

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

COLLEGE OF ARCHITECTURE AND PLANNING

DEPARTMENT OF BUILDING TECHNOLOGY

CONTRACT ADMINISTRATION PRACTICES OF DISTRICT ASSEMBLIES

(CASE STUDY OF MAMPONG MUNICIPAL ASSEMBLY)

BY

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**A THESIS SUBMITTED TO THE DEPARTMENT OF BUILDING TECHNOLOGY IN
PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF
SCIENCE (MSC) IN CONSTRUCTION MANAGEMENT**

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DECLARATION

I hereby declare that this submission is my own work towards the Master of Science and that, to the best of my knowledge, it contains no material previously published by another person nor material which has been accepted for the award of any other degree of the University, except where due acknowledgement has been made in the text.

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ABSTRACT

The Municipal Assembly being the central institution within the Municipality in charge of planning, implementation and management of development projects, has the responsibility of ensuring compliance with contract terms and conditions, managing changes, completing projects on time and within budgets and also to the required quality standard.

Quarterly Progress Reports on construction projects submitted by Mampong Municipal Assembly to Ashanti Regional Coordinating Council between 2009 and 2011 showed that 75% of these projects which were supposed to be completed in six calendar months are still captioned “on-going” projects. It is against this background that the researcher has considered the study into Contract Administration Practice very necessary.

The aim of this research is to identify the difficulties faced by Municipal Assemblies in the management of their building construction projects. The objectives also are to identify and document the existing contract administration practice, identify inhibitions to effective contract administration practice, determine factors that underline the identified inhibitions and consequently propose recommendations to the existing practice.

The study is focused at the contract implementation stage of building construction projects of Mampong Municipal Assembly, where no external consultant was employed and with funding from the District Development Facility.

In order to achieve the objectives of the research, a systematic procedure in conducting this study had been structured. Structured interviews were conducted with 20 staff members of Municipal Assembly in charge of project supervision, and 10 building contractors who have worked or are still working on District Development Facility projects. Statistical Package for

Social Sciences (SPSS) and Microsoft Excel were used for the organisation of the data presentation, description and analysis.

The results revealed that both contractors and staff of the Municipal Assemblies are well informed on the rights, duties and liabilities of a building team; pre construction meetings were not organized before commencement of works; resident engineers or clerk of works are not permanently stationed on each project site; and that would have a toll on the quality of work produced.

Based on the results of this research, it is recommended that there is an essential need to equip the Works Department with logistics and staff; pre construction meeting should be held before work begins, regular site meetings should be organized; and finally an officer should be stationed permanently on each project site whilst works are going on concurrently.

DEDICATION

I lovingly dedicate this thesis to my parents and to all my friends.

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First and foremost, I am extremely grateful to Almighty God for giving me strength and protection during this period.

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CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Contract Administration formally commences when the building contractor signs the contract to deliver the building project and associated works. The Contract Administration phase covers all construction, subcontracting, procurement and installation of engineering services, commissioning, handover, defects rectification works, and extends to the final financial close of the project, (CPSP, 2011).

Contract Administration includes negotiating the terms and conditions in contracts and ensuring compliance with the terms and conditions, as well as documenting and agreeing on any changes or amendments that may arise during its implementation or execution. In today's increasingly competitive and fast-paced business environment, contract management plays a vital role in every organization. It is a critical discipline employed by both buyers and sellers who must manage customer and supplier expectations and relationships, control risk and cost, and contribute to organizational profitability and success (Lunderman, 2008).

Contracts define the various aspects, obligations and relations between each party that are necessary to reach a common expected goal hence one of the most important tools in the construction sector and contribute to successful completion of projects (Sertysilisik, 2007).

Yurt (2005), defined contract management as: the complete and exact understanding of contract clauses, and the execution of them during the construction in order to minimize possible disputes between the parties. In other words it is the process of generating solutions for disputes that may arise during the executing" (Thomas, 2007).

Office of Government Commerce (2002) also defines contract management as: the process that enables both parties to a contract to meet their obligations in order to deliver the objectives required from the contract. It also involves building a good working relationship between customer and provider. It continues throughout the life of a contract and involves managing proactively to anticipate future needs as well as reacting to situations that arise"

Else, (2007) noted that, successful contract management, is most effective, if upstream or pre-award activities are properly carried out and time and effort must be spent on determining how the contract will work once it has been awarded, however there are a number of definitions of contract management, the majority of which refer to post-award activities, (Yigit, 2009).

A client engages the services of a consultant to see to it that the contractor performs to meet the requirements stipulated in the contract. This starts from the time the contract is awarded until the work has been completed and accepted or the contract terminated, payment has been made, and disputes have been resolved (OFPP, 1994).

By the promulgation of the Local Government Act 1993 (Act 462) Section 10, a Municipal Assembly is responsible for the overall development of the Municipality, monitor the execution of projects under approved development plans, assess and evaluate their impact on the people's development, the local, municipal and national economy. According to Local Government Act 1993 (Act 462) section 37, there shall be established by the Act of Parliament a Local Government Service Act. Local Government Service Act, 2003 (Act 656) sections 22, 23 and 24 mandates each Municipal Assembly to establish departments to help in the discharge of its functions.

One of the departments is the Municipal Works Department, whose functions include the following:-

- Assist the Municipal Assembly in executing its functions in relation to provision of civil works, that is feeder roads, public buildings, rural housing, water and sanitation.
- Monitoring and Supervision of Works.
- Supervise works quality, measure works, check and recommend for payment of certificate and carry out other contract management activities.
- Post Construction Management.

Key contract administration activities include ensuring compliance with contract terms and conditions practicing effective communication and control, managing contract changes invoicing and payment and resolving claims and disputes (Takashi et al., 2008).

Changes or Variations are almost inevitable during the period of a contract, particularly in the case of large or complex construction. They should not be seen as cause for concern but, effectively managed, as opportunities to improve the contract outputs (Elsay, 2007).

Contract changes are a common element of most contracts. An effective process for managing contract changes must be in place to ensure that all requests are handled smoothly. Contract changes may be called amendments, modifications, change orders, supplemental agreements, add-one, up-scopes or down-scopes (Takashi et al., 2008).

In order to meet the client's aim and objectives and thus complete the project on time, within budget and also to the required quality standard, effective Contract Administration Practice should be embraced.

1.2 PROBLEM STATEMENT

The Municipal Assembly is the central institution within the Municipal responsible for planning, implementation and management of development programmes. One cannot talk of development and leave out construction. The District Assembly Common Fund, (DACF), Internally Generated Fund (IGF), District Development Facility (DDF), Ghana Education Trust Fund (GET Fund), are some of the main sources of revenue for projects at the District level.

Quarterly Progress Reports, on construction projects submitted by Mampong Municipal Assembly to Ashanti Regional Co-ordinating Council (RCC) from 2009 to 2011 show that 75% of projects awarded in 2009 and were supposed to be completed in either four (4) or six (6) calendar months are still under the caption "on-going projects" (MMA, 2012).

It is against this background that the researcher has considered the study into the Contract Administration Practice of Municipal Assembly very necessary.

If an economic operator realizes that the contracting authority is not monitoring progress, it may get careless and delivery will be less than acceptable, or it may create and demand variations not provided for in the contract (Sigma 2011).

1.3 RESEARCH QUESTION

Undertaking such a study, the following research questions have been proposed.

1. What are the present Contract Administration Practices of Construction Projects being adopted by Mampong Municipal Assembly.

2. What are the difficulties encountered by Municipal Assemblies during the Contract Administration Phase of Construction Projects.
3. What techniques should be adopted to improve Contract Administration Practice of Construction Projects in the Municipalities.

1.4 AIM

The aim of this research was to identify the difficulties faced by Municipal Assemblies in the management of their building construction projects.

1.5 OBJECTIVES

1. To identify and document the existing contract administration practice at the Mampong Municipal Assembly.
2. To identify inhibitions to effective contract administration practice at the Mampong Municipal Assembly.
3. To determine factors that underline the identified inhibitions.
4. To recommend modifications to the existing practice.

1.6 SCOPE OF STUDY

The study is focused at the contract implementation stage of building construction projects of Mampong Municipal Assembly, where no external consultant was employed. There are several sources of fund for construction projects available for Municipal Assemblies, and for this reason this study concentrated on projects financed from the District Development Facility.

1.7 RESEARCH METHODOLOGY

In order to achieve the objectives of the research, a systematic procedure in conducting this study had been structured. Desk research which is based on library related books, scientific journals and periodicals and internet research, as well as a web based search were used to review existing related literature.

Structured interviews were conducted with staff members of Mampong Municipal Assembly in charge of project supervision, and building contractors who have worked or are still working for the assembly. Statistical Package for Social Sciences (SPSS) and Microsoft Excel were used for the organisation of the data presentation, description and analysis. The study is evaluated and recommendations for further research that are thought to be valuable were noted.

1.8 SIGNIFICANCE OF RESEARCH

The municipal assemblies are responsible for the overall development of the municipalities, monitor the execution of projects, assess and evaluate their impact on the people's development. Additionally funds for execution of projects from the central government and some donor agencies are channelled through the assemblies. For this reason, it is incumbent on the assemblies to effectively carry out contract administration practice. Therefore by investigating difficulties encountered by Municipal assemblies in contract administration practice and subsequently recommending an effective way of managing projects would go a long way in the achievement of value for money.

Furthermore, this study can be used as a basic guidance for all those involved in the practicing of contract administration of construction projects.

1.9 STRUCTURE OF THE THESIS

This thesis is structured on five chapters. Chapter one, being the introductory part, also included the problem statement, research questions, aim, objectives, scope of study, research methodology and significance of research. Chapter two covered the review of relevant literature on the topic and an overview of local government in Ghana. Chapter three focused on the methodology and procedure used for the study. Chapter four dealt with the analysis of the data gathered as chapter five presented a summary of findings, conclusion and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

This Chapter reviews literature on Contract Administration of Construction Projects. It covers the activities that take place after signing of contract agreement, up to final hand over of the project. It also provides an overview of the concept of Local Government in Ghana.

2.2 OVERVIEW OF LOCAL GOVERNMENT

Local Government consists of those functions which are carried out by local authorities. Local authorities are those bodies that carry out the functions of local government.

2.2.1 Historical Background of Local Government in Ghana

Local Government in Ghana started with the introduction of native authorities by the colonial government in 1878. The native authorities were local government units made up of non-elected paramount chiefs, sub-chiefs and elders. The traditional rulers served as central figures in local government. The native authorities were given powers to pass bye-laws. Though the local administration system produced close relationship between the chiefs and the British authorities, it failed to meet the needs and aspirations of the people. In 1952, a new local government structure which was a two-tier system made up of 26 Municipal Councils and 252 Local Councils was introduced. The Local Government Councils were made up of two-thirds elected members and one-third chiefs, with paramount chiefs as presidents of the councils. This was the first time Councillors were allowed to contest on party basis.

In the second republic, the Local Administration Act 359 (1971) was passed. However, it was implemented in 1974 due to the change of government in 1972. The 1974 Local

Administration (Amendment) Decree, NRCD 258 created a local government structure, described as the single hierarchical model. It abolished the distinction between local and central government at the local level by creating one common single structure called the District Council (D.C).

2.2.2 Structure and Composition of the Local Government

The Local Government structure consists of the Regional Coordinating Council (RCC) and a four-tier Metropolitan and three Municipal/District Assemblies structure as depicted in the figure below. The structures below the Metropolitan, Municipal and the District Assemblies are known as the sub-structures of the Assemblies.

2.2.3 Municipal Assembly

The Municipal Assembly is the central institution within the Municipality responsible for planning, implementation and management of development programmes. It is assigned with deliberative, legislative as well as executive functions. It is therefore an established structure assigned with the responsibility of integrating political, administrative and development resources to achieve more equitable allocation of power and wealth at the local level.

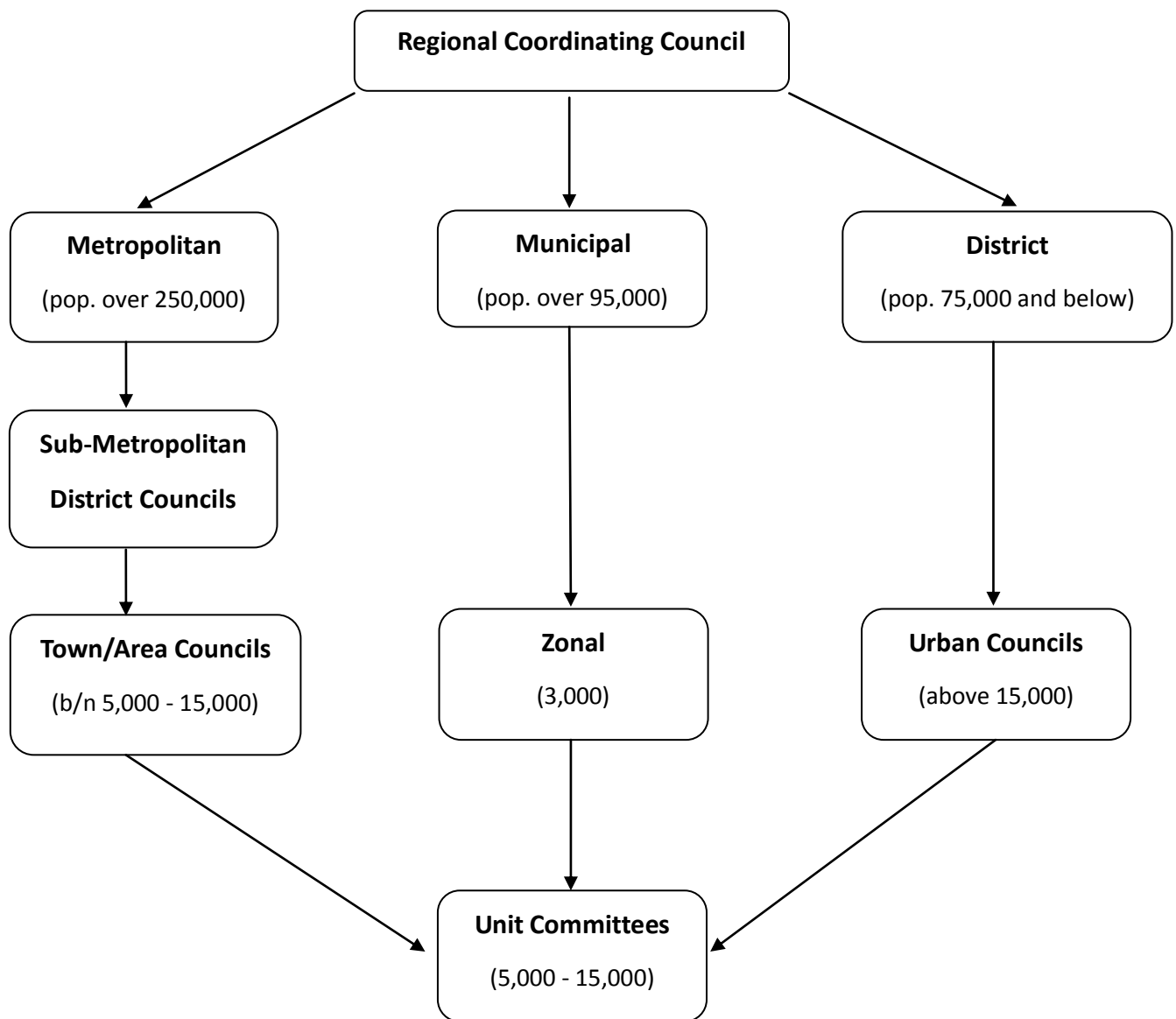


Figure 2.1: Local Government System

2.2.4 The Regional Coordinating Council (RCC)

The Regional Coordinating Council (RCC) consists of the Regional Minister as Chairman, the deputy or deputies, the presiding member of each Metropolitan/Municipal/District Assembly (MMDA) and the District Chief Executive (DCE) of each district in the region, two chiefs and the Regional heads of the decentralized departments without voting rights.

Functions of the RCC

- Monitors, coordinates and evaluates the performance of the District Assemblies in the region.
- Monitors the use of all monies allocated to the District Assemblies by any agency of the Central Government.
- Reviews and coordinates public services generally in the region.
- Performs other functions as may be assigned to it by or under any enactment.

2.2.5 Metropolitan / Municipal / District Assemblies (MMDAs)

District Assemblies in Ghana are either Metropolitan (population over 250,000), Municipal (one-town Assemblies with over 95,000 populace) or District (population of 75,000 and over). There are six (6) Metropolitan Assemblies, forty (40) Municipal Assemblies and one hundred and twenty four (124) District Assemblies.

The District Chief Executive is nominated by the President, approved by two-thirds of the members of the District Assembly present and voted at the meeting. The Assembly has a Presiding Member who is elected from among its members by two-thirds of all the members of the Assembly. It is important to note that, elections to all local government bodies are on a non-partisan basis; the elections are state-sponsored and conducted by the Electoral Commission.

Departments of the District Assembly

Table 2.1 *FIRST SCHEDULE (REGULATION 1 (a))*

DEPARTMENT ESTABLISHED	DEPARTMENT CEASING TO EXIST
<ol style="list-style-type: none"> 1. Central Administration Department 2. Works Department 3. Physical Planning Department 4. Department of Trade and Industry 5. Department of Agriculture 6. Department of Social Welfare and Community Development 7. Legal Department 8. Waste Management Department 9. Urban Roads Department 10. Transport Department 11. Budgeting and Rating Department 	<ol style="list-style-type: none"> 1. Department of Social Welfare 2. Department of Community Development 3. Public Works Department 4. Department of Feeder Roads 5. Department of Town and Country Planning 6. Department of Rural Housing and Cottage Industries 7. Department of Animal Health and Production 8. Agricultural Extension Services Division 9. Crop Services Division 10. Department of Agricultural Engineering

Table 2.2 *SECOND SCHEDULE (REGULATION 1 (b))*

DEPARTMENT ESTABLISHED	DEPARTMENT CEASING TO EXIST
<ol style="list-style-type: none"> 1. Physical Planning Department 2. Department of Trade and Industry 3. Finance Department 4. Department of Education, Youth and Sports 5. Disaster Prevention and Management Department 6. National Resources Conservation Department Forestry, Game and Wildlife 7. District Health Department 	<ol style="list-style-type: none"> 1. Department of Town and Country Planning 2. Department of Co-operatives 3. Controller and Accountant General's Department 4. Ghana Library Board 5. National Youth Organizing Commission 6. Registry of Births and Deaths 7. Office of the District Sports Organiser

2.2.5 Functions of the Works Department

The Works Department of the District Assembly is a merger of the Public Works Department, Department of Feeder Roads and District Water and Sanitation Units of the Assembly.

The Works Department shall;

- Facilitate the implementation of policies on works and report to the assembly.
- Advise the Assembly on matters relating to works in the district.
- Assist to prepare tender documents for all civil works projects to be undertaken by the Assembly through contracts or community initiated projects.
- Facilitate the construction, repair and maintenance of;
 - i. Public roads including feeder roads, and
 - ii. Drains along any streets in the major settlements in the district.
- Advise on the construction, repair, maintenance and diversion or alteration of the course of any street.
- Encourage and facilitate maintenance of Public buildings in the District.
- Assist to build, equip, close and maintain markets and prohibit the erection of stalls in places other than the markets.
- Facilitate the provision of adequate and wholesome supply of portable water for the entire district.
- To assist to inspect projects undertaken by the District Assembly with relevant departments of the assembly.
- Advise the Assembly on the prohibition of;
 - i. Digging of burrow pits or other excavations and
 - ii. The sinking of wells or their closure
- Provide technical and engineering assistance on works undertaken by the Assembly.
- In consultation with the Electricity company of Ghana facilitate the provision of street lighting.

- Facilitate the registration and maintenance of data on public buildings and
- Protection or prevention of obstructing access to fire hydrants

2..6 The District Development Facility (DDF)

The District Development Facility is a performance based grant system that mobilizes additional financial resources to support local service delivery by district assemblies, being implemented by the Ministry of Local Government and Rural Development.

The District Development Facility is available to all assemblies but the resource allocation is based upon actual performance which is verified in an annual evaluation called the Functional Organization Assessment Tool (FOAT). In this evaluation, the performances of all assemblies are determined against predetermined agreed upon indicators.

The FOAT assessment is implemented by independent consultancy firms on behalf of the Ministry.

Funding Partners

The District Development Facility is currently supported by the following Development

- Partners Agence Francaise de Development (AFD)
- Canadian International Development Agency (CIDA)
- Danish International Development Agency (DANIDA)
- Kreditanstalt für Wiederaufbau (KfW)

2.3 OVERVIEW OF CONTRACT ADMINISTRATION

When a contracting authority enters into a contract with an economic operator, the arrangement cannot be left to run. It must be managed to enable both the contracting authority and the economic operator to meet their contractual obligations. Contracts are frequently

complex, may involve multiple actors, may last a long time and may consume many resources. It is therefore vital that they are properly managed. If an economic operator realizes that the contracting authority is not monitoring progress, it may get careless and delivery will be less than acceptable, or it may create and demand variations not provided for in the contract (Sigma 2011).

Contract Administration involves making decisions and the timely flow of information and decisions to enable completion of the project as required by the contract documents including review and observation of the construction project. This is important to the Owner and Consultant not only to determine that the work is proceeding in conformity with the contract documents but also because it allows a final opportunity to detect any inaccuracies, ambiguities or inconsistencies in the design (Richard, 2007).

Contract Management & Administration can be defined in many ways but a simple definition would mean that contract management & administration is a set of tools or activities to ensure one thing and one thing only-that the vendor delivers what he promised or what you specified (and he gets paid accordingly for that) (PPC, 2004).

The 4 objectives of Contract Management are basically to ensure:

1. That the scope is being delivered to the required level of performance and quality.
2. That all the conditions of contract are met by both parties.
3. That all the objectives of the organization for entering into agreement with an outside source are satisfied.

4. The relationship between the 2 parties is open and constructive so as to avoid tensions and identify and solve problems easily.

To simplify however, the objectives of contract management can be summarized as: “A fair & reasonable price for a high quality and on time scope of work” (PPC, 2004).

Contract administration covers the formal governance of the contract and any permitted changes to documentation during the life of the contract. This area of contract management ensures that the everyday aspects of making the contract run effectively and efficiently are taken care of. Contract administration formally commences when the building contractor is formally engaged to deliver the building project and associated works. The contract administration phase covers all construction, subcontracting, procurement and installation of engineering services, commissioning, handover, defects rectification works, and extends to the final close of the project.

Contract Administration is undertaken during the construction and delivery phase of a project and the contract is managed by or on behalf of the principal to the contract. The Principal is the entity entering into the contract with the building contractor. The purpose of contract administration is to

- Manage the delivery of a capital project and associated work in accordance with the executed contract documents.
- Ensure the contractor fulfils its responsibilities, duties and outcomes in accordance with documented requirements; the contract itself, and statutory requirements.
- Ensure that the building contractor is properly paid for works suitably carried out

(Wa'el et al., 2010).

2.3.1 RIGHTS, DUTIES AND LIABILITIES

The Employer

The employer is referred to throughout the contract and is expressly required to perform specific duties. The vast majority of these duties are codified and are carried out by the architect/contract administrator on behalf of the employer. However, the employer, as one would expect, retains the important duty of payment to the contractor for works which are completed in accordance with the contract.

Duties and responsibilities

- To state the nature of intended work.
- To pay the contract sum.
- To refer a dispute to adjudication.
- To have the contract sum adjusted by any amount with the contractor in respect of variations.

The Architect

As construction administrators, architects interpret construction and contract documents, track the progress of work and reconcile the sometimes conflicting interests of owners and builders. The architect serving as a construction administrator observes construction for conformity to construction drawings and specifications. These documents are part of the legal contract between the owner and general contractor. When interpreting these legal documents, the architect's role shifts. The architect serves not as the owner's direct agent but in a quasi-judicial capacity, showing partiality to neither the owner nor the contractor. At other times,

during the construction phase the architect acts as the owner's representative and agent (Mays, 2000).

The Architect's Liability

- The architect can be sued for negligence and breach of duty as an independent contractor and as an agent of the owner. These suits might be brought by the architect's client or by a third party such as the contractor, subcontractor, later owners, tenant, or passer's by. Third party claims may be made even though the architect's client is satisfied with the professional service and has no complaint.
- However, the architect has immunity from suit for decisions made in the quasi-judicial capacity, provided they are made in good faith. The architect is liable only when acting fraudulently or with wilful or malicious intent to injure the owner or contractor, (Supplemental Architectural Services, 2000).

The Quantity Surveyor

Quantity Surveyors are named in the contract and their principal duties are in relation to the payment provisions, value of the works including the value of variations and, if so instructed, ascertainment of the loss and/or expense inferred by the contractor as the consequence of a specific occurrence

The Clerk of works

The Clerk of works is manually appointed by the employer to act, under the direction of the Architect / contract administrator, solely as an inspector of the works. The clerk of works should be ready to take up the duties before the date of possession (how early will depend on

the size and complexity of the project) and will either be resident on site or will visit the site on regular basis during the period of works (Langdon, 2007).

The Principal Contractor

In the Standard Building Contracts, under Article 6, the principal contractor is stated to be the contractor or such other contractor as the employer shall appoint as the principal contractor.

Sub-Contractor

Sub-Contractors feature as members of the construction team. This is because , as well as carrying out work on site, they are often involved in the design and planning of specialist works in advance of the appointment of the main contractor.

2. 3. 2 MEETINGS

Initial Meeting/Pre-Construction Meeting/Post Award Conference

As soon as practicable after the contract has been placed, the building team should meet. Although this initial meeting may take place on site, it will more probably take place in the offices of the project manager, the architect/contract administrator or the main contractor.

The manner in which the initial meeting is conducted will greatly influence the success of the project, and succinct clear direction from the chair will be a strong inducement to a similar response from others. Since at this stage the person having the most complete picture of the project is likely to be the project manager, if there is one, or the architect/ contract administrator, if there is not, it is logical that the project manager or the architect/ contract

administrator should take the chair. The arrangement for this meeting should be discussed with the main contractor beforehand.

Programme

The SBC in clause 2.9.1.2 requires that the contractor shall provide the architect/contract administrator with two copies of the master programme for the execution of the works as soon as possible after the execution of the contract.

In addition the contractor is also required to update it within 14 days of any decision by the architect/ contract administrator that creates a new completion date.

In any event the master programme should be reviewed regularly and updated whenever necessary. It is to be noted that the master programme is not a contract document and SBC clause 2.9.1 makes it clear that nothing contained in the master programme can impose any obligation on the contractor beyond those obligations imposed by the contract documents. Some forms of contract do not require the contractor to provide a programme. In such circumstances if one is wanted the need should be stated in the bill of quantities, specification or the contract documents themselves.

Preconstruction Meeting

If the Project Engineer decides that a formal meeting is necessary in order to successfully begin work on the project, a meeting should be arranged as soon as practical after the contract is awarded and the contractor has organized for the work.

In the case of a project that includes utilities to be adjusted, relocated, replaced or constructed by a utility or their contractor, during the performance of the contract, the Project Engineer

shall facilitate a mandatory utility preconstruction meeting with the contractor and all affected utility owners and their contractors prior to any on- site work (WSDOT 2012).

Post Award Conference

Once the contract is awarded, it is very important that a Post Award Conference is conducted.

The purposes of the post award conference are:

- Achieve clear mutual understanding of all contract requirement.
- Identify and resolve potential problems
- Avert misunderstanding

A post award conference is a meeting with the principals responsible for administering the contract. The conference is typically held soon after the contract is awarded. It is an orientation for the contractor to ensure a clear understanding of all contract terms, conditions and the respective responsibilities of all parties. The conference also serves as an excellent tool to clarify and resolve any potential misunderstandings early on. Although both the contractor and the agency personnel should be fully aware of the contract requirements, the post award conference ensures that those involved directly in the contract administration process understand all requirement of contract performance.

Not every contract requires a formal post award conference but generally there should be some form of discussion between the contracting parties after award to ensure that all parties agree on the performance requirements and the administrative procedures applicable under the terms of the contract. The post award conference should not be used to change the terms of the contract. Agency personnel should decide if a post award conference is necessary for less complex, low risk, low dollar value contracts, a telephone call to the contractor may be sufficient.

2.3.3. INSTRUCTIONS

Architect/Contract Administrator's Instructions

It should be possible to have available complete sets of drawings, specification notes and quotations from sub-contractors and suppliers when the tender documents are prepared. This in turn will mean that, as soon as the contract is placed, contractors can be handed all the necessary information to enable them to build the project.

However, the ideal circumstances outlined above are not the norm, and even when fully finalised information is available for incorporation into the contract documents, it will still be necessary, from time to time, for the architect to issue further drawings, details and instructions. These are collectively known as architect's instructions (Langdon,2007).

The procedure for the issue of architect's instructions can be summarised as follows:

Any instruction issued by the architect must be in writing, but

- Should the architect issue an instruction other than in writing it is of no effect unless, within seven days of such an instruction being given:
 - it is confirmed in writing by the architect, at which time it becomes effective, or
 - it is confirmed in writing by the contractor and is not dissented from by the architect within a further period of seven days, at which time it becomes effective; however
- if neither the architect nor the contractor confirms an instruction issued other than in writing but the contractor complies with the instruction, the architect/contract administrator can, at any time up to the issue of the final certificate, confirm that instruction in writing, at which time the instruction becomes effective.

A contractor is allowed to question the contractual validity of any architect's instruction and the architect has to answer forthwith, it should also be noted that, if the contractor does not comply with a valid architect's instruction, the employer is also allowed to employ others to give effect to the instruction and recover all costs so incurred from the defaulting contractor.

If a clerk of works is employed on the project and issues any directions to the contractor, such directions are effective only if they are issued in regard to a matter in respect of which the architect is empowered to issue instructions, and also if they are confirmed in writing by the architect/contract administrator within two working days (not, it will be noted, seven days as is provided for the confirmation by architect/contract administrators of their own instructions issued other than in writing).

2.3.4 CHANGE ORDERS

All contracts are designed to deal with extras because all projects have unknowns. The project manager's role is to document applicable extras and quantify them for approval. Communication between the foreman and the project manager on a daily basis eliminates misunderstandings at the end of the project. For example it is not sufficient for a contractor to provide a receipt for materials purchased- the actual quantity installed in the field must be verified so that a complete report can be provided to the client, from the project manager (Melissa, 2007).

Most forms of contract for construction projects allow a process for variations. Even though there may be a process in place to deal with these late changes, cost and time invariably dominate the decision process. If the cost affects the design, it will impact on the construction process and quite possibly operation and maintenance as well (Cameron et al 2004).

The construction administrator tracks all changes in the construction documents. All addenda is a change made to the construction documents after they have been released for bidding but before the owner and contractor have signed a contract. A modification can take one of four forms;

- A written amendment to the contract signed by both parties.
- A change order.
- A construction change directive.
- A written order for a minor change in the work issued by the architect.

Change orders are a frequent source of cost overruns on construction projects. Changes in scope and scope growth are a common occurrence in construction. If not managed properly these changes can pose a risk to timely project completion and adherence to the project budget (Cohen, et al. 2005).

The Seattle Public Utilities Construction Management Handbook defines "In-Scope Work" and "Out-of-Scope Work" as follows.

In-scope Work: Work which is necessary to complete the construction and meet the interest and functionality of the project as originally designed.

Out-of-Scope Work: Work which is of a substantially different nature from the originally contracted work and/or additional work of similar nature but which is not necessary to meet the intent and functionality of the project as originally designed (Cohen, et al. 2005).

Every project requires some changes during construction in order to complete the project. The source of changes may be the owner, designer, or contractor. An owner may wish to make a change to better achieve his or her intended use of the project after construction is complete.

A designer may make a change in the original plans or specifications or the contractor may wish to make change because it is not always possible to accurately predict all the events that will arise during the construction process. Thus, changes during construction are almost inevitable.

The mechanism for making changes during construction is the change-order; a written document describes the modification in the work. All approved change-orders are incorporated into the original bid documents for the project. Although a change order may increase or decrease the cost and schedule of a project, most change-orders add cost to a project and impact the schedule (Oberlender 2000). Changes in scope and scope growth are a common occurrence in construction. If not managed properly these changes can pose a risk to timely project completion and adherence to the project budget (Cohen et al. 2005).

A change order is a written order to the contractor, signed by the owner, and issued after execution of the contract, authorizing a change in the work or an adjustment in the contract sum or the contract time. Changes in drawings and contract documents usually lead to change in contract price or contract schedule. Changes also increase the possibility of contractual disputes. In general changes present problems to all parties involved in the construction process (Al-Dubaisi, 2000).

Changes or variations are almost inevitable during the period of a contract, particularly in the case of large or complex construction. They should not be seen as causes for concern but, effectively managed, as opportunities to improve the contract outputs (Else, 2007). All contracts are designed to deal with extras because all projects have unknowns. The project manager's role is to document application extras and quantity them for approval.

Communication between the foreman and the project manager on a daily basis eliminates misunderstanding at the end of the project. For example it is not sufficient for a contractor to provide a receipt for materials purchased. The actual quantity installed in the field must be verified so that a complete report can be provided to the client from the project manager (Melissa, 2007).

Most forms of contract for construction projects allow a process for variation. Even though there may be a process in place to deal with these late changes, cost and time invariably dominate the decision process. If the change affects the design, it will impact on the construction process and quite possibly operation and maintenance as well (Cameron et al 2004).

Dayworks

Works valued at prime cost on a daywork basis effectively involve a cost-plus method of reimbursement and, from a contractor's viewpoint; this is therefore an attractive means of securing payment for variations. For work to be valued at prime cost on a daywork basis the record sheets must be submitted to the architect/contract administrator or his authorized representative, usually the clerk of works, no later than one week following the week in which the work was carried out. In addition to being serially numbered it is essential that the following information be recorded on each sheet:

- the reference of the architect/contract administrator's instruction authorizing the work
- the date(s) when the work was carried out
- the daily time spent on the work, set against each operative's name
- the plant used

- the materials used.

The architect/contract administrator or his authorized representative should, as soon as possible after receiving the sheets, check the accuracy of the records and, if found to be correct, countersign them and pass them to the quantity surveyor who will determine whether or not the recorded work is to be valued at prime cost. It is worth noting that the architect/contract administrator's signature on a daywork sheet does not constitute a variation, nor does it commit the quantity surveyor to having to value the work at prime cost. It is helpful if the contractor gives architect/contract administrator advance warning of his intention of recording anything as daywork so that the architect/contract administrator, or the clerk of works on his behalf, can arrange for particular notice to be taken of the resources used (Jaser ,2005).

2.3.5 INTERIM PAYMENTS

- i. Payment of pre-determined amounts at regular intervals
- ii. Pre-determined payments at pre-determined stages
- iii. Regular payments by detailed valuation
- iv. Certificates and payments
- v. Interim Certificates

Unfixed material and goods on site

The value of all materials and goods stored on site must be included in the valuation, provided that they are adequately protected and have not been brought to site prematurely.

Unfixed materials goods off site

Only the value of materials or goods stored off site that have been listed by the employer in a list supplied to the contractor and annexed to the contract documents can be considered for inclusion in a gross valuation

Retention

Every contract shall provide for at least ten percent (10%) of the sum to be paid to the contractor to be retained and shall specify the period after the completion of the contract for which such sums shall be retained (Kaming et al., 2004). It is to be noted that no retention is held against the value of work for which a certificate of making good defects has been issued.

2.3.6 DELAYS AND DISPUTES

Delays to the progress of the works and the loss and/ or expense associated with such delays are perhaps the most common causes of dispute encountered in the administration of building contracts.

All delays will fall into one of the following three categories;

- i. Delays caused by the contractor
- ii. Delays caused by employers or their representative
- iii. Delays caused by event outside the control of either party
 - Force majeure
 - Exceptionally adverse weather conditions

Liquidated Damages

It is a basic principle of English law that if one party to an agreement breaks a term of that agreement causing the other party to suffer financial loss, that second party can claim compensation or 'damages'. However, if it were left to aggrieved employers to claim and prove specific losses on each and every occasion that a contractor failed to meet a completion date; it would be a total waste of time, cost and effort in detailed litigation.

It is therefore normal in building contracts to provide for employers to recover 'liquidated' damages, a set sum, from contractors if they fail to complete the works or section by the relevant completion date.

Disputes and Dispute Resolution

There are many reasons why disputes occur, but in the main they are caused by the failure of one or more members of the building team:

- To do their work correctly, efficiently and in a timely manner
- To express themselves clearly, or
- To understand the full implications of instructions given or received.

Mediation

Is a private, informal process in which one or more neutral parties assist the disputants in their effort towards settlement.

Adjudication

This is now the single most common mechanism by which construction disputes are resolved.

Arbitration

A process subject to statutory controls, whereby a private tribunal of the parties choosing formally determines a dispute.

Litigation

The courts provide the setting for the traditional mode of dispute resolution.

Termination/ Determination

'Termination' of a contract takes place at a point in time in the course of a contract period when a legally binding contract is brought to an end before it has been discharged by performance due to the acts of one or both parties (Wong,2005). 'Determination' of a contract occurs when a valid and enforceable contract is brought to an end prematurely either by its becoming impossible of performance by circumstances which were unforeseeable at the time the contract was formed or by the actions of one or both parties.

2.3.7 COMPLETION, DEFECTS AND THE FINAL ACCOUNT

Completion

A building contract does not come to an end until the architect/contract administrator issues his final certificate and even then actions for breach of contract can be commenced within six or twelve years of the breach, depending upon whether the contract had been executed under hand or as a deed.

Completion of the works can take place in three stages:

Practical completion

Sectional completion

Completion of making good defects.

Defects

The hope is that the architect on site will recognize defective work. Defective work is anything that fails to meet some applicable criteria, such as the contract documents, the building code, or specified building standards

The architect does not have the power to accept nonconforming work unilaterally. However, the owner may allow nonconforming work to remain, with the contract sum reduced accordingly. The architect should advise the owner when such acceptance would be advantageous or inadvisable (Supplemental Architectural Services, 2000).

Final Account

The responsibilities of the contractor, the architect/contract administrator and the quantity surveyor in connection with the final account are set out as:

- Within three months of the contractor sending all necessary documents, the architect/contract administrator (or quantity surveyor if so instructed by the architect/contract administrator),
- Not later than six months after practical completion of the works, the contractor has to send to the architect/contract administrator (or quantity surveyor if so instructed by the architect/contract administrator) all documents necessary for the adjustment of the contract sum (Lunderman, 2008).

- Within three months of the contractor sending all necessary documents, the architect/contract administrator (or quantity surveyor if so instructed by the architect/contract administrator),
- has to ascertain any outstanding loss and/expense and the quantity surveyor has to prepare a statement of all other adjustments to be made to the contract sum - the ascertainment of loss and/or expense and the statement of adjustments are, together, commonly referred to as the final account.
- When complete, the architect/contract administrator has to send a copy of the final account to the contractor.

Final Certificate

The architect has to issue the final certificate within two months of whichever of the following events occurs:

- The end of the rectification period in respect of the works or, where there are sections, expiry of the period for the last section; or
- The date of issue of the certificate of making good in respect of the works or, where there are sections, issue of the last certificate of making good; or
- The date on which the architect/contract administrator sends a copy of the final account to the contractor.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter provides an explanation regarding the methodologies and procedures used for the study. These include data collection, questionnaire design and interview.

3.2 CASE STUDY

Case study provides qualitative and contextual data, and the approach is very useful for the collection of detailed information. It provides an avenue to delve into an aspect of a problem in detail. This study focused on how Mampong Municipal Assembly manages their contract administration practice of construction projects. Therefore a case study approach is well suited to this study.

The research studies focused on building projects funded from the District Development Facility (DDF) from 2009 to 2011 by the Mampong Municipal Assembly in the Ashanti Region. Twenty (20) persons from the Mampong Municipal Assembly who are all members of the Municipal Planning Coordinating Unit (MPCU), whose core functions include monitoring of construction projects within the municipality were interviewed. Ten (10) individual contractors who have worked on District Development Facility (DDF) projects were also interviewed.

The researcher employed the use of Statistical Package for Social Sciences (SPSS) and Microsoft Excel for the organization of the data presentation, description and analysis. The

statistical tools employed for the analysis were t-test for examining significant differences or preference in the opinions by respondents.

3.3 DATA COLLECTION

Structured interview type with open-ended questions was used as the method for data collection in this study. Smaller but focused samples are more often needed than large samples; therefore the interviews were done on twenty (20) staff members of the Mampong Municipal Assembly who are in charge of monitoring of projects and ten (10) building contractors who have undertaken District Development Facility (DDF) projects.

3.3 Selection of Respondents (Municipal Assembly Staff)

There were twenty (20) individuals who were interviewed from various departments in the Mampong Municipal Assembly on contract administration practice. There were 1 Coordinating Director, 3 Planning Officers, 3 Technician Engineers, 1 Works Engineer, 2 Assembly Members, 2 Budget Officers, 2 Physical Planning Officers and the rest were the other members of the Municipal Planning Coordinating Unit.

Previous Research

The literature revealed that similar approach had been used by previous researchers on contract administration practice; Susan (2005) and Tay (2006).

Questionnaire Design

The interview question design took into consideration the objectives of the study to answer the research questions. The questionnaire was divided into four parts:

1. Brief profile of the respondents and their understanding of contract administration principle.
2. Identification of inhibitions to effective contract administration practice.
3. Determining factors that underline the identified inhibitions.
4. Proposal of modification from the respondents to the existing contract administration practice.

3.4 DATA ANALYSIS

Data Analysis is a practice in which raw data is ordered and organized so that useful information can be extracted from it. Analysis of the data for this study was done using percentages and frequency to arrive at the conclusions, i.e. descriptive statistics.

Validity of the research

The staff members of the assembly, who were interviewed, were those directly in charge of supervision and monitoring of projects. The contractors on the other hand have all executed District Development Facility (DDF) projects with varying number of years experience, therefore the information gathered from these group of people were reasonable in the circumstance.

Reliability of the research

All the contractors interviewed have attained a certain level of education, with the minimum being City & Guilds of London Intermediate Certificate. Also the staff members of the assemblies interviewed have all completed a tertiary programme at various institutions.

Because of the educational background of both the contractors and the assembly staff, they easily understood the questions and therefore provided a consistent response.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.1 INTRODUCTION

This chapter deals with the analysis and discussion of a research to investigate difficulties Mampong Municipal Assembly encounter in contract administration practice by considering existing contract administration practice at the Mampong Municipal Assembly, identify inhibitions to effective contract administration practice, determine factors that underline the identified inhibition and very importantly propose modifications to the existing practice.

The chapter is organized as follows; background information of respondents from Municipal Assemblies and then from contractors, the existing contract administration and challenges at the Municipal Assemblies.

4.2 BACKGROUND INFORMATION

In this section, the educational background of the contractors, classification of their firms, their experience with District Development Facility (DDF) projects, and the number of projects they have executed under District Development Facility (DDF) are analysed and presented in the associated tables.

4.2.1 Contractors

Table 4.1 is a summary of the information on the educational background of the contractors considered in this research. The qualifications generally range from tertiary level degrees to professional certificates. All of the contractors who featured in this research were Managing Directors of their individual companies.

Table 4.1: Educational Background of Contractors

Qualification	Frequency	Percent (%)
G.C.E O Level	2	20.0
BSc. Construction Tech. & Mgt.	1	10.0
C.T.C III	2	20.0
SHS/Technical	2	20.0
City & Guilds London Cert.	3	30.0
Total	10	100.0

Table 4.1 is a summary of the information on the educational background of the contractors considered in this research. The qualifications generally range from tertiary level degrees to professional certificates. All of the contractors who featured in this research were Managing Directors of their individual companies.

Table 4.2: Category of Respondents' Companies

	Frequency	Percent (%)
D2K2	2	20.0
D3K3	8	80.0
Total	10	100.0

In terms of class to which these companies were categorized, 20% were D2K2 with the majority 80% being in the D3K3 category. This information is summarized in Table 4.2

Table 4.3: Number of Years Experience with DDF projects

Years	Frequency	Percent (%)
Less than 3	4	40
3--5	5	50
5 or more	1	10
Total	10	100

40% of the total number of contractors interviewed in this research has less than three (3) years experience with execution of DDF projects, 50% have worked for three (3) or more years with 10% of them having worked for five (5) or more years. Table 4.3 shows the summary of the number of years a contractor has worked on DDF projects with the Municipal Assemblies.

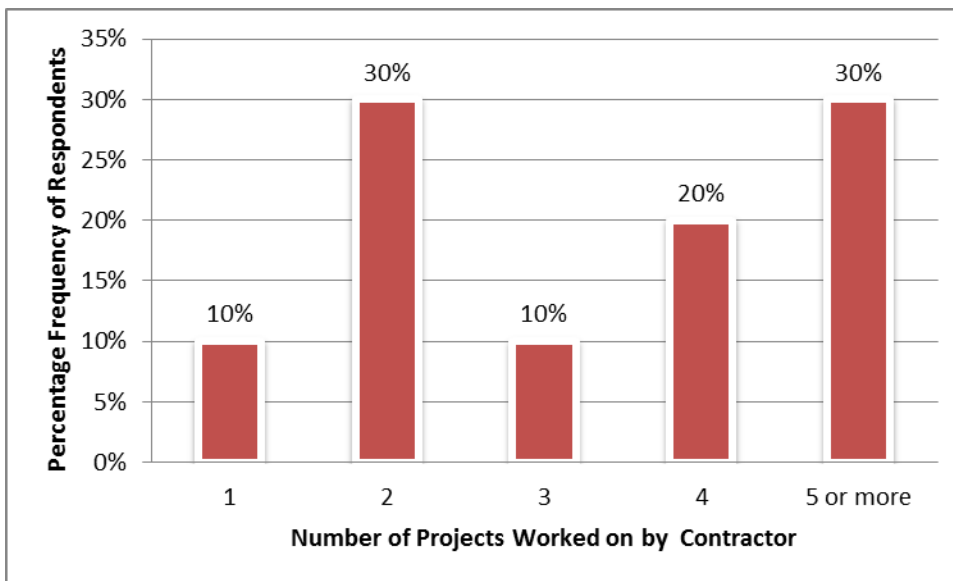


Figure 4.1: Number of DDF Projects executed by Contractors

Out of the 10 contractors interviewed, 60% of them have executed between three (3) to five (5) DDF projects with the Assemblies, 30% worked on five (5) or more different projects. There were 40% of the contractors who had worked on either one (1) or two (2) DDF projects. Figure 4.1 is a graphical display of the number of projects that individual contractors had executed under DDF. This implies that all the contractors interviewed have experienced contract administration practice by a Municipal Assembly under DDF.

4.2.2 Municipal Assembly Staff

Summary of twenty (20) officers from different departments within the Municipality, who are directly in charge of supervision and monitoring of projects were interviewed. 15% were from the Planning Unit, 10% from the Budget Unit, 10% from Physical Planning, and another 10% from Assembly Members, 20% from the Works Department, 5% from Central Administration and the remaining 30% from the Decentralized Departments.

Table 4.4: Municipal Assembly Staff Respondents

Department	Frequency	Percent (%)
Planning	3	15
Budget	2	10
Physical Planning	2	10
Assembly Members	2	10
Works	4	20
Central Administration	1	5
Decentralized Dept.	6	30
Total	20	100

On accounts of the educational background of the assembly's staff, their responses to the questions were very reliable. Table 4.5 shows the summary of the educational qualification of the respondents. Those with Bachelors or Masters degrees were 75%, C.T.C II and F.T.C certificates were 10% and H.N.D (Building) were also 15%.

Table 4.5: Educational Qualification of Respondents

	Frequency	Percent (%)
Bachelors/Masters	15.0	75
C.T.C II and F.T.C	2.0	10
H.N.D /Diploma	3.0	15
Total	20.0	100.0

From the background of the respondents of both contractors and staff presented, it shows that all the contractors have worked significantly on a number of DDF projects enough to give sound judgments on the principles of contract administration. Also apart from the academic qualification of all respondents, the staff respondents of the Assembly are in reputable positions to give concrete responses on the subject of contract administration practice of DDF projects.

4.3 CONTRACTORS

This section presents the data collected from contractors on various aspects within the execution of DDF projects from the Assembly. The existing practice of contract administration is looked at by considering issues relating to meetings, knowledge of respective personnel on projects, delays, instructions, disputes, retention, hand over and final accounts.

Building Team

The contractors interviewed were questioned on their knowledge on the rights, duties and liabilities of various personnel on contract administration including the employer, quantity surveyor, clerk of works, contractor and sub-contractor. The summary of the information given is as follows:

- Employer – Owner of the project or finances and awards the project

- Architect – designer and provides specification; recommends for payment; leader of the project team
- Quantity Surveyor – Prepares bill of quantities or deals with tender or contract documents; analyses the cost relating to the project; issues payment certificate; responsible for evaluating project
- Clerk of Works – Representative of client on project site; employed by architect or client to ensure quality of both labor and materials on site are standard
- Contractor – Executes the project
- Sub-contractor – Does minor works on the project; He/she is given part of the project by main contractor; A contractor who does some specialist work like plumbing, electrical, landscaping, etc. ; Assists the main contractor

Post Award Conference

There were a significant 70% of the contractors who claimed that the Municipal Assembly does not organize Post Award Conference or Pre-Construction meeting before the commencement of any new project. This is shown in Table 4.6. Although all contractors had knowledge on the responsibilities of a Clerk of Works on site, there was a 80% affirmation that the Assembly did not keep either a resident engineer or a clerk of works permanently on each project whilst work progressed as shown in Table 4.6

Table 4.6: Contractors Opinions

	Organization of Post Award Conference		Presence of Resident Engineer or Clerk of Works	
	Frequency	Percent(%)	Frequency	Percent(%)
Yes	3	30.0	2	20.0
No	7	70.0	8	80.0
Total	10	100.0	10	100.0

Site Meetings

Regarding site meetings, 30% of the contractors were of the opinion that the meetings were held quarterly, 50% said it happened monthly whilst 20% also said twice or more within a month as shown in Table 4.7.

Table 4.7: Frequency of Site Meetings

	Frequency	Percent(%)
Quarterly	3.0	30.0
Once Monthly	5.0	50.0
Twice or more Monthly	2.0	20.0
Total	10.0	100.0

Instructions

Concerning the issue of responsibility for issuing instructions to the contractor on site when it becomes necessary, the responses indicate that it was the Municipal Engineer or the Consultant, where external consultants are engaged to provide consultancy services. This was always done orally and later followed up by a written letter. The same individuals responsible for issuing instructions were found to be in charge of sanctioning modifications or alterations to the scope of work on site. These modifications or alterations were communicated to the contractors during site meetings and later followed up with a letter known as variation order.

Payment Certificates

Although the contractors were aware that contract data stipulates twenty eight (28) days within which an employer should honour certificates, they considered the process to be too bureaucratic.

Table 4.8: Period for Honoring Certificates

	Frequency	Percent(%)
Less than 2 weeks	1.0	10.0
2-3 Weeks	3.0	30.0
More than 3 Weeks	6.0	60.0
Total	10.0	100.0

Table 4.8 above shows that 30% of contractors agree that their certificates are honoured within three (3) weeks after they have submitted their request for payment on works completed. With reference to the difficulty of getting certificates to be honoured within the existing practice, 70% of contractors indicated that the procedure was excessively long as certificates had to go through the Works Engineer, then to the Municipal Chief Executive, to the Municipal Co-ordinating Director, further to the Municipal Planning Officer, then to Municipal Budget Officer before finally to the Municipal Finance Officer for issuing of cheque. The remaining contractors claimed that the procedure was satisfactory.

Retention

Even though the Financial Memoranda for Municipal Assemblies Part ix Section 72 mandates the assemblies to retain 10% on every certificate as retention fund, 35% of the contractors said that retention ranged between 5-10% depending on the contract sum, whilst the

remaining 65% indicated that exactly 10% was retained as retention fund irrespective of the contract sum.

Delays and Disputes

In every case of a contract between two parties, it is important to know what action either party takes when there is some form of a breach of the contract (in this case with delays either from the payment by the assembly or on the side of the contractor). For DDF projects, the data collected suggests that some significant projects are not delayed and are executed on time. But for cases where there are issues of delays by the assembly, virtually no action is taken by the contractor. But when the contractor delays, the assembly writes to them either speed up work or write threatening to terminate the contract.

In terms of the Assembly delaying payments, contractors who agreed that they experienced delays indicated that they take no action reasonably because it might primarily influence their chances of obtaining further contracts with the Assembly in the near future. They follow up with regular interactions and wait patiently till payments are made. Two percent (2%) of the contractors have taken legal action against the assemblies when payments were unduly delayed.

Completion, Defects and the Final Account

On completion of the project, the assembly led by the engineer, inspects the facility and then lists down all the outstanding works and defects and gives to the contractors to make good before the defects liability period expires which according to the respondents is a period of six months. At the expiration of the defects liability period, all the respondents said that, final

inspection is organized to ascertain that all the defects that were observed during the previous inspections are rectified before the retention fund is released.

Challenges in Project Execution and Factors Influencing Projects Undertaking

The list given below shows the challenges indicated by contractors on site in executing DDF projects appropriately. They include:

- The bureaucratic structures at the assemblies for honouring certificates are worrying. Though contract data allows payment within 28 days, 20% said it goes beyond that period.
- 50% of the contractors asserted that they have been arranging for vehicles to carry engineers to site for inspection themselves.

Contractors also listed some factors that made undertaking projects for the Assembly unattractive or otherwise as follows:

- The contract data though specifies the Advance Payment (Mobilization) to be 15% of the contract sum, all the contractors wanted it to be raised to 20 or 30%
- The assembly staff members used to visit project site without giving prior notice to the contractors for them to be present in order to answer any question that might arise.

There were suggestions by the contractors interviewed in this research on how the existing practice could be improved:

- The Works Department should be given a project vehicle so that contractors could be spared the burden of arranging for a vehicle for the engineers any time they need the engineers on their project site for clarification of an issue pertaining to the project

- The contractors were of the view that the 15% Advance Payment cannot take the project to a substantial level before the next payment certificate is raised, therefore they proposed 20-30%.
- When a contractor submits certificate for payment, it first goes to the engineer's office, then to the Municipal Chief Executive, from there to the Municipal Coordinating Director, he also minutes to Planning and Budget officers before finally the Municipal Finance Officer who then issues the cheque. All the contractors bemoaned on this procedure and suggested that the process be reduced.
- The contractors suggested that for a project with four months duration, at least six site meetings should be organized so that issues bordering on design and site conditions could be addressed as early as possible.

4.4 MUNICIPAL ASSEMBLY STAFF

The research considers responses of similar issues as was investigated in the case of contractors with twenty (20) staff members of the Municipal Assembly. The following sub-sections are a presentation of the results from the survey.

Facilities

The responses from the staff of the Municipal Assembly suggest that the kind of facilities that the Assembly has been putting up under the Municipal Development Fund (DDF) include Educational, Health, Sanitation and Security facilities, Staff Quarters for Teachers and Nurses, Road and Bridge Construction. Collectively the role that the departments at the Assembly played after a project is awarded a contract were general supervision and issuing of payment of certificates, monitoring and evaluation of the project and very importantly working on progress reports as it a mandatory requirement to submit monthly, quarterly and annual

progress report to Regional Coordinating Council and Ministry of Local Government and Rural Development.

The results also show that the type of condition of contract that the Assembly used in preparing Tender and Contract Documents are Standard Condition of Contract of PPA, JCT/ICE and FIDIC. Table 4.9 shows a summary of the information.

Table 4.9: Type of Contract

	Frequency	Percent (%)
PPA	18	90
JCT/ICE	1	5
FIDIC	1	5
Total	20	100

Exactly half of the respondents claimed that because it is at the Post Award Conference or Pre-Construction meeting that potential problems are identified and also the contract terms, conditions and the respective responsibility of all parties are emphasized, they always organized such meetings before construction work commenced. The other half stated that no such meetings take place.

Similar to the views of the contractors, the frequency of site meetings was quarterly, once a month or twice a month. The meetings were however modally organized on monthly basis. Table 4.10 is a summary of the information.

Table 4.10: Frequency of Site Meetings by Staff

	Frequency	Percent (%)
Quarterly	4.0	20
Once Monthly	8.0	40
Twice or more Monthly	8.0	40
Total	20.0	100.0

Instructions to the contractor during site visits or inspections are done via the written notes in the site note book or by informing the contractor orally and later by writing depending on the nature of the instruction. The personnel in charge of sanctioning modifications to the scope of work include the Municipal/Municipal Engineer in consultation with management.

After the contractor completes a project, the project is inspected by the Engineer and the monitoring team. A monitoring report from the monitoring team is attached to the payment certificate before the process for honouring payment certificate starts. Also, the retention of the portion of the contractor's money when making interim payments was found to be 10% same as suggested by the data collected from the contractors.

Actions in Case of Delays and Challenges in Contract Administration

When a contractor unjustifiably delays DDF projects, respondents claimed that either Liquidated Damages was applied or the contractors were simply written to with caution. Most of the time, the letters are just reminding them of the termination clause in the contract. If the need be however, some contracts are terminated and the contractors are from thence blacklisted.

In the case of the Assembly failing to pay a contractor promptly, the respondents indicated that no action is taken by the contractors for fear of the possibility of not obtaining future contracts with the Assembly. The contractors simply keep pleading and reminding the Assembly to honour their part of the contract. There were two instances where contractors took the Assembly to court.

Upon completion of the project, respondents generally agreed that the project is inspected, snag list is prepared for rectification and then handed over the project to the client. When the

defects liability period was expired however, final inspection takes place to check if all the defects that were observed earlier are rectified, then the retention fund would be released.

The challenges that respondents found associated with supervision and monitoring of DDF projects for staff of the Assembly include:

- Non-availability of logistics
- Releasing and fuelling of a vehicle for supervision
- Contractors failing to provide site note book making it difficult to determine shortfalls of the project
- Absenteeism of contractors during visits

Amongst the challenges, majority of the respondents (84%) indicated that the Assembly was not equipped in terms of personnel and equipment.

Responses on the number of projects the Assembly awarded within a year showed that there were between four (4) to ten (10) projects a year. However, between five (5) and seven (7) projects are more likely to be awarded in a year. All of the respondents agreed that there were no clerk of works on each project site permanently whilst work progressed.

In addition to this, respondents listed the following factors that in their opinion were inhibiting effective contract administration practice at the Municipal Assembly:

- The Works Department, which is statutorily in charge of supervision of assembly projects lacks qualified personnel and have fewer staff
- There are no project vehicles for the engineers to make effective supervision

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION

5.1 INTRODUCTION

This chapter is a summary of the findings and analysis of the data collected, conclusions and recommendations which will help the construction industry in general and the District Assemblies in particular, in contracts that they administer. The research specifically sought to outline the existing contract administration practice at the Municipal Assembly, identify inhibitions to effective contract administration practice, determine factors that underline the identified inhibitions and propose recommendations to the existing practice.

5.2 SUMMARY OF FINDINGS

5.2.1 Overview

This research was to assess the Contract Administration Practice of Mampong Municipal Assembly, regarding construction projects in a bid to identify inhibitions to effective contract administration practice. The study employed the use of interview guide as main instruments for research on ten (10) respondents who were contractors and twenty (20) other respondents who were staff members of Mampong Municipal Assembly. The data gathered was analysed using percentages and frequency, and t-test was used to test for significant difference in opinions.

5.2.2 Findings

The following findings emerged from the study.

- The Municipal Assembly awards averagely five (5) to seven (7) DDF projects in one (1) year
- Both contractors and staff of the Municipal Assembly are well informed on the rights, duties and liabilities of the employer, architect, quantity surveyor, clerk of works, contractor and subcontractor.
- There is always a less likely chance that a Post Award Conference will be organized before work commences. The more likely occurrence being that the contractor is taken straight to the project site after a letter of acceptance is presented.
- The Assembly does not keep a resident engineer or clerk of works on site permanently as confirmed by both contractors and staff of the Municipal Assembly.
- Averagely, the Municipal Assembly organizes quarterly or monthly site meetings. More often however, these site meetings are organized on monthly basis.
- Instructions to the contractor and modification to the scope of the project are sanctioned mostly by the Municipal Engineer in consultation with management.
- It takes modally between two (2) to three (3) weeks for certificates to the honoured after a contractor submits a request for payment on a completed project and this process was found to be slightly lengthy and not simple although some contractors indicated that it was satisfactory.
- 5% to 10% was found to be retained as retention fund when interim payment certificates were prepared.
- Concerning delays of projects, when a contractor delays a DDF project, the Assembly first writes to the contractor reminding them of the termination clause in the contract. If the option fails after sometime however, the contract is terminated and the contractor is blacklisted. But this rarely occurs. When the Municipal Assembly delays

payment however, the contractors mostly do not take any action for fear of being blacklisted. Two contractors were found to have taken legal action.

- After reports of project completion, the Assembly generally organizes an inspection and documents any defects and outstanding works. This is done by the engineer and his team and the retention is released in the absence of any defects.
- The retention is released averagely in six (6) months to the contractor.
- The absence of a project vehicle was to be a major challenge for both contractors and staff of the Municipal Assembly concerning DDF projects. Apart from that, contractors were not found to be at post in time of inspection because the inspection team make unannounced visits to the project site.
- In addition to the above challenges, contractors were reported not to provide site books which will provide some indication of the shortfalls of the project.

5.3 CONCLUSION

The study has established that Municipal Assemblies in Ghana generally do not organise Pre-Construction Meetings before contractors commence work on a project, and also Site Meetings which are supposed to be done regularly are intermittently done.

The absence of Clerk of Works permanently on each project site whilst work progresses was noticed during the study, and that would have a toll on the quality of materials to be used and also poor workmanship.

The survey showed that contractors and staff of the Municipal Assemblies are well informed of the rights, duties and responsibilities of members of the project team which comprises of employer, architect, quantity surveyor, clerk of works, main contractor and subcontractor.

A reasonable percentage of contractors interviewed (70%) bemoaned of the procedure and duration that certificates go through before they are honoured. It was found also that the percentage of retention that is retained on interim payment certificate varies from Municipal to Municipal with the range between 5% and 10% and released after six (6) months when all defects that were apparent during the inspection are rectified.

The survey results showed that when there is a fundamental breach of the agreement by the Municipal Assembly, the contractors take no legal action for fear of being blacklisted on future projects. But conversely, the contractors are threatened with termination of contract.

Vehicular and personnel constraints were also found to be a major setback on effective contract administration practice at the Municipal level from both contractors and staff of the Municipal Assemblies.

The study further established that much premium is not put on the core functions of the Works Department, who are statutorily in charge of supervision of developmental projects at the various assemblies.

5.4 RECOMMENDATIONS

The following are practical recommendations to the Municipal Assemblies and contractors and all interested institutions which could help improve the contract administration practice of construction projects.

1. The Municipal Assembly is recommended to conduct a Pre Construction Meeting before a contractor commences work. This would help identify and resolve potential problems, avert misunderstanding and achieve clear mutual understanding of all contract requirements.

2. It is recommended that the Works Department of the assembly should keep a Clerk of Works permanently on each project site to ensure that quality and specified materials are used and the design and specifications are strictly adhered to.
3. The supervising engineers are advised to organise regular site meetings as this will provide a forum for the presentation by the contractor of his progress report which should include details of any matters materially affecting the regular progress of the works and details of drawings and instructions.
4. It is recommended that at Practical Completion, a thorough inspection should be carried out on the building by the inspection team of the assembly, prepares a snag list containing all defects that would be observed during the inspection and also record of outstanding works to be done on the building is prepared. The contractor would be required to make good all the defects and any other defect that would be apparent during the six (6) months defects liability period. At this stage half of the retention should be released. When the engineer is satisfied that all defects, shrinkages and other faults that were formally required to be made good have been made good, a certificate to that effect must be issued, and the other moiety of the retention should be released.
5. It is recommended that any instruction issued by the engineer must be in writing, but should the engineer issue an instruction other than in writing it is of no effect unless, within seven (7) days of such an instruction being given:
 - It is confirmed in writing by the engineer, at which time it becomes effective, or
 - It is confirmed in writing by the contractor and is not dissented from by the Engineer.

6. It is highly recommended that the Works Department is resourced logistically, especially with a vehicle and motorbikes so as to frequently visit project sites to prevent shoddy works of assembly projects by contractors.

5.5 LIMITATIONS TO STUDY

The interviews though successful posed difficulties contacting contractors, as most of them were not on their respective project sites. The reason for the absence was the fact that, they have completed their projects. At the Municipal Assembly, it was not difficult getting the officials to be interviewed. Members of the Municipal Planning Coordinating Unit (MPCU), who have oversight responsibility of ensuring that developmental projects within the district are done expeditiously were those interviewed. They included the Municipal Works Engineer, District Development Planning Officers, Municipal Budget Officer, Municipal Director of Agriculture, Municipal Director of Education, Municipal Director of Health Services, Municipal Finance Officer Municipal Directors of Social Welfare and Community Development and Conveners of Works Sub-Committees of the Municipal Assembly.

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APPENDIX I

INTERVIEW SCHEDULE FOR STAFF OF MAMPONG MUNICIPAL ASSEMBLY

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

COLLEGE OF ARCHITECTURE AND PLANNING

FACULTY OF ARCHITECTURE AND BUILDING TECHNOLOGY

DEPARTMENT OF BUILDING TECHNOLOGY

The interview question design took into consideration the objectives of the study with the aim to answer the research questions.

Please answer the questions that follow by writing unrestrictedly for open-ended questions.

Please answer all the questions freely but objectively. The information is for academic purposes only and would be treated with confidentiality. Thank you.

David Ofori (MSc. Construction Management - KNUST)

1. Name of your department
2. Position in the department
3. Educational qualification
4. What type of Conditions of Contract does your assembly use in preparing Contract and Tender Documents (PPA or FIDIC)?
5. What type of facilities has your Assembly been putting up with the Municipal Development Facility (DDF)?.....
.....

6. What role does your department play after a project has been awarded on contract?

.....

.....

7. How often do you organise site meetings?.....

.....

.....

8. During site visits or inspections, how do you carry out instructions to the contractor?

.....

.....

9. When it becomes necessary to modify or alter the scope of work, who sanctions that and how is it done?.....

.....

10. What is the procedure in making payments to a contractor for work done?.....

.....

.....

11. Do you retain a portion of the contractor's money (amount due him) when making payment; if yes how much in terms of percentage?.....

.....

.....

12. When a contractor unjustifiably delays the work, what action do you take against him?

.....

.....

13. When your organisation fails to pay a contractor promptly, what do you do?

.....

.....

14. What action do you take when a contractor reports of practical completion of a project?.....

.....

15. What do you do when the defects liability period expires?

.....

.....

16. What are the challenges you face in the course of supervising or monitoring projects?

.....

.....

17. How well are you equipped in terms of personnel and equipment for administering effective contract administration practice?

.....

.....

18. What factors in your opinion are inhibiting effective contract administration practice?

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.....

APPENDIX II

INTERVIEW SCHEDULE FOR MAMPONG MUNICIPAL DEVELOPMENT

FACILITY (DDF) CONTRACTORS

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

COLLEGE OF ARCHITECTURE AND PLANNING

FACULTY OF ARCHITECTURE AND BUILDING TECHNOLOGY

DEPARTMENT OF BUILDING TECHNOLOGY

The interview question design took into consideration the objectives of the study with the aim to answer the research questions.

Please answer the questions that follow by writing unrestrictedly for open-ended questions.

Please answer all the questions freely but objectively. The information is for academic purposes only and would be treated with confidentiality. Thank you.

David Ofori (MSc. Construction Management - KNUST)

TOPIC: Investigating Difficulties Municipal Assemblies Encounter In Contract

Administration Practice. (Case Study of Mampong Municipal Assembly).

1. Name of your Company.....
2. Position in the Company.....
3. Educational qualification.....
4. Which category of Class does your firm belong to?.....
5. Please since when did you start winning contracts under DDF?.....
6. How many projects have you executed under DDF?

7. Please what are the Right, Duties and Liabilities of the following persons in contract administration? *The Employer, Architect, Quantity Surveyor, Clerk of Works, Contractor and Subcontractor*.....
8. Please does the Municipal Assembly always organise what is called Post Award Conference or Pre-Construction Meeting before you start work on new projects, and what transpires at this meeting?.....
9. Does the assembly keep a resident engineer or a Clerk of Works permanently on each project site, whilst work progresses?.....
10. How often does the Municipal Assembly organise site meetings in the course of the work?.....
11. Please who issues instructions to you on the site when it becomes necessary, and how is it done?.....
12. When it becomes necessary to modify or alter the scope of work, who sanctions that and how is it done?.....
13. Please when you submit your request for payment on work done, how long does it take before the certificates are honoured?.....
14. How will you describe the procedure that the certificates go through before they are honoured?.....
15. Please how much is retained as retention fund when interim payment certificates are prepared?.....
16. When you unjustifiably delays the work, what action does the assembly take against you?.....

- 17.** When the client too, the Municipal Assembly fails to pay you promptly, what action do you take against them?.....
- 18.** What does the Assembly do when you reports of Practical Completion of a project?.....
- 19.** When and how do you get your retention fund released to you?
.....
- 20.** What challenges do you face in the course of executing projects for the assembly under DDF?.....
- 21.** What factors in your opinion makes undertaking projects for the assemblies unattractive or otherwise?.....
- 22.** What will you suggest to modify the existing practice?
.....