the fourten local government areas with approximately fifty in each. Costs range from 20,000.00 to ₦30,000.00 per unit.

The designs are the standard two/three bedroom muslim-type intermediate quarters used by the defunct Northern Nigerian Government. However, once the KSHA flirted with the idea of prefabricated/industrial building systems. About 100 multi-storey houses were built and this system was also used for part of the development of the Unguwar Rimi and Barnawa Housing estates.

However, this idea has long been abandoned. The scope of contracts is very wide but it is clearly spelt out in the Contract Agreements.

" The contractor shall carry out and complete the works in accordance with this Contract in every respect in accordance with the directions and to the reasonable satisfaction of the Client. If the Contractor shall find any discrepancy in or divergnece between or within the Drawings and/or Bills of Quantities he shall immediately refer the same in writing to the Client and specifically apply in writing for any necessary instructions from the Client in relation thereto. The Client may in his absolute discretion and from time to time issue Client's Instruction in regard to:-

a) The variation or modification of the design, quality or quantity of the works or the addition or omission or substitution of any work;

b) Any discrepancy in or divergence between or within the Drawings and/Or Bills of quantities;

c) The removal from the site of any materials brought thereon by the Contractor and the substitution of any other materials therefor;

d) The removal and/or re-execution of any works executed by the Contractor;

f) The dismissal from the Works of any person employed thereupon;

g) The opening up for inspection of any work covered up;

h) The amending and making good of any defects in accordance with the provisions of.

If any verbal instructions, directions or explanations involving a variation are given to the Contractor or his foreman upon the works by the Client or the Client's Representative, such instructions, directions or explanations shall be confirmed in writing by the Contractor to the Client within fourteen days, and if not dissented from in writing by the Client to the Contractor within a further fourteen days shall be deemed to be Client's Instructions. The Contractor shall fortwith comply with all Client's Instructions. If compliance with Client Instructions involves any variations, such variation shall be dealt with under.

and the value thereof shall be added to or deducted from the Contract Sum.

If a compliance with Client's Instructions involves the Contractor in loss or expence beyond that provided for in or reasonably comtempleted by this Contract, then unless such instructions were issued by reason of a m.

If within seven days after receipt of a written notice from the Client requiring compliance with Client's Instructions the Contractor does not comply therewith, the Employer may employ and pay other persons to execute any work whatsoever which may be necessary to give effect to such instructions and all costs incurred in connection therewith shall be recoverable from the Contractor by the Employer as a debt or may be deducted by him from any monies due or to become due to the Contractor under this Contract."

4.5. Tendering and Award of Contracts:

From its inception, the Civilian Administration directed that the Kaduna State Housing Authority should review its registration of its Contracts with a view to reviewing the list. After this was done, Contracts for the construction of 50 (2 and 3 bedroom) housing units in each of the 14 local government areas were advertised in the New Nigerian of January 20th 1980 with fees from ₦50.00 to a ₦100.00. In response to the advertisement about three hundred and fifty contractors tendered.

Because of the enormity of the task of appraising each tender (tender documents included bills and drawings and prequalification was registration with the Authority along the criteria mentioned in chapter 3) simply only a masterlist was compiled with the quoted figures. This list was passed on to the management with the recommendations that since no

project was bigger than (₦100,000.00) one hundred thousand naira the contracts could be awarded lump sum.

The Board of the KSHA deliberated on the contractors and provisionally awarded the contracts to 185 Contractors, some with two units and some with one. Contract for the Power Houses and Civil Engineering works were also awarded. The board also divided projects into two groups.

Group A Projects which cost up to ₦100,000.00 and above.

Group B Projects which cost less than ₦100,000.00.

For group A the contracts are forwarded to the Government House for confirmation. The powers of the board stopped at ₦100,000.00 per Project.

In this case however because there was no project bigger than one hundred thousand naira the master-list was sent to the Government House and a final list of Contractors was approved.

In future however, the KSHA, did not call for tenders anymore. Those who deserved more Contracts were recommeded to the board by the management.

HMB All contracts for constructions in the HMB are advertised and are open to contractors registered with the HMB, Kaduna State Government or the Federal Works registration Board. Contract over ₦250,000.00 are usually split amongst several contractors except for the Health Centres.

Management was advised after the list of contractors and their quotes was compiled.

In the HMB the Chief Executive was also the Chairman of the Board. Sometimes the Board was by-passed with direct dealings with the Government House. Tenders were also not appraised because of the time involved and advice was niether sought or received from professionals employed by the board. For larger Projects like the New Nursing Home, Katsina Specialist Hospital, Malumfashi and Giwa Hospitals, reputable contractors were invited by management to bid for the Contract. No professional including the Deputy Chief Engineer was never involved in the negotiations.

ANALYSIS: Tenders are mostly advertised in the National dailies, as required by Government regulations.

In the KSHA tenders are mostly open or negotiated with the lowest tenderer awarded the project.

In the HMB tenders are mostly selective or negotiated if the project requires the attention of a specialists Contractor. However, in the last four years a new trend emerged. Tenders were advertised and processed as usual but it is possible that none of the tenderers will win the Contract. The Contract is eventually awarded to the persons the political leadership deem 'competent' and their documents would be backdated and processed.

When tenders are advertised in the national dailies, respondents are given the impression that every

Contractor, subject to certain conditions, has equal chances of winning the project. Moreover, my findings showed that tenders are only advertised for official record purposes, but projects had been for all intents and purposes, awarded even at the time the tenders are advertised. It is a system whereby some official 'Con' the public and exploit situations for their personal benefits.

Also in negotiated Contracts, there are no pre-qualification for tenders (i.e a system whereby Contractors are screened to weed the very poor ones),

It was also noted that there were no appraisals of tenders. In the end despite the amount anybody quotes for a particular project, the Contracts are awarded at the Ministry of Works estimate i,e for the same type of project, all conditions being the same, the Contracts are awarded at a flat rate, And most of the Contracts are awarded to Contractors for reasons other than ability.

In the tendering processes most of the Professional have no role except to document, Most Contracts are eventually subleted because Contractors who win these contracts have neither the capacity nor the ability to do the job. The conditions of Contracts however say " The Contractor shall nto without the prior written consent of the Client assign this

Contract or sub-let any portion of the Works; provided that such sonsent shall nto ɔe unreasonably withheld to the prejudice of the Contractor". The provision is seriously breached since Contracts are 'sold' like yams.

4.6 CONTRACT AGREEMENTS: In Kaduna State all government agencies use the same forms of agreements. These are of two types and are based on the standard form of contract and the Federal Government conditions of contracts for lump sum contracts.

The conditions for lump sum contracts is used for projects whose total cost is estimated to be under one hundred thousand naira. It has only twenty two clauses and deleted deliberately are the clauses concerning unfixed materials and fluctuations. No payments will be made under this agreement for unfixed materials and no claims for fluctuations will be entertained.

This type of contract agreement is more commonly used by the KSHA.

The second type is used for projects over (₦100,000.00) one hundred thosand naira. It is the revised form of the standard form and resembles the JCT Form.

One noticeable revision is the clause dealing with payment to contractor. The time has been canged from "28 days" to "when funds are available in the treasury.

This form is mostly used by the HMB. This form however has a lot of obscurities which have either not been fully identified or are yet to be resolved.

Government Agencies have however been able to deal with contractors in ways they have deemed fit because most of the contractors are illitrate.

ANALYSIS: There is an agreement in both the KSHA and HMB on the clauses which are bottlenecks and which are abused and misused. The clauses which deal with interim certificates and payments, variations, unfixed materials, fluctuation and liquidated damages are seriously breached by both the KSHA, HMB and the Contractors. However, the Government is always at an advantage because majority of the Contractors are illitrate and do not know their rights. Most of the provisions that are breached state as follows. And it is not difficult to determine from their texts how easily these breaches could be made:-

" No variation shall vatiate this contract. All variations authorised by the Client or subsequently sanctioned by him in writing shall be measured and valued by the Surveyor (or if none then by the Client or the Client's Representative) who shall give to the Contractor an opportunity of being present at the time of such measurement and valuation and taking such notes as the Contractor may require.

The contractor shall be supplied with a copy of the priced Bills of variations showing the sums due to him under the Contract not later than the end of the Period of Final Measurement and before the date of the Client's certificate in respect of such variations, and the valuation thereof unless previously or otherwise agreed shall be made in accordance with the following rules:-

a) The prices in the Bills of Quantities mentioned in clause 4 of these conditions shall determine the valuation of extra work of similar character executed under similar conditions as work priced therein;

b) The said prices, where extra work is not of a similar character or executed under similar conditions as aforesaid, shall be the basis of prices for the same so that as may be reasonable, failing which a fair valuation thereof shall be made,

c) Where extra work cannot be valued in accordance with sub-clause (a) or (b) the Contractor shall be allowed day-work prices at the rates, stated in the form of tender;

Provided that in any case vouchers specifying the time daily spent upon the work (and if required by the Client the workmens' names) and the materials employed shall be delivered for verification to the Client

or the Client's Representative not later than the end of the week following that in which the work has been executed;

d) The prices in the above-mentioned Bills of Quantities shall determine the valuation of items omitted: Provided that if omissions substantially vary the conditions under which any remaining items of work are carried out the prices for such remaining items shall be valued under rule (b) of this Clause.

2) The measurement and valuation of the works shall be completed within the Period of Final Measurement and effect shall be given to the valuation of variations by adjustment of the Contract Sum".

"Where in any certificate of which the Contractor has received payment the Client has in accordance with Clause 27(2) of these Conditions included the value of any unfixed materials such materials shall become the property of the Employer and shall both be removed except for use upon the Works unless the Client has authorised in writing such removal, but the Contractor shall remain responsible for loss or damage to the same."

(1) The Contract Sum shall be deemed to have been calculated in the manner set out below and shall be subject to variation in the events specified hereunder:-

a) The prices contained in the priced Bills of Quantities shall be deemed to include the net cost of labour and materials and goods current at the date stated on the

decrease in the rates of wages paid to the manufacture's employees, then Kaduna State Government Employees engaged in similar work have received a comparable increase or decrease, resulting net increase or decrease shall be paid to or allowed by the Contractor;

(2) The Contractor shall incorporate the provisions of this clause 28 in any sub-contract for portions or work subject in accordance with these Conditions. Any fluctuations in prices in respect of the works so sub-let shall be paid to or allowed by the Contractor accordingly.

(3) The Contractor shall within a reasonable time give written notice to the Client or the Client's Representative of any increase or decrease in the net rates of wages or in the net prices for any of the materials or goods and of any increase or decrease in the net sub-contract prices for any portions of the works sub-let.

(4) No addition to deduction from the Contract Sum made by virtue of this Clause shall alter in any way the amount of profit of the Contractor included in the Contract Sum."

4.7 SUPERVISION OF PROJECTS:

In the KSHA we have District Managers who manage the Estates and supervise projects in the local government areas. They send Monthly progress reports to the head office. Variations are made by the head office. In HMB, however, the state was divided into four zones with a zonal engineer in each of the zones. The zonal Engineers and their staff are responsible for the day to day supervision of projects and the preparation of valuation reports. The valuation report is a statement of the items completed by the Contractor as specified in the Bills of Quantities and where bills are not used percentages of completion are given. This forms a basis upon which valuation certificates are prepared at the Head office by the Quantity Surveyo.

The most difficult problem in the supervision of projects is the quality of the supervisory staff. Most of them are technicians and technologists who sometimes make decisions that have drastic consequences on the projects. The second, problem is also their number. The projects are very many and scattered all over the state and it is very difficult for the small number of staff to cope with adequate supervision. In some cases even if the staff are qualified and experienced their powers are limited in that they

could not make any decisic ı that may involve extra - costs.

In both the HMB and the KSHA field staff cannot authorised any works involving extra-costs. The Contract Agreement are very clear about Supervision and the powers of Supervisory Staff.

(1) "The duties of the Client's Representative are to watch and supervise the Works and to test and examine any materials to be used or workmanship employed in connection with the Works, and the Contractor shall affort every facility for the performance of these duties. The Client's Representative shall have no authority to relieve the Contractor of any of his duties or obligations under the contract, nor except as expressly provided delay or any extra-payment by the Employer, nor to make any variation of or in the Works.

(2) The Client may from time to time in writing delegate to the Client's Representative any of the powers and authorities vested in the Client and shall furnish to the Contractor a copy of all such written delegations of powers and authorities. Any Written Instruction or written approval given by the Client's

Representative to the Contractor within the terms of such delegation (but not otherwise) shall bind the contractor and the employer as though it had been given by the Client. Provided always as follows:-

(a) Failure of the Client's Representative to disapprove any work or material shall not prejudice the powers of the Client thereafter to disapprove shuch work or materials and to order the pulling down, romoval, or breaking up thereof.

(b) If the Contractor shall be dissatisfied by reason of any decision of the Client's Representative he shall be entitled to refer the matter to the Client who shall thereupon confirms, reverse or vary such decision."

(2) 1. " The quality and quantity of the work included in the Contract Sum shall be deemed to be that which is set out in Bills of Quantities mentioned in Clause 4 of these Conditions but save as aforesaid nothing contained in the said Bills of Quantities shall override, modify or affect in any way whatsoever, the application or interpretation of that which is contained in the Conditions.

2. Any error in description in quantity in or omission of items from the Bills or Quantities shall not vitiate this Contract but shall rectified and treated as a Variation."[2]

4.8 . CONTROL AND MONITORING

Control over the projects is poorly cised in both the KSHA and the HMB. It starts by controlling costs in the design stage by the professionals involved in design and planning and during the construction stages by the supervisors who make sure works are done according to specification and no extra-costs incured. Progress of project is monitored though progress reports and reports on capital finances ensure the level of resources allocated is adequate for smooth execution of project.

4.9 PAYMENTS TO CONTRACTORS.

HMB

Payments in the HMB are divided into two categories. Payments for 1) projects under one hundred thousand naira and 2) for projects over one hundred thousand naira.

The first is clasified as payments for minor contracts and these payments are made in three valuations only; each not being less than thirty per cent of the value of the contract. The bills of quantities are not used for minor contracts.

The bills have previously been studied and percentages have been assigned to the various elements of the structure. These percentages are expressed as percentages of the value of the project. Generally 10% is assigned to substructure and 20% to Blockwork etc. These percentages are mostly less than the actual values of the works in the initial stages of construction ,this devaluation is compensated for in the later stages.

Bills of quantities are used for major contracts. The payments period for lump sum contracts is 28 days as contained in the contract forms whicle for major contracts it is when the treasury has funds.

KSHA: Since most of the projects here are valued below one hundred thousand naira there is no distinction in payments. All payments are treated alike. The difference comes in claims e.g. liquidated damages paid by contractors. In the KSHA, 100 naira is paid weekly in defaults for contract works less than 50,000.00 naira, 150 naira a week for contracts between ₦50,000.00 and ₦75,000.00 and ₦200 a week for contracts above ₦75,000.00.

The time it takes for payments to reach the treasury is almost the same in both the KSHA and HMB because they have similar bureaucratic structures.

ANALYSIS:

In both the HMB and KSHA payments are made late and this causes delays in the execution of the projects which lead to disputes. Late payments cause delays and may consequently call for fluctuations and late completion. Government financial regulations and policies are usually responsible for these delays. However, we also find situations where government officials have tried to exploit the situation to their own personal economic advantage. The problem of payment is very grea in government ministries because after processing a Valuation Certificate upto its approval by the accounting officer.

5.10 DETERMINATION, COMPLETION AND RETENTION:

HMB Cases of determination of contracts during the period under review were frequent. A classic example is the contract for the external electrical works at the Kagoma General Hospital. The contract was awarded in 1979. The main contractor did not start work until late 1979 and the contract was then stopped. The electrical contractor was given a go ahead to start work

in 1981 but he refused. Early 1982 the employment of the main contractor was determined. Again a letter was sent to the Electrical Contractor to proceed with his work but he responded with a condition that the contrac should be revised. The HMB rejected the contractors r request. Finally a warning letter was sent to the contractor with a deadline of two weeks within which to start work. After the time had lapsed, the contract file was sent to the Ministry of Justice for comments. A brief was then prepared for the Board and the contract was revolved.

KSHA: In this case the contractor handling the erection of elevated water tanks at Mani Housing estate, the contract was determined because he was established bankrupt.

The contractor complained about non-payment for works done. The KSHA responded by requesting him to ask his bankers to open up new lines of credit for him and that his payment would be given top priority when the KSHA gets funds.

He responded with a letter from his bakers that he was penniless and was furthermore indebted to the bank to the tune of several thousands of naira.

The case was forwarded to the Ministry of justice for comments.

The KSHA board determined the employment of this contractor because he had declared bankruptcy.

Other cases are not that easy to understand and for sake of decency and brevity we shall not discuss them here only in general terms.

ANALYSIS: Most of the new projects undertaken except for minor extentions and maintenance, works have hardly been completed. We have Contracts lapsing over two development periods. The Unguwar Rimi housing Estate Contract (prefabricated structure) was awarded by the Kaduna State Government in 1974 and is yet to be completed. However, some completed st structures are being occupied. The New Nursing Home General Hospital in Kaduna whose Contract was awarded is yet to be completed. Clause 18 and 19 of the Contract agreements are very explicit on completion. The clauses are however as good as none.

Retention as the rate of 10% is deducted progressly from the Contract payments. For larger contracts the retention money is usually 5%. Contracts have in the last four years been terminated arbitararily. The reason for most of the terminations amongst other things was Political vendetta. This contracts are then re-awarded to other contractors at even higher costs. This has led to many court cases with the government loosing a lot of money in claims and legal expenses, though some of the cases are handled by the Ministry of Justice.

4.12 SUMMARY

It has been found that the practice of Contract Administration results from and result in the followings:-

1. Ambiguous Policy Statements byGovernment or by Management of Public Organizations, is the major cause of bad planning at project conception and all its attendant results.
   Ambiguous policy statements to rephrase simply mean lack of clearly defined goals and directions Specialist Organisations as a whole may have goals i.e the purpose for which they were setup but do not have clearly defined objectives because they do not know how to effectively and effieciently go about the work they were set up for. They either set goals too high and are eventually difficult to attain because of lack of resources or set goals too low which will mean eventually expending too much of their resources for too little i.e. wastage.
2. Further to this Projects are not properly planned and are not related to the available basic infrastructure due to lack of suffi cient data about the requirements of the Project. As the saying goes preparedness is the key

to all successes but to be prepared or to plan and design adequately a project all relevant information must be dollected and made availabe to the project designers so as to ensure nothing has been left wanting all the factors like availability of space, funds etc., have to be furnished the design team.

3. The problem most generally felt is of the diversion (lack of funds) of funds into more pressing and lucrative ventures thereby starving projects of funds. This will certainly result into lack of funds to provide required services and/or facilities or shortage of funds to provide basic/minimum equipment.
This is mainly due to the governments policy of compression i.e cutting down costs to the barest minimum unless when higher interests are involved.

4. Bureaucratic bottlenecks, described earlier in processing payments, for work done are also a common feature. They result in delays and disputes between government and its Contractors which culminates into all sorts of complications. Many a Contract had been abandoned for this reason.

There is also a clear shortage of, and poor utilization skilled manpower in the professional administrative and executive capacities. This has also led to inability to properly administer Contracts, Supervise Projects etc. This is also a major cause of ignorance. Of e.g. the Critical Path method (CPM) and the Project Evaluation Review Technique (PERT).

Disregard for proper tendering processes and procedures has led to award of Contracts to incompetent and over stretched Contractors who end up producing poor quality works, abandoning Projects or absconding with mobilization fees.

Contracts have also been awarded, because of the e loopholes, to alien Contractors who realy were not Contractors in their own Countries of origin and whose bonafide Credentials were not corroborated.

The Contract Agreements generally in use ie. THE Jct form of Contract (Local Authority Edition) has become nothing but a collection of papers signed by both goverment and its Contractors. There is disregard for its provisions which are breached by both parties

8. Lastly, there is the problem of the round peg or a square hole i.e the professional/specialist in government. Government set up scarcely makes it impossible for certain professionals to assume their roles and responsibiliities as they would outside of government.

All the above listed problems or phenomena are results from poor Contract Administration Practice or the Poor Contract Administration Practice results from them.

The problems (causes and consequences) that characterised Contract Administration in Public Projects are many and numerous but for the sake of the scope of this work the preceeding eight lumped classification may suffice.

5. CONCLUSION:

5. 1. PUBLIC ORGANIZATIONS

In order to understand practices and operations, and problems emanating therefrom of public organizations and propose useful solutions certain charateristics or factors which influence styles and practices of public organisations have to be appreciated. Most important amongst these factors include:

(a) Polical Considerations:- The public administrative system responds to a complex set of demands articulated through the political system to an extent that has no parallel in business administration. It is a fact that modern business enterprises, especially large ones, must be sensitive to political influences and pressures such as e.g. Customs duties, Government policy on expartriate qouta or on indeginisation, such political influences do not stop a firm from observing market tests of efficiency.

Business firms are not directly intergrated with the political system in the way that all public administrative agencies are. The agencies inhabit a political instead of a market environment and the political system articulates demands and monitors results in quite different ways from the market system. Political consideration and

pressure groups could influence government decision. But, in the public service, the criteria for computing what can be regarded as the best use of resources are more complex and numerous. Using economic analysis there will be the need to use social costs and social benefits rather than an expenditure incurred and income received as in business.

(b) Financing of Capital Projects:

Capital Projects in public service are usually financed through own resources which could be either federal or state grants to the organisation. Sometimes certain projects require foreign or internal loans in order to see them through to completion.

The sources of own resources in Nigeria are mainly government viz Federal and State. For the federal government her major sources of revenue are through excise duties, company taxes, petrol revenue and miscellaneous taxes. While the State(s) depend largely on Federal grant/subvention, domestic taxes e.g. PAYE, Court levies, fines and so on.

Capital Budgeting constitutes the projection of requirements, assessment project and allocation of funds for respective periods.

Financing of capital projects through own resources usually involves pooling of revenue and disbursing per priority requirements.

While finance through foreigns loans usually involve seperate records specially designed and agreed for that purpose. Such funds are received directly from sources.

Domestic loans involve funding and special records kept. As for monitoring of performance, there are several instruments available for this purpose. These include the certificate of valuation and Contract Register.

The Contract Registered has the following informations:-

a) The name of the Contractor,

b) The nature of Contract including description and amount,

c) Progressive reduction of contract amount per payment made.

(B) Retention fee Administration: The 10% or 5% reduction of Contract Sum on each certificate of valuation is disbursed by means of a cheque which specifies the amount due the Contractor and the Commissioner of Revenue.

There is a journal voucher transfering the amount to a retention fee account but payment is made on receipt of certificate of valuation, releasing the retention after the defect liability period. Progress report of Capital finances simply are a record of the percentage of payments made.

(c) Compression:

Public expenditure, (as comtemplated by spending departments and political pressures and demands) always far exceeds the revenue which government can generate from all available sources. Thus the whole system works under constant pressure for economy.

In any organisation at any given time all of these factors or at least one or two would be found to be acting at the same time.

The two which have so far had the greatest impact on the practice of Contract Administration are:-

a) Political considerations, and

b) The financing of Projects.

Political considerations polluted the policy guiding the initiation and siting of projects and also bastardised the tendering system which led to poor contractors handling jobs which in turn also led to low quality work e.g. as in the Barnawa Housing Estate certain Blocks of flats collapsed and killed nearly all the occupants of the building. All similar structures later had to be pulled down in order to avert further casualties. That is a loss of an investment of over fifty million naira. The federal housing programme of the defunt Civilian Administration which lies uncompleted in all 19 States of the Federation is also another example.

The first problem goes side by side with the second i.e. Financing of Capital Projects.

Government and Public Organisations have, always and particularly very recently, projects which are beyond their resources to finance. This has led to projects being seriously delayed because of late payments, shelved because the government no longer considers the project a priority of the project has had to be suspended. There is also the possibility of cost of the project escalating because of delays where fluctuations and all sorts of claims set in. A contradicting feature of government is that while granduese plans are being made for Prestige Projects the whole system is under the presure for economy. This inconsistency is yet to be resolved.

Organisational and employment practices affect the roles and functions of the various professionals in the building industry that may be employed by public organisations. This is key in planning design and supervision of projects and indeed the whole system of contract administration in public organisations

5.2 SOURCE OF PROBLEMS IN CLIENT/CONTRACTOR INTERCOURSE

The objective of all building construction endeavours is to produce high quality works at reasonable costs at the specified time; however, poor quality works at high costs and late completion periods arise due to the actions of either the Client and his Professionals or the Contractor. In the case of public organisations like the KSHA and the HMB except in specialised projects there is no demarcation between Client and Professionals. Problems may arise if the Client:-

- does not challenge his professional to give him the best within his means.
- changes his mind too frequently asking for more difficult things during the period of works execution.
- does not readily accept competent professional advice,
- does not honour his contract obligations as stated in the Contract Conditions which in this case is the JCT form (Local Auhorities edition),
- does not call his professionals to book for negligence etc.
- does not take contractor to arbitration or sue him in court when he has failed to honour obligations.

Professionals can also contribute negatively by;-

- not cooperating with Client or themselves to give their best.
- not preparing all the required drawings before bill preparation, making room for the inclusion of too many near arbitrary prime cost and provional sums.
- not supplying drawings (details and specifications) promptly during site operations as required.
- not competently advicing the Client on what to do in case of Contractors' breach of Conditions.
- not letting the Client know the consequences of his actions.

The Contractor also by:-

- not being competent or reputed for good works.

5.3 RECOMMENDATIONS:

Earlier in this work, it was our stated objective to propose an alternative to the current Contract Administration Practices in Public Building Projects. However, at this point it would seem that the objective earlier stated is larger than than perceived. Proposing an alternative would mean an overhaul of the present system which is beyond the scope of this work. Recommendations would however be made on the choice, modification, revision of practices in Contract Administration.

Recommendations would centre on the variables highlighted in the objectives of this work.

(1) POLICY STATEMENTS:

The policy statement usually spells out the intention of the project initiator, the estimated cost of the project, as well as the resultant effect of such a project on the nation's economy. A sound and clearly-stated policy can establish the unity of purpose among all potential participants in the Project , and it can motivate initiatives necessary for the prompt execution of the project. The policy should establish objectives and guidelines with respect to identifying the people to benefit therefrom, adopting standards (space, infrastructural services, location, and actual construction) and assignment of responsibility to the institutional actors within the system.

Having made the policy statement, the actual feasibility study of the project is then done by making use of all available data and information about the project, and using this knowledge to determine scope of the project. It is after this aspect is completed, reviewed and accepted by the Client that the specifications and bill of quantities are prepared. It is after this that invitations to tender go out, followed by the analysis of the quotations received, comparing the figures with the estimates produced by the consultants. The contract is later awarded to the contractor satisfying all the pre-determined criteria set out by the consultants or the organisation.

There is then the actual construction phase of the project with adequate site supervision along with the phased execution of different stages of the contract. On the completion of the project to the satisfaction of the site supervisors, a certificate of payment is prepared before the contractor gets paid for the project. Finally, the completed and properly executed project is handed over to the Client.

2. ORGANIZATION:

The design of a formal structure of organisation in which specialization can be applied is of utmost importance to the successful operation of any organisation most especially specialized organizations like the KSHA and HMB . For departments charged with the responsibility of the development of public utilities such a structure which incorparates function and hierachy should be devoid of ambiguity in order to de-emphasize or make irrelevant the problems highlighted in chapter four. The line and Staff Organisations merged would proved adequate for such purposes since it maintains simplicity and would give specialists a free hand. Line Organisation is the simplest, most direct type, in which positions (i.e. Experience) in the hierachy are most important in the accomplishment of the main operations of the organisation.

Staff Organisation is purely advisory (either generalist or specialist) to the line structure, with no authority to place recommendations into actions.

Line Organisation		Advantages
	1.	Maintains Simplicity
	2.	Makes clear division of authority
	3.	Encourages speedy action.
Staff Organisation		
	1.	Enables specialists to give expect advice
	2.	Frees line executives from detailed analysis
	3.	Affords young specialist a means of training.

In this structure professionalsemployed by public organisations would be able to operate as a team with the architect or Builder being the head of the building team i.e. first amongst equals. This forms the basis for proper utilization of manpower.

(3) TENDERING, CONTRACT AWARDS AND CONTRACTING:

The most essential operation to the choice of on able and competent Contractor to handle a project is the registration of Contractors. Regulations should be such that only the good ones get registered in the various categories. There should be strict adherence to regulations, so that the process is not spoilt . And when every thing is said and done at least only a good contractor will get a job. Registration of contractors for public works in each state should be made by a central body ie. The works Registration Board, in order to avoid duplication and give room for dishonest registrations. For the large projects tendering should be selective-competitive and the smaller ones open-competive.

The appraisal of tenders should be encouraged and public organizations should be stopped from awarding Contracts at a fixed flat rate. However, a ceiling should be placed on Contract Sums.

There are certain systems of tendering and contracting which do not give room for abuse as does the open/competitive tendering systems.

The direct labour system and the Design and Build system of contracting are devoid of all the disadvatages of traditional tendering/-contracting systems and with all the attendant advantages, the design/build system is a form of negotiated contracting.

(a) DIRECT LABOUR: This is suitable for minor public projects. This is a practice whereby a client acquired the necessary materials and plant, and employs labour to assist him in the execution of the works. The work is thus carried out by a client-appointed workforce, Periodically his professional advisors endorse the executed works and recommend payment to labourers or labour only contractores.

In large projects however the need arises for a seperate site management. The management staff would be involved inthe day to day planning, job allocation, collecting cost information and monitoring of progress. This system has primary advantages of direct responsibility and reduced construction costs.

5) DESIGN AND BUILD PROJECTS: These are sometimes called turnkey or all-in-package deal contracts. All these terms refer to the same aspects of contracting where the client makes up his requirements to a contractor who both desi gns and reects the building. This system offers historic advantages blended with modern refinements; they are:-

1. The contractor is involved from the start, thus being completely aware of the clients requirements and conditions and offering the specialized knowledge of methods.
2. By eliminating traditional tendering procedures the time from inception to completion is reduced to a minimum.
3. There is a direct contact between Contractor and Client.
4. A functional building at reasonable cost should result.
5. Pre-contract costs can be substantially reduced.
6. The cost of the work is known and agreed prior to commencement.

(4) CONTRACT AGREEMENTS:

There are many clauses which are open to misuse and abuse in the forms of Contract currently in use. The form of contract most widely used for public building works is the Corrupted JCT Form of Contract (local authority edition) (see appendix B).

Clauses whichare most frequently abused include those concerning fluctuations, Variations, Unfixed materials, Prime Cost Sums, Provisional Sums and assignment and Sub-letting of Contracts. It is the opinion of this work that the clause concerning assignment and subletting of works and that concerning unfixed materials should be deleted except in specialized projects. The other provisions afore mentioned should more be strictly controlled.

A permanent solution would be to review the form of Contract currently in use in order to produce one that is suitable to our circumstances here in Nigeria.

However, the general conditions of Government Contracts for building and Civil Engineering works would be the most suitable for public building works. This isbecause the peculiar nature of Government works is considered. This is generally referred to as Form GC/WORKS/I/-1977 Edition. (see appendix C).

The Form GC/WORKS/I., has special provisions concerning corrupt gifts and payments of commission (clause 55) and determination of contract im special cases (clause 44) which amount to serious problems facing Public Projects in Nigeria.

5) SUPERVISION OF PROJECTS:

The first step in ensuring proper supervision of projects is to ensure that qualified persons in adequate numbers are posted, withthe necessary powers that would make them effective and to create an atmosphere that makes it possible for them to operate efficiently. The following aids are usefullin supervision of projects particularly in laison with head offices, since most Zonal/District Engineers powers are curbed.

Site Report: Site reports should be sent to the head office to keep them aware of general progress of works and for further necessary reports in order that the job could be effectively monitored from head office and any problems arising resolved.

The reports should include information on the following:- Delays incurred with their causes, visitors and instructions received and work progress.

Weekly Meetings: These meetings should be attended by government supervisory staff and their counterparts in the Contractor's camp together with choosen sub-contractors are an excellent way of exercising control. This is to make sure that progressi is related to programmes, problems discussed and means of overcoming them decided and anticipated problems settled or by-passed. Such a meeting could be held on Fridays to review the activity of the past week and look at the week ahead.

Site Meetings: Site meetings are usually held at the start of the Contract and thereafter regularly as required during theprogres of the work. It is at those meetings where Progress and variations on the Contract are discussed and agreed. It helps to avoid delays and resolves differences before they generate friction.

The weekly meeting are more effective for projects like housing estates with numerous Contractors and Sub-Contractors who may not be attending meetings regularly.

The Site Meetings are more effective with larger projects like a Specialist/General Hospital.

(ϵ) PAYMENT TO CONTRACTORS

Apart from political pressure one of the greatest impediments to Contractors.

Financing of projects should in the first place be planned with sources of adequate funds in mind so that the project is not delayed unnecessarily due to lack of funds and where they are (iefunds) not readily available, as in developing countries such as Nigeria, short term arrangements like internal bank loans should be made. For larger and more specialised projects, internal bank loans and foreign loans sufficient for the successful execution of the project might prove very useful.

Financial regulations of the government should also be reviewed, or adjusted to make it possible for Contractors to get paid within the 28 days as required by the contract Conditions.

However, financial regulations could be changed to remove all red-tape and bureaucracy so that delays due to non-payments or late payments are eliminated. This change should also include the retention fee administration, so that journal vouchers are made and retention monies are paid into the retention account. This is helpful so that contractors who have completed works

and the defect liability period has passed would collect the monies due to them readily.

The system of Contracting which totally eliminates delay in payments and does not make the Client indebted to any other organization is the Contractor/Finanier arrangement.

In this system the Contractor arranges for the financing of the project with the Client guaranteering payment in the case of default by the Contractor, While repayments are made directly by the Client to the financeers. This system also has the advantages of less paper work.

This is in a nutshell a summary of Contract Administration in public building projects, the problems existing in the system due to numerous causes and solutions to the various problems in the opinion of the work.

An alternative model as earlier stated would mean an overhaul of the system of the day and is beyond the scope of this work.

APPENDIX A

RESEARCH QUESTIONAIRE

PARTICULARS OF RESPONDENTS:

1 (a) N e,

(b) Profession,

(c) Rank,

(d) Department:

2 (a) Please outline the functions of your department

(b) Please outline your duties/responsibilities,

(c) Please comment on the organisation of the dept(ref: organisational structure, staffing, heirachial relationships)

B

Please comment on the following:

1 a) Initiation of projects; with particular reference to policy guidelinge highlighting any deficiencies or strenghts:

b) Types of projects; with reference to size, variety and complexity,

c) Tendering for contracts: with reference to types of tendering systems used including tendering precesses and procedures,

2 a) Award and placing of contracts; highly important are non-comformities and deviations,

b) The contrac agreements; pinpointing any absolete clauses, bo tlenecks and the use and misuse of contract pr visions;

3. a) Supervision of projects; the duties of Zonal/-site Engineers/officers and limits of their responsibili ;;

b) Control Monitoring and progress report on capital projects;

c) Cost contr l and progress reports on capital finances;

4. a) Contractors types of contractors, their performances and effect on quality of works and performance of the organisation.

b) Payment to ontractors; interim certificates, variation a l payment period,

c) Delays and isputes; with particula reference to causes a l consequences,

d) The relatio ship between professional and administractors, h : it affects the efficiency and effectiven of the system of administration of contract

- C -

1. Please outline your ole(s) in the administration of projects in the :

a) Precontract tage,

b) Contract pe iod,

c) Past contra stage.

2. When are the servi s of private consultants employed,

3. What are the effec (s) on the system of the administration of contracts .en consultants are used,

- D -

1. Please:

a) Comment gen rally on contract administration within you organisation,

b) Suggest an alternative, in whole or in part, to the pre. nt system that could be used in your organi tion and in similar ones.

APPENDIX B

[redacted] ICA FORM OF CONTRACT:

Variants of the standard form are as follows:
Local Authorities Edition - with quantities, without quantities and withapproximate Quantities.
The standard form of contract is basically divided into the following sections:-

1) Articles of of agreements
2) Conditions of contract
3) Appendix
4) Supplemental Agreement.

Articles of Agreements:

Thes include the recital of the name of the employer, Contractor, architect and the quantity surveyor involved, the identification of the works, a schedule of drawings, the contract sum and provison for intressing sugestions.

Conditions of Contract:

1. Contractor's Obligations
2. Architects Instructions
3. Contract documents
4. Statutory obligations, notices, fees and charges.
5. Levels and setting out of the works
6. Materials, goods and workmanship to conform to descriptions testing and inspection.
7. Royalties and patent rights.

8. Foreman - in - charge
9. Access for architect to works
10. Clerk of works
11. Variations, provisional and prime cost sums
12. Contract bills
13. Contract sum
14. Value Added Tax - Supplemental Agreement.
14. Materials and goods unfixed or off site
15. Practical completion and defects liability
16. Partial possesion by employer
17. Assignment and subletting
18. Injury to persons and property and Employers indemnity
19. Insurance against injury to persons and property
20. Insurance of the works against fire
21. Possession, completion and postponement
22. Damages for non-completion
23. Extention of time
24. Loss and expense caused by irregular progress of the works.
25. Determination by employer
26. Determination by contractor
27. Nominated subcontractors
28. Nominated suppliers
29. Artisans and Tradesmen
30. Certificates and Payments
31. Fluctuations
32. Outbreak of hostilities
33. War damages
34. Antiquities
35. Arbitration.

APPENDIX C

A Summary of the General Conditions of Government Contracts for Building and Civil Engineering Works:

1. Definitions
2. Contractor deemed to have satisfied himself as to Conditions affecting execution of the works.
3. Vesting of Works etc. in the Authority. Things not to be removed.
4. Specifications, bills of quantities and drawings.
5. Bills of quantities (applicable if so stated in the tender)
6. The autorities schedule of rates.
7. The contractor's schedule of rates.
8. Progress of the Works.
9. Suprintending officers instructions.
10. Failure of Contractor to comply with suprintending officers instructions.
11. Valuation of the suprintending officers' instructions.
12. Valuation by measurement.
13. Variations.
14. Setting out works.
15. Things for incorporation and work manship to conform to description.
16. Local and other authorities' notes and fees.
17. Patent rights.
18. Appointment of Resident Engineer or Clerk or Works.

17. Watching lighting and protection of works.

18. Precautions to prevent nuisance.

19. Removal of rubbish.

20. Excavations and materials arising therefrom.

21. Foundations.

22. Contractor to give due notice prior to covering works.

23. Suspension for frost etc.

24. Daywork.

25. Precautions against fire and other risks.

26. Damage to works or other things.

27. Assignment or trasfer of contract.

28. Date for completion. Extension of time.

29. Partial possession before completion.

30. Liquidated damages.

31. Subletting.

32. Sub-contractors ans supplies.

33. Defects liability.

34. Contractors Agent.

35. Daily returns.

36. Contractor to conform to regulations.

37. Replacement of contractors employees.

38. Attending for measurement and provision of informations.

39. Prime cost items.

40. Provisional sums and provisional quantities.

41. Advances on account.

42. Payment on and after completion.

43. Certificates.

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43. Recovery of sums due from contractor.

44. Special powers of determination.

45. Determination of contract due to fault or failure of Contractor.

46. Provisions in case of determination of contract.

47. Injury to persons, loss of property.

48. Damage to public roads.

49. Emergency powers.

50. Facilities for other works.

51. Fair wages.

52. Racial discrimination.

53. Prolongation and distruption expenses.

54. Corrupt gifts and payments of commission.

55. Admission to site.

56. Passes.

57. Photographs.

58. Secrecy.

59. Arbitration.

Bibliography:

1. Karvagh, Muller and O'Brien, Construction Management: A professional Approach, McGraw Hill, 1972
2. Joint Contracts Tribunal, Standard form of Building Contract; local Authorities Edition with quantities (1980)
3. Howard. K. and Shapr, J.A, the Management of the a student Research Project, Gower Aldershot, 1983.
4. The Aqua Group, Contract Administration for Architects and Quantity Surveyors (5th Edition), Granada, Herts 1981.
5. Willis, A.J. and Willis, G. J., Practice and Procedure for the Quantity Surveyor (7th Edition), Granada Herts. 1972.
6. Butter, J. T., Elements of Administration for Building students (2nd Edition), Hutchinson, London, 1977.
7. Massie, A., J.L, Essentials of Management (3rd Edition), Prentice - Hall, N.J, 1979.
8. Adebayo A. Principles and Practice of Public Administration in Nigeria, Wiley, London, 1981.
9. Ferry, D.J and Brandon, P.S Cost Planning of Buildings (4th Edition), Granada, Herts, 1980.
10. Trickey, G, Design and Build, the new form, chartered Quantity Surveyor, Aug. 1982,
11. Julian, A.L., The New J.C.T Form: " A farrago of obscurities " ? The Quantity Surveyor, December 1980 Vol. 36 No. 12.
12. Calvert, R.E., Introduction to Building Management. (3rd Edition). London, 1980.