DEPARTMENT OF BUILDING SURVEYING
FACULTY OF ARCHITECTURE, PLANNING AND SURVEYING
UNIVERSITI TEKNOLOGI MARA
PERAK

(PRE-CONTRACT IN CONSTRUCTION STAGE)

MUHAAMAD HAFFIZ BIN ABD HAMID

(2010985731)

DIPLOMA IN BUILDING SURVEYING

PRACTICAL TRAINING REPORT
JUNE 2013 – SEPTEMBER 2013

ACKNOWLEDGEMENT

In practical training for four months, i would like to say thank you for all person who are support to prepare my practical report. First of all, I would like to Ilham Kos Kosultan Sdn Bhd for giving me the opportunity to do practical training in companies.

In addition, I would like to thank the Quantity surveyor at Ilham Kos Kosultan Sdn Bhd, En Izuanshahril because give more information and guidance to me to prepared tender. He also gave full faith and an opportunity of doing any work.

Not forgetting my parents a lot of help in financial terms in the success of this practice. They also provide support and encouragement to me to complete the practical training report.

I also like to thank my supervisor, En Hasnan Bin Hashim because he has helped and assisted in completing the practical training report. Additionally, not forgetting others staff at Ilham Kos Kosultan Sdn Bhd to support me on my practical training

Finally, I am satisfied with all the work I do and it's a lot of positive impact on me. I hope the University of Technology Mara (UiTM) will continue to cost and practical training such as this to the coming generation.

ABSTRACT

Practical training is a course that should be completed by all students who took the final semester of Diploma in Building Surveying. Students have to choose where company or place to do the practical training.

I have selected the state private company of the Ilham Kos Kosultan Sdn Bhd as my place to do the practical training. I have placed at technical department. Quantity Surveyor as a guardian to prepared the document tender and calculated the cost of Bill of Quantity. The Quantity Surveyor also take over as financial for the contract and adviser for client about law of contract before take any action to the contractor.

In the contractual practice, they have two stages that are Pre-Contract and Post-Contract. The Pre-Contract stage for Quantity Surveyor is start with Preliminaries detail abstract (PDA) until award the Contractor. And for Post Contract is start from site possession to contractor until final account for the project.

I would choose the Pre-contract Stage as my final practical report. In this stage the client appoint the Architect to design and construct the project. And the architect as a lead consultant will recommend the consultant team as Quantity surveyor, civil & structure engineering and mechanical & electrical Engineering.

After client selected team consultant for the project, Quantity Surveyor will come out with costing for the project. When client agree with the costing and design, Quantity Surveyor will prepared the document tender and give to the selected tenderer to submit their price.

Then, Quantity surveyor will prepared document tender report and advice client to select contractor to complete the project.

TABLE CONTENT

LIST OF FIGURE

CHAPTER 1

(INTRODUCTION TO PRACTICAL TRAINNING)

1.0 Introduction

Industrial training is a compulsory part of the course to be taken by all students of Universiti Teknologi Mara (UiTM), each student is required to undergo industrial training for one semester before being awarded a diploma. The training is done for four months at firm or organizations that have been hand-selected by student or specified. The real aim of this industrial training is to prepare graduates who are ready and able to face either a career in academic or non-academic in spirit and appearance of professionalism.

In addition, students are exposed to real-world job situations besides helping improve the social skills of students. Students have to undergo industrial training in Ilham Kos Konsultan Sdn Bhd. During the training period, students are exposed to a variety of activities in the field of work, although the job is not done entirely by students for the purpose of security, regular students were briefed and clear guidance and useful enough as a general knowledge, in addition, students can learn the pattern of administration and management, as well as exposed to the real working environment and can learn social skills such as communication and social interaction.

At the end of the industrial training, the students hope to achieve objectives and take advantage of what he learned to face challenges in today's world of increasingly challenging.

1.1 COMPANY PROFILE

Figure 1.1 ILHAM KOS KOSULTAN SDN BHD

Ilham Kos Konsultan Sdn Bhd. is the Consultant Firm of Quantity Surveyor at no 950, Medan Peruda,Jalan Sultan Badlishah, 05000 Alor Setar, Kedah Darul Aman.The principal objective of Ilham Kos Konsultan Sdn Bhd is to financial and contractual matters concerning the project and to get the Best Value Money in the construction of any building or infrastructure works for public and privates sectors.

1.1.2 Company Background

Ilham Kos Konsultan Sdn Bhd has a team of Quantity Surveyors and Technical Assistance are Experience And qualified. We also have knowledge in the field of construction economies and contractual issues for various type of project. This enables us to provide professional service to clients, particularly in terms of construction cost is an important thing that is required by each client before performing a construction project.

It is belief and practices to ensure that all our staff is a very important asset to the company. Therefore we constantly strive to develop skill and knowledge to provide better service to client.

1.1.3 Corporate Information

Directors	: Sr. Rohaizat Bin Suradi
	: Sr. Azlan Bin Pawanteh
Registered Office	:No. 950, Tingkat 1, Medan Peruda, Jalan Sultan Badlishah, 05000 Alor Setar, Kedah Darul Aman. Tel: 04-734 6348 / 49 Faks : 04-7317350
Office Address	:No. 950, Tingkat 1, Medan Peruda, Jalan Sultan Badlishah, 05000 Alor Setar, Kedah Darul Aman. Tel: 04-734 6348 / 49 Fax: 04-7317350
Registration No	: 2002/FC00319
Date Of Incorporation	: June 2003

1.1.4 Scope of Professional Services

Land Appraisals Studies

- Preparation of report showing the various forms of land utilization and their financial implication

Pre-investment and Feasibility Studies

- Preparation of studies showing the financial feasibility of development project
- Advice on feasibility and variability of executing the project safely and economically
- Preparation of construction loan disbursement by financial institution

Cost Estimating and Project Cost Control

- Preparation of construction cost analysis
- Providing financial advice on alternative design and material

Tender and Contract Documentation

- Preparation tender and contract document
- Providing advice on alternative tendering procedure

Tender evaluation

- Report on detailed analysis of contractor's tender
- Negotiation of contract prior to award

Variation and Cost Control

- Evaluation of variation and cost control of construction cost to ensure that the final cost is within the allocated budget
- Preparation of financial statement and forecast

Interim Payment

- Periodical evaluation of the completed work, preparing recommendation for interim payment to the contractors.

Final Account

- Preparation and settlement of the final account on completion construction

Others Related Services

- Evaluation or audit of contractual claim for Arbitration or litigation cases and insurance claim
- Contractual arrangements for turnkey, work management and privatization project

1.1.5 Staff Information

Bil	Name	Designation
1	Sr Rohaizat Bin suradi Bach. QS (Hons), UTM,MISM	Director
2	Sr Azlan bin Pawanteh Dip. QS UTM, B.Sc (CNAA) QS	Director
3	En Rosmaili Bin Hj Nazri Bach.Sc.Bldg.Econ & QS	Associate Quantity Surveyor
4	En Muhd Zaher Bin Ishak Bach. QS.(Hons) Um	Quantity Surveyor
5	Pn lailiza Bt Ishak Dip. QS UTM	Senior Assistant Quantity Surveyor
6	En IzuanShahril Bin Che Azmi Dip. QS Poli. Kota Bharu	Assistant Quantity Surveyor
7	Pn Rohani Bt Md Daud B.BA (Hons). UUM	Account Executive
8	Pn Sarina Bt Ishak Dip. Information Technology(IIC)	Administrative Executive
9	En Mohammad Bin Yusof MCE	Office Assistance

1.1.6 Quality Policy

Ilham Kos Konsultan Sdn Bhd, a provider financial and contractual matters concerning the project and to get the Best Value Money in the construction of any building or infrastructure works for public and privates sectors with our Quality Policy.

- Meet clients requirements and needs
- Improve the level of service
- Foster a culture of quality in organization
- Manage the project in efficiently and effective.

1.1.7 Quality Objective

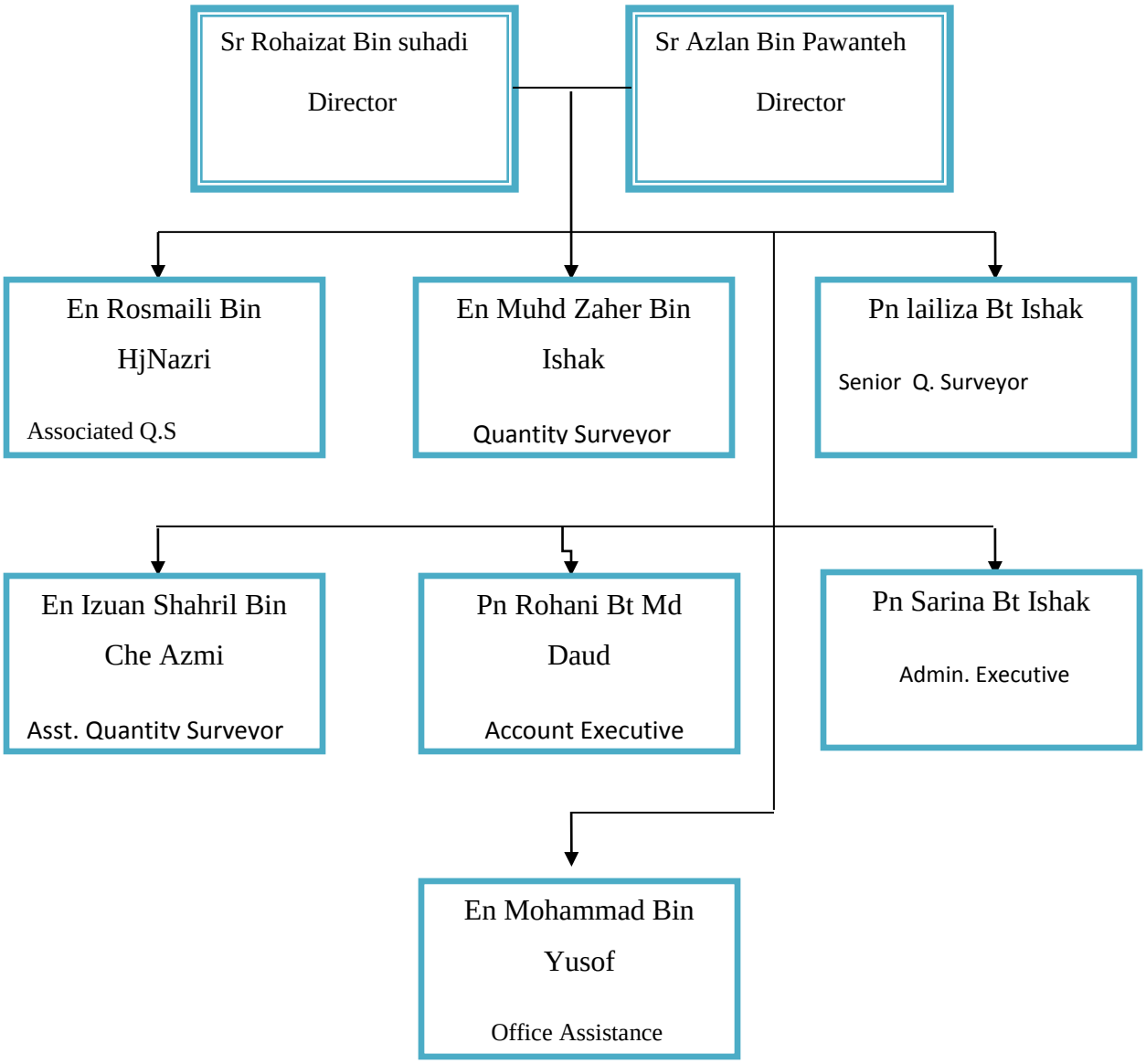
Quality Objective is a target to achieve for better service for time to time.

- Deliver tender document to client on time
- To issues contract document to client within 4 month
- To issue recommendation for interim payment certificate with 14 days from site valuation
- To issues final payment certificate within 14 day from finalization of final account.

1.1.8 Company Logo

Figure 1.1: ILHAM KOS KONSULTAN's Logo

1.1.9 Organization Chart of Ilham Kos Konsultan Sdn Bhd



1.1.10 List of Abandoned Project

Completed Project

Bil.	Project	Client	Cost Contract
1	Cadangan Membina dan Menyiapkan Pusat Kesihatan & Pusat Pelajar Di UiTM Cawangan Pulau Pinang, Seberang Perai, Pulau Pinang (2006)	UiTM	RM 2,671,278.00
2	Cadangan Membina Dan Menyiapkan 26 Unit Rumah Berkembar Dan 90 Unit Rumah Teres 2 Tingkat Di Atas Kawasan Industri, R&D Dan Perumahan Taman Perindustrian Hi-Tech Kulim, Mukim Padang Cina, Daerah Kulim, Kedah Darul Aman (2006)	Kulim Technology Park Corporation Berhad	RM 15,242,822.39
3	Cadangan Membina Dan Menyiapkan 26 Unit Rumah Berkembar Dan 90 Unit Rumah Teres 2 Tingkat Di Atas Kawasan Industri, R&D Dan Perumahan Taman Perindustrian Hi-Tech Kulim, Mukim Padang Cina, Daerah Kulim, Kedah Darul Aman (2006)	Majlis Daerah Baling, Kedah	RM 2,200,000.00
4	Kerja – Kerja Pengubahsuaian Rumah Kedai 3 Tingkat Di Bandar Amanjaya, Sungai Petani, Kedah (2006)	Open University Malaysia	RM 1,500,000.00

5	Cadangan Membina Dan Menyiapkan Dewan Orang Ramai Di Pekan Padang Serai, Kulim, Kedah (2006)	Majlis Perbandaran Kulim	RM 1,230,594.65
6	Cadangan Membina Pavillion Dan Padang Bola Di Atas Sebahagian Lot 2216 Bagi UiTM Merbok, Daerah Kuala Muda, Kedah Darul Aman (2007)	UiTM	RM 908,289.40
7	Membina Dan Menyiapkan Maktab Rendah Sains Mara (MRSM) Jitra, Mukim Binjal, Daerah Kubang Pasu, Jitra Kedah (2006)	Techart Sdn Bhd	RM32,488,888.88
8	Cadangan Membina Dan Menyiapkan Pasar Awam Di Taman Angsana, Kulim, Kedah (2007)	Majlis Perbandaran Kulim	RM 913,170.00
9	Cadangan Membina Dan Menyiapkan Sebuah Masjid Di Atas Sebahagian Lot 562 & 3753, Mukim 9, Transkrian, Daerah Seberang Perai Selatan, Pulau Pinang (2007)	Pejabat Pembangunan Negeri Pulau Pinang	RM 2,465,000.00
10	Cadangan Membina Dan Menyiapkan Kompleks Perahu Layar, Di Atas Lot 3662, Mukim Kuah, Langkawi, Kedah Darul Aman (2007)	Majlis Sukan Negara Malaysia	RM 5,500,000.00

Current Project

Bil	Project	Client	Cost Contract	% Progress
1	Cadangan tambahan pembinaan bengkel kemahiran hidup di MRSM Merbuk di atas Lot PT1380, Bandar Merbuk, Daerah Kuala Muda, Kedah Darul Aman	Majlis Amanah Rakyat	RM 1,700,000,00	1%
2	Cadangan membina dan menyiapkan sebuah Kompleks Sukan Di Atas sebahagian Lot 10518,Seksyen 39, Mukim Padang China , Daerah Kulim , Kedah Darul Aman	Kulim Hi-tech	-	Pre-contract stage
3	Cadangan Membina Dan Menyiapkan Kompleks Perahu Layar, Di Atas Lot 3662, Mukim Kuah, Langkawi, Kedah Darul Aman.	Majlis Sukan Negara Malaysia	RM 5,500,000.00	70%
4	Cadangan Pembinaan Perumahan Dan Ibu Pejabat Polis Kontinjen (IPK) Kedah.	Kementerian Keselamatan Dalam Negeri	-	Pre-contract stage

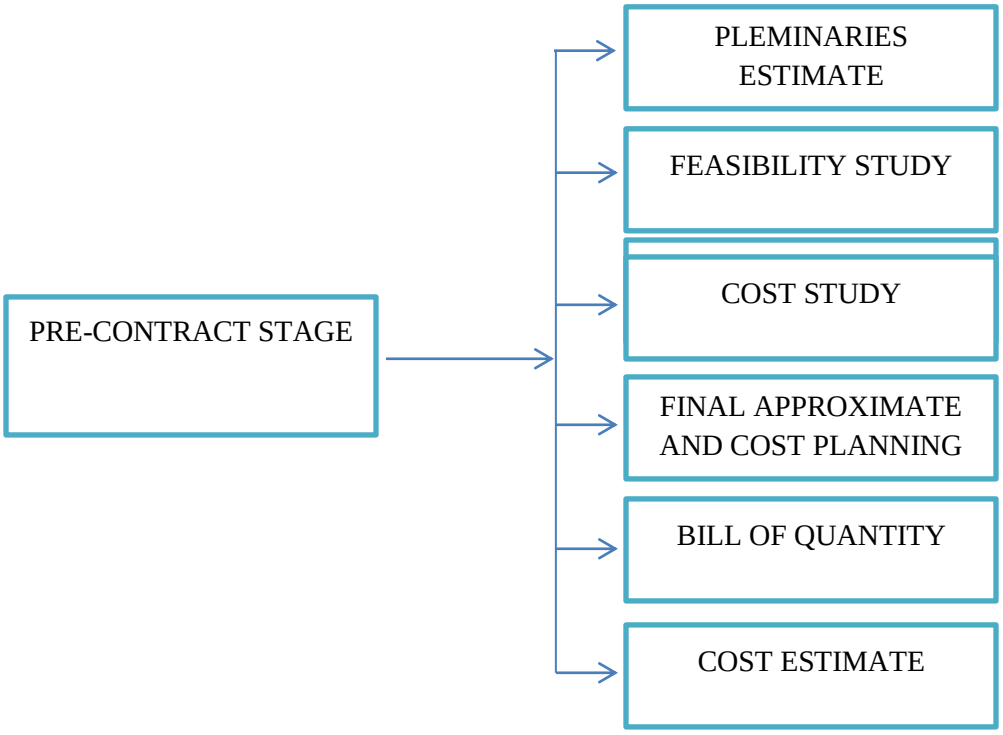
CHAPTER 2

(LITERATURE REVIEW)

2.0 INTRODUCTION OF PRE-CONTRACT

In the project of architectural and engineering, construction of a process that consists of the building in infrastructure. Normally, the job is managed by a project manager, and supervised by a construction manager design engineer, construction engineer or project architect. In construction stage, that has two stages that are Pre-Contract and Post-Contract.

Pre-contract stage that include the inception stage until the tender Action stage. In every stage, the quantity surveyor will play their roles to make the requirement needed in preparing the tender document has been done. The stage that involved in the Pre-Contract stage is:



2.1 Pre-Contract Stage

- Inception
- Feasibility
- Scheme design
  - Outline proposal
  - Detailed design
- Production information
- Bill of Quantity
- Tender Action

2.2 Pre-Contract Stage Detail

2.2.1 INCEPTION

- The client appoint architect to oversee the design and construction of the project.
- After the signing of an agreement between the client, Architect recommends the Quantity Surveyor And structural Engineer.

Client Clarifies

- The required of time scale and date to commencement and completion
- The nature of project such as the size and facilities required
- Site location and topography
- Method of financial to the project.
- Material and standard of the project

Approaches

- Located a site then assess what could be develop on that site
- Decide the particular project and then find a suitable site to build.

2.2.2 FEASIBILITY

- Design team will examine the clients proposal to make sure no major problem or constrain related to design of the building and the site.
- Confirm the development be able to fulfil its proposed function
- Confirm the technical problems of the project be overcome economically
- Confirm the financial constraints are acceptable
- Team will investigation the site topography, sub soil and legal constrain.
- Outline Planning Permission applied for that.
- Looks at the potential of the project being viable
- A number of factors must be considered

Ground Condition

- Choose the suitable foundation and their Quantity follow as condition of sub soil for ground floor construction
- To determine the ground water condition the comprehensive site investigation should be carried out to ensure the correct type of foundation and economically design.

Method of Accessing Construction Cost

- Elemental Cost Analysis
- Cost per unit area
- Approximate Estimating
- Bills of Approximate Quantities

Element Cost Analysis

- This is based on historical data from completed projects with the costs broken down into the elements of construction and shown on a metre squared basis.
- Data for the calculation of costs can be obtained from a number of sources i.e. the Royal Institution of Chartered Surveyors quarterly review of building prices.

Cost per Unit area

- Based on historical data obtained from similar completed projects on a cost per metre squared basis.
- Information may be obtained from the developers own projects or from other developers.
- Easy method to calculate though it is not very accurate. Best used on simple offices or car parks.

Approximate Estimating

- Requires detailed information about the design requirements of the project.
- Cost obtained by taking off quantities and building up an estimate.
- Data on costs is obtained the use of a number of computer software programmes which are available.

Bills of Approximate Quantities

- This method is time consuming in comparison to those listed above.
- Method requires a Bill of Quantities being produced before an estimate can be obtained.
- Most accurate and can be used for tendering

2.2.3 SCHEME DESIGN

The Architect design from the briefing by client. And the scheme Design divide into two categories that is outline proposal and detailed design.

Proposed The Design Brief

Provide the design team with as much information as is possible in order to ensure that a building appropriate to the client's needs and requirements is produced.

Sketch Plan-Outline Proposal

When meet the Client on Briefing, Architect will prepared the outline drawing, Explanations of what assumptions and main decisions have been made, and forecast of cost and time scale.

Specific requirement to providing Design brief.

- This provides a list of specific requirements.
- They are frequently produced on a room to room basis and are often used by local authorities and health authorities.
- Although it does not lend itself to misinterpretation it can restrict the design due to the requirements being too rigid.

Performance Specification

- This gives the designer the standards of performance which the building is to obtain.
- It is then up to the designer to ensure that these standards are met, the way that this is done is left to the designer.
- This method allows the designer some flexibility as to the design and the materials which are chosen.

User Requirement Study

Objective must be set by the study the function of the building:-

- The person using the building
- Budgetary constraints
- Life cycle of the building
- Consideration of the building

Consideration of the design

- Type of building such as steel or frame
- Cost of the building including labor and component
- Site condition
- Site location and access to the site
- Amount of area of site including car parking and building area.

2.2.4 PRODUCTION OF INFORMATION

Once building regulation approval is obtained, a detailed cost estimate is obtained remainder of production information produced. This is included.

- All working drawing such as Architecture, structure and services
- All schedules of door, window, drainage and reinforcement
- Specification of construction methods and material

2.2.5 BILLS OF QUANTITY

The Quantity Surveyors prepares the bill of quantities by taking the entire material requirement off the working drawing. With the list give, item on drawing, component and all the material which required to construct the project.

Bill of Quantity Content

- Form of tender
- Preliminaries
- Preambles
- Measure work section
- Day work
- Prime cost and provisional sum
- Final summary

All the content will describe to the document tender by Quantity surveyor.

Bill of Quantity Content Detail

- Preliminaries
  - ✓ Referred to as Prelims, these are found at the commencement of the BofQ.
  - ✓ General items
  - ✓ Provides extra information to contractors
- Preambles
  - ✓ Form the specification for materials and workmanship. The object is to specify all materials in such a way as to leave no doubt in the contractors mind - specify BS numbers,reference numbers, and manufacturer.

- Measure Quantity

  - ✓ Work section is related to precise measurement of work. According to the drawing by Architect. Quantity Surveyor will measure all component and item of the building to the nature of wok that used meters run or meter square

- Provisional Quantity

  - ✓ This item is to cover the item does not know at the tender process such as rock and water.
  - ✓ This item will be measure or omitted on completion

- Prime Cost Sum

  - ✓ This prime cost sum will be provided by subcontractor, supplier for work to be done or nominated by them.

- Provisional Sum

  - ✓ Provisional quantities should not be confused.
  - ✓ This relates to a sum which is provided for in circumstance which cannot be entirely foreseen, but which it is known is likely to be required.

2.2.6 TENDER ACTION

The architect will be choosing the type of tender to be used and produce to this project for all documents. The document will be sent to the builders and then they will estimate the price of the project for which part of work they want to do.

Then, the builder should submit the tender document on the specified time and date to the client. And on the specified date, the tender will be open and client will choose the suitable builder with the qualified and price of the tender that the builder pricing for do the project. And then who becomes the contractor of that project.

2.3 CONSULTANT AND THEIR ROLE

2.3.1 CLIENT

In a certain construction projects, client is the most important person in all the party which involved in this project. Normally, the client will state their ambition to make any construction project. Hence, this party will find the contractor to realize their ambition. So, with the existence of client, it will become the main idea towards the construction of certain project.In running a construction project, the client needs to fulfill the condition and criteria which has been stated.

The criteria that needed in a client are as follows:-

- Capital factor is the determinant to all running's works. So the client has to prepare an enough capital to ensure their ambition can be realize by the contractor.
- Besides that, this client also needs to have a site to build any construction project.
- The client also has to prepare a couple of accommodation for the customer especially the contractor to smooth the construction project.

2.3.2 ARCHITECT

Architect is the most important person in completing the building projects. The first party who is performs the action in starting the process in the construction project is the Architect. He has to engage by the Client as agent to design, advise and ensure that the project is kept within the cost and complies with the design. The Architect has to responsible in handling this project and he has a skills and master mind of the design in the building. He has an expert in production of design and all the architectural drawing. Below are the tasks of Architect in pre-contract stage for this project:

i. **Translated the Client's brief for this project**

In pre-contract stage, the Architect has to draw the design of building based on Client's brief. Architect has to determine the size, shape, layout and functions of the building, the design whether in or out of the building, the materials have to be use in the construction and also the method of the construction.

ii. **Prepare sketch design and outline proposal to shown to the Client.**

Architect will prepare the sketch design and outline proposal to know the comment from Client about the design of the building. So, the Architect will adjust the design based on the Client comment. Its can make design will give pleasure to the Client.

iii. Prepare the specification for material and the work of the building.

Architect have to prepare the specification for material and works of the building for this project to act as a reference to all the consultant especially the Quantity Surveyor for preparing the pricing and document tender for this project. The specifications also act as a reference to the contractor in pricing the Bill of Quantities and also like progress of work in this construction project.

iv. Prepare the detail drawing for this project

After the design which is prepared by the Architect get an approval from the Client, Architect have prepare the detail designs for the building to give to the Quantity Surveyor to prepare the measurement and also to complete the document tender for this project.

v. Leadership of consultant team.

Normally, Architect will act as a leader in the construction project. If the project has a problem, the consultant must refer to him to settle down that problem. The Architect also have to manage the site meeting and detect any problems required in the progress of the construction work whether the consultants or contractors.

vi. Submit the building layout to the authorities

Architect has to submit the building layout to the Local authorities to get the approval for this project. This is because the Architect must follow up the local authority's procedure in preparing the design for the building.

2.3.3 CIVIL AND STRUCTURAL ENGINEER

The civil and structural engineer is important in the construction works. They will responsible on the stability of the structure component in the building and also responsibilities in special problems exist especially on external work. The task of Civil and Structural Engineer are:

i. **Prepare the necessary structural designs**

The Structural Engineer has to prepare the structural design for this project like beam, column, roof trusses, foundation and others based on the Architect's drawing. They also responsible in design the infrastructure works for the project like roadways, drainage, parking and other related facilities.

ii. **Calculate the load of the building.**

They have to calculate the load which is gain in the building. This is because they have to decide the size of foundation, beam, and column. It is for the stability and the strength of the building.

iii. **Responsibility on the stability of the structure for the project.**

The structural Engineer has to ensure that the stability of the building structure is strong and the building is free from danger to the user. So, the building is safe to be use in the future. If the Engineer makes a mistake about the structure design, it can affect the stability of the building. So, the Engineer has to showing careful attention in design the structural element for the building.

iv. Submission of drawing to the local authority

They have to submit the drawing to the local authorities to get the approval for the plan such as infrastructure work plan. This is important to ensure that the area of the project is not disturb the another place and can cause the problem in the future.

v. Identify the soil structures or stabilization and grand water condition

They have to responsible in special problems existed regarding reclamation ofland, soil stabilization and grand water condition. They also have to identify the strength and condition of soil to ensure that the types of foundation to be used for this project based on the load to support the building.

2.3.4 MECHANICAL AND ELECTRICAL ENGINEER

They are responsible in mechanical and electrical work such as plumbing (hot and cold water), heating, air-conditioning, lighting and others for the project. The task of Mechanical and Electrical Engineer are:

i. Prepare the mechanical and electrical plan for the project.

The Mechanical and Electrical Engineer also has to prepare the drawing plan for the mechanical and electrical works in this building such as wiring system, piping installation, plumbing works and so on. Besides that, they also have to prepare the drawing fire protection system, air-conditioning system and system lift installation. They will responsible to all the works to make the building will operate successfully.

ii. Guide and check the works which is related with them in the project.

In the progress of works, they have to guide and check all the work at site. This is important to ensure that there are no mistakes in the progress of installation works. This is also because the installation works is difficult and the engineers have to guide the works.

iii. Get the approval from the local authorities.

Before the work will be started, the Engineers have to get the approval from the authorities likes Tenaga Nasional Berhad, Telekom and Jabatan Bomba on the installation system in the building. This is important because to make sure that the material and arrangement of the equipment can be use and suitable for thisbuilding. The authorities also have to check and test the entire requirement to make sure that it will operate before give the approval for it.

2.3.5 QUANTITY SURVEYOR

The Quantity Surveyor performs an extensive role in the development and construction industry. His task is to guide the construction cost and advice Client about the cost of the project. In other words, Quantity Surveyor is a cost adviser for the Client. He also concerned with contracts for works of construction. He is thus expected to have a practical working knowledge of the law, relating to the profession that is sufficient to enable him to perform his duties adequately. The Quantity Surveyor's tasks are:

i. Preparation preliminary cost estimates and cost plan of the project.

First stage need to be done by the Quantity Surveyor is preparing the preliminary estimates based on the preliminary drawing designed by the Architect. He can use the floor area method to prepare the preliminary estimates. After all the information had received, process of preparing cost plan will be prepared. This cost plan is important to know the budget cost of this construction project for the Client prepares his cost of the project. The preparation of the budget is important to ensure that the building can be erected within an approved expenditure.

ii. **Advice to Architect about design based on cost limit.**

The Quantity Surveyor has to help Architect in advise him in the early stages of a scheme, when approximate costs being considered. Quantity Surveyor will usually give advice on a first approximate estimate without charge, but a subsequent cost planning service, involving as it does a substantial amount of work, is the subject of a fee to be agreed.

iii. Tendering Procedures and contractual arrangement

The Quantity Surveyors has to advise to the Client and also Architect on procurement, tendering and contractual procedures and arrangement for this project. This is because the Quantity Surveyor is expert in the procedure of contract and also about the tender.

iv. Preparation of Bills of Quantities or Specification Document for tendering purposes.

Tender document are the document prepared by Quantity Surveyor after the Client give his approve. In the Tender Document is containing item Bills of Quantities which is state the quantity and material are used in the construction based on the drawing. This document has to prepare before issuing of tender. The Quantity surveyor has to negotiating or agreeing on rates and has to manage the contract administration for this project.

v. Preparing Tender Report

The Quantity Surveyor has to preparing the tender report to advice to the Client on the selection of Contractors for this project. In this project, the Client chooses the open tender, so the Quantity surveyor has to evaluate the entire document tender from Contractor. So, the Client will compare the contractors who have entered the competition to get this tender and Client also can choose the suitable contractor for this project.

vi. Preparation of feasibility studies for this project.

The Quantity Surveyor will make the feasibility studies for this project to know the requirement of the project for Client and also for the Consultant. He has to advise on the economics of a project and what is would cost. With apply expertise on comparative cost studies and life cycle costing; Quantity Surveyor can get the reasonable cost based on period of time and durability of building.

CHAPTER 3

(PRE-CONTRACT OF CASE STUDY)

3.0 INTRODUCTION OF PROJECT

I have chosen to discuss the pre-contract stage for this report because the role Quantity Surveyors have played more in this stage that involved the process in preparing tender document, tender report and also pre-contract cost estimate.

The definition of Pre contract is a process which is happen before the construction. This stage is important to be followed by the client and design team in order to complete the construction progress successfully.

Basically, pre-contract stage is started from the inception stage until tender have been award. The design teams have their roles in every stage in pre-contract stage. The works involved in pre-contract stage are as followed:

3.1 PROJECT TITLE

Cadangan Membina Sebuah Masjid Di Taman Kenari Kulim, Kedah Darul Aman

3.1.1 PROJECT LOCATION

The location for project " Pembinaan sebuah masjid di taman kenari":

Taman kenari,

Di atas Lot 4297 (Lot Lama 5434),

Mukim Kulim, Kulim,

Kedah Darul Aman.

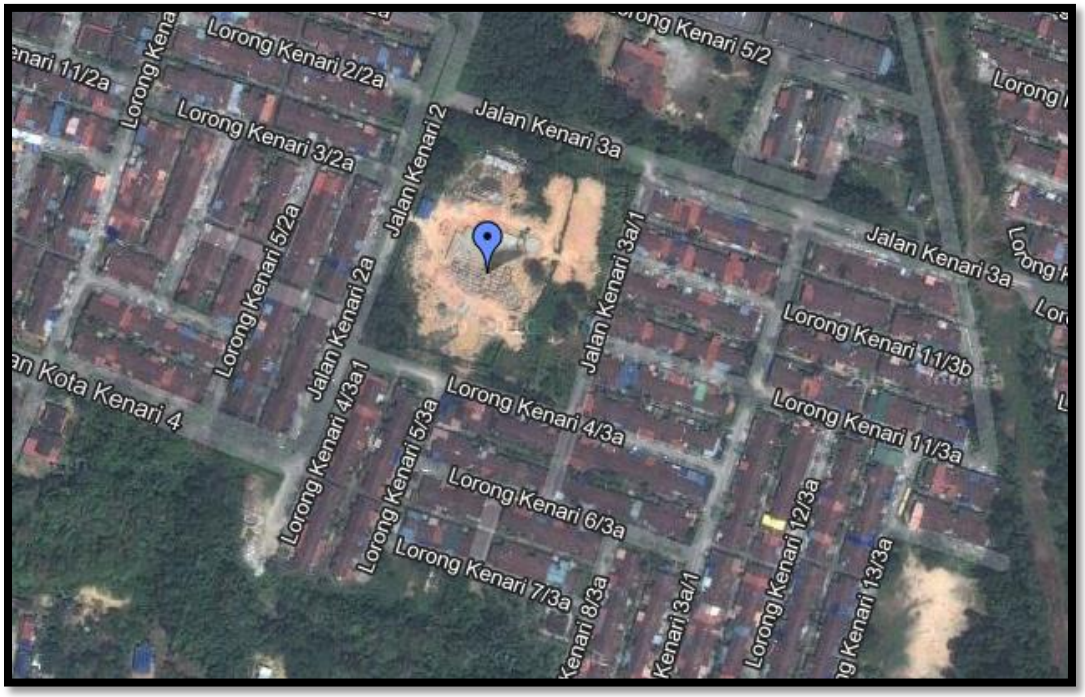


Figure 3.1 Location plan of Project

The resident in this area keep increasing since this place a residential area and majority of resident who live in Taman Kenari are muslim. The increasing number of resident cause an existed ‘surau’ cannot accommodate the resident at that area especially in Friday and Eid.

Existence of Masiid Jamek Taman Kenari will help to reduce the traffic of people focus on one location at certain time especially when resident carrying out Friday prayer. It also will reduce traffic congested because people park their car side of road and disturb traffic flow. Masjid Jamek have provided parking facility to avoid the lack of parking lot that can cause traffic disturbance.

Site suggestion has a good and perfect accessibility because the mosque is built at centre of the residential area. Generally, the site in this area is also already having facilities such as electric and telecommunication. Therefore, it contributes to an easy planning and development on this site.

3.2 PROJECT BACKGROUND

The client has appointed a team of professionals to assist them in the pre-contract stage and construction stage. The team of professionals consists of architect, civil and structural engineer, mechanical and electrical engineer and quantity surveyor. These professionals will guide and give advices and consultation to the client regarding design, safety measure, cost indication and assist in selecting the most competitive reliable tenderer to undertake the project.

The project name is **"**Cadangan Pembinaan Sebuah Masjid di Taman Kenari, Kulim, Kedah Darul Aman**".**This is a project under and owned by the Jawatankuasa Masjid Taman Kenari**.**

3.2.1 The consultants responsible for the running of this project are as below:

1	**ARCHITECT**	**AZLINA ABDULLAH ARCHITECT** No. 5c, Bangunan Al ikhwan Jalan Kilang lama, 09000 Kulim, Kedah Darul Aman.
2	**QUANTITY SURVEYOR**	**ILHAM KOS KONSULTAN SDN. BHD** No. 950, Tingkat 1,Medan Peruda, Jalan Sultan Badlishah, 05000 Alor Setar, Kedah Darul Aman.
3	**CIVIL & STRUCTURAL ENGINEER**	**DESIGN PRO CONSULT SDN. BHD.** No. 1 , Tingkat 1, Jalan Arowana 1, Kawasan Perniagaan Arowana, 13500 Permatang Pauh, Pulau Pinang.
4	**MECHANICAL & ELECTRICAL ENGINEER**	**RHA CONSULTING ENGINEERS** Lot 186, Lorong Putra 1/D, Pusat Perniagaan Putra Jalan Kilang Lama, 09000 Kulim Kedah Darul Aman

3.3 PROJECT'S DETAILS

BIL	TOPIC	DESCRIPTION
1	CONTRACT SUM	RM 3,334,094.25
2	TYPE OF TENDER	SELECTIVE TENDER
3	DATE OF SITE POSSESSION	15TH JULY 2009
4	DATE OF COMPLETION	14TH JANUARY 2011
5	CONSTRUCTION'S PERIOD	18 MONTHS
7	PERFORMANCE BOND	5% OF THE CONTRACT RM 166,704.71
8	DEFECT LIABILITY PERIOD	12 MONTH
9	TENDER FORM	PWD, FORM 203A (REV. 10/83)

3.4 PRE-CONTRACT COST ESTIMATE

In the pre-contract stages, there is an early estimate for the project proposed. This is done to get the rough estimate on the cost of overall project based on the first design and key plan produced by the Architect. The Quantity Surveyor used **Preliminaries Details Abstract (PDA)** to prepare cost estimate. The main purpose of preparing the pre-contract cost estimate is to ensure that Developer budget balanced with the design to be built. It also can be as the guideline for the developers to conversant the budget to be spending for the project. With the help of this estimate, Client can also know whether the budget is higher than the estimate done.

There are many methods that could be used in preparing preliminary cost estimate. Each method has their advantages and disadvantages itself due to the information need to be carried before proceeded with the estimate.

- **Unit Valuation Method**

This method is the easiest method to get the early estimate for some simple project such as mosque, hospital, and school. This method required a very little information and they need to refer to the Public Works (JKR) unit rates that always updated.

- **Floor Area Method**

This is an easy method and faster to be done than others. It has been used to check the estimated made by other method. Data from similar buildings is also needed when used this method. This method is the most popular method in estimating the cost project.

- **Cubic Method**

This method is used in pre-contract cost estimated because it not takes a long time. It is more detail than Gross Floor Area method because consider height of buildings. But this method rate has a little meaning to a client because they usually concerned with floor area. It is also very rare to normal practice.

- **Stores Enclosure Method**

This method is much better compare to the cubic method due to the complexity to prepare the estimate. Calculating the gross floor area does it and total areas of the external walls and then multiply with the weight. The area of the roof will be measured on plan and multiply with the weight.

- **Approximate Quantities Method**

This method is the most accurate method than other method. This method is almost the same in preparing the Bill of Quantities but it is slightly easier and faster. This method needs drawings, specification and price rates. The taking off will be done for every element. The most reliable method as it makes specific provision for all major items and takes account of all design factors affecting cost including shape, size, height and detailed specification. However it the elements should be measured separately and this cause the need of time.

Furthermore, in preparing pre contract cost estimate for a project, there are factor that need to be considered while prepare the cost estimate. The factors as follow:

i. **Accuracy**

The Quantity Surveyor must decide whether he want to use an accurate method to obtain the cost or not.

ii. **Information**

The accuracy of an estimate is based on the information given by other consultants. If a lot of information is given then the Quantity Surveyor can do an accurate estimate.

iii. **Time Constraint**

If the client gives a lot of time for the Quantity Surveyor to prepare the cost estimate then perhaps the Quantity Surveyor could prepare an even accurate cost estimate.

iv. **Types of building**

An estimate is based on the type of building that the client wants to build. For example if the client wants to build a hospital then it is suitable to use Unit Method.

3.5 Pre-Contract Cost Estimate for This Project

As for this project, the method apply in preparing cost estimate is the Approximate Quantities based on preliminary drawing design by Architect which is not been finalized yet. The accuracy for this method is depending on the information and details on the drawing only.

Data Required

i. Preliminary Architectural and Structural Drawing
ii. Specifications
iii. Elemental Cost Analysis for historical building
iv. Current price and rate

The Advantages of Approximate Quantity Method

i. The quantity measured more accurate compare to the other methods
ii. Therefore, the cost estimated also more accurate
iii. The Quantity Surveyor, Architect and Engineer can determine the estimate cost for every element.
iv. Easy for Architect and Engineer to change the design to reach the Client's budget and requirements

The way in preparing this approximate quantity method is as follows:

i. The bill of quantities is prepared the same way as the usual bill of quantities was prepared. But in the approximate quantities method, the brief way is practice.

ii. Usually, this brief way contains all the measurement of the composite item that is using one dimension set for couple of item. Price for this composite item is made based on the current price and the allotment has to be made for all the items that been measured.

iii. The measurement is made by disregard all the small items, laps and deduction only be made to the big void only.

Preliminaries cost estimate for this construction equal **RM 3,595,770.00**

3.6 Project Cost Estimate

"CADANGAN PEMBINAAN SEBUAH MASJID DI TAMAN KENARI KULIM, KEDAH DARUL AMAN".

Below is the price that has been by '**Preliminary Detail Abstract (PDA)'** for this project which approved based on below:

	BREAKDOWN OF PRELIMINARY COST ESTIMATE	PDA COST(RM)
1	PRELIMINARIES	140,000.00
2	PILING WORK	211,000.00
3	BUILDING WORK	2,110,080.00
4	INTERNAL SERVICES	247,050.00
5	EXTERNAL WORKS	419,790.00
6	PROVISIONAL SUM	40,000.00
7	CONTRIBUTION FEES	15,000.00
8	MISCELLANEOUS	40,000.00
9	SUPERVISION	40,000.00
10	PROFESSIONAL FEES	332,850.00
TOTAL PROJECT COST ESTIMATE		**3,595,770.00**

From the estimation that been prepared, it was high if it have been comparing with the contract sum that agreed by the client and the contractor. The amount given by Zuricon Sdn. Bhd. is lower than estimate price and the contract value is **RM 3,334,094.25 (THREE MILLION THREE HUNDRED THIRTY FOUR THOUSAND NINETY FOUR AND TWENTY FIVE CENT ONLY)**

3.7 PREPARATION OF TENDER DOCUMENT

Tender document is a very basis and important document to make sure that the project can smoothly construct as per schedule done before. But, need to be reminding that no one construction project was smoothly executed.

Tender document is a something like quotation document that used for selecting the most compatible and capable contractor to execute the proposed job. Before the contract bind between Client's and contractor, the tender document must be prepared first to get the contract bid value from the contractor before contractor awarded.

Tendering process is a most important period because in this period, the Client's will make the decision to select the most suitable contractor to realise their wish. There are several stages in preparing the tender document to make sure the tender document produced fully benefit and fair to both parties Client's and contractor.

3.7.1 Purpose of Preparing Tender Document

The purpose of preparing tender document is to inform tenderers and all parties involve about the proposed project. It is also a symbol to invite the tenderers to give their financial bid. Plus, to assist the tenderers to price the entire item involved based on the quantity stated in the tender document. The Client's select the right contractor to execute the Works in order to get the best tender bid prices with suitable completion time. It is also to inform the tenderers about the requirements and qualification need in the project. Beside that it is to inform the tenderers about the documentation cost and tender closing date. It use for a guideline to the Quantity Surveyor to make the evaluation for progress payment and also guideline for evaluation the variation orders during the construction stage.

3.7.2 Content of Tender Document

Tender document use in the project "Cadangan Pembinaan Sebuah Masjid di Taman Kenari Kulim, Kedah Darul Aman" is bases list material and quantity. Taking off would be prior to get quantity and should be included into materials list that have been made and then should be included into tender document. The lists of contents tender document on project are as follows :

i) Advertisement

ii) Tender JKR's form 203 A

iii) Instruction Tender

iv) Condition Tendered

v) Preliminary Works

vi) Specification

vii) Bill Of Quantities

viii) Drawing

ix) Appendix

x) Form of tender

3.7.3 Here is the matters which contain in the contract:

i. Advertisement

Advertisement done which is a document to offer contractor enter tender. Advertisement is an offer from client to contractor. This is must be clear and simple. Stated advisement containing:

a) Department or client to offer tender

b) Title of tender document

c) Type of tender document

d) Conditions of tendering

e) Date , Time And Place Submission Of Tender

f) Date, Time and Place Visit to Site.

ii. Tender Form

Tender form needs to be filled by the contractor completely. In the tender form it is offer to some project. Tender form also is letter to the owner sign and later will send by contractor. The type for tender form using in this project is Tender JKR's form 203 A.

iii. Instruction Tender

Contents in Instruction tender on this project are as follows:

a) The offer is based on Table Document and drawing , there are provided list quantity, specification and conditions of document offer. Therefore, Table Tender document would be put at the office Ilham Kos Konsultan Sdn. Bhd. as references.

b) To Inform delivery tender place

c) Each tendered must delivery 1 set of documents which contains :

- One set tender with full document
- One set of tendered

d) Tendered musts fill or complete the rate and price to all of item that explained in the list quantity before or today stated documents delivery follow:

- Background form tendered
- Tender Form JKR
- Appendix to preliminaries

  - (Appendix B – ' Daywork Rates and Schedule of Basic Plant Charges for Use in Condition with Daywork ‘)

e) To inform contractor must visit site and ensure the site is suitability. Any risk and accidents happens at the site is under his responsibility own.

f) To inform client to not need accept lowest tender and should give reason to reject the offer.

g) All of the information in forms needs to be filled and stated form needs to be completely signed.

h) In this period contractor cannot scratch, make any amendment and any additional condition.

iv. Conditions Tender

In this part it is explain about the terms that need complied by each contractor, for example are as follows:

a. Filling condition and document delivery tender.

b. Performance Bond and Security Deposit must be prepared before construction jobs carried out.

c. The suitable place and time to take and return document tender already complete.

v. Preliminary Work

Usually it is include works for one project. Contractor will put price to each item those stated. In this part contractor have the opportunity to price each item. If contractor not price it, it was still being already presumed pricing in the document tender. Business model driving at deep this preliminary works is:

a. Scaffolding

b. Signboard

c. Site office

d. Work progress report

e. Insurance

f. Temporary Telephone

g. Temporary road

h. Temporary Water and Electrical

vi. Specification

Specification were essential drawing inside work in more detail, it maybe could not be stated in drawing and list material. Apart from that, specification also sets out about quality material, kind of material which is used and method of working those carried out.

Specification must become a part from the document tender issued to those tendered and Table Tender Document. Good specification features must not contradict with information state in drawing and list quantity.

vii. Bill of Quantities

Bill of Quantities is document which give details work that need to be carried out with its quantity in one plain arrangement to enable tendered price quantity without need to measure by own and can refer from drawing and referring specification.

Contractor would be fill the price in column has been provided in Bill Of Quantities and gather him to be entered into Tender Summary and further to Tender Form. Bill of Quantities is provided by Quantity Surveyor refer to Standard Method of Measurement (SMM). Any change those necessary stated to contractor.This Bill of Quantities must be including each work involved without have any disagreements among drawing and specification. Customary materials list arranged according to this element. In materials list containing all of the elements namely internal works, external work and infrastructure, cost prime and temporary cost of provisions. Each element will be price and the totaled cost whole project leak.

viii. Drawing

Drawings make the document very significant for each contract base on list quantity. The complete drawing one set Architectural and Structural needs administered by Quantity Surveyor to make taking off. Apart from that, it so important to describe overall about something project. Drawings must be complete and all if not settled its specification must be show and job requirement explain need to be implemented fully. Drawings also must revise to avoid contradiction among drawing provided by other Architect.

Each number and title drawing must be clear and any amendment must clearly state in space note of drawing. In construction project Pembinaan Sebuah Masjid Taman Kenari this has been attached drawing list to facilitate contractor to do the job.

ix. Appendix

Appendix contains information which is used by contractor as references such as the background business and also material that use in this construction project. Occur in appendix document tender on this project is:

- Appendix A : Bank Guarantee Performance Bond
- Appendix B : Bank Guarantee Advance Payment
- Appendix C : Schedule of Price
- Appendix D : Particulars of tendered organization.

x. Form of tender

This is to contain the condition of tender. For example, there are nothing variation or additional can prepare for form of tender or any document. The function of form of tender is to give instruction for contractor after gave a tender. After the tenderer is successful, they must signature the letter acceptance and before the construction are beginning the tenderer must be deposit the performance bond, insurance of public liability, insurance of works and earnest money.

3.8 Preparing Of Tender Report

The tender document can be submitted to the Client's office, Architect office or at Quantity Surveyor office. After receive the tender document, all the parties involve will play their roles.

The purpose of preparing tender report is for analyse and evaluate the entire tender received from all the tenderers.. The tender report are prepared in compact and briefly with all information required by Client's. This compact and briefly report can assist contactor to select the compatible contactor to make the Client's wish come true.

In this project, there are three consultants that responsible to prepare the tender report. Ilham Kos Konsultan Sdn. Bhd.is required to analyse and evaluate the tender received for the Financial Bid, Design Pro Consult Sdn. Bhd.is required to analyse and evaluate on fire protection, mechanical ventilation & air conditioning and plumbing and sanitary appliances and Azlina Abdullah Architectis required to analyse and evaluate on technical bid part. After both parties finish their evaluation, Quantity Surveyor, Engineer and Architect will combine together their valuation and produce a tender report and submit to Client's.

3.9 Content of Tender Report

- Evidence about the type invitation tender, date tender invite and closed and also tender validity period.
- Simple explanation about project construction.
- Error list which does by tendered in tender document.
- Tender list issue including tender price and completion of the project period.
- Cost estimates Quantity Surveyor and estimate cost difference with tendered. Quantity Surveyor will submit tendered proposal eligible to be agreed and commended by Tender Committee.
- Tendered background and project list were carried out and still under construction

Matters considered during Quantity Surveyor makes proposal on the selection tendered eligible operate this project is:

- Price offered was reasonable
- Company Experience
- Company background
- Financial position of company
- Adequate administration and technical staff
- Has the machinery and adequate assets of the company and also high technology.

3.10 Type of Tender

There is several type of tender normally used in pre – construction stage. But, normally there only there methods that often used in selecting the contractor during the pre – construction stage. That three methods is open tender, selective tender, and negotiated tender. This three method often use because its own reason. All the above method has its own advantages and disadvantages. The selecting of tender type depends on Client's decision.

For project "Cadangan Pembinaan Sebuah Masjid di Taman Kenari, Kulim, Kedah Darul Aman" they had use Selective Tender.

3.11 Number of Tenderer

Here is the list of the Contractor whose has return back the document to be filled by Contractor. Some of them return with the entire requirement that been ask by the Client for the project. But, some of them were not. Each tenderer information then collected by the Quantity Surveyor from the tender document return by the tenderer.

Only two tenderer that submit back their document. The detail as follows:

Bil.	Pentender	Harga Tender (RM)	Taraf	Tempoh Siap (bulan)
1	1/2	RM3,334,094.25	Bumiputera	Tidak dinyatakan
2	2/2	RM2,797,576.90	Bumiputera	Tidak dinyataka

3.11.1 Tender Analysis

Bil.	Tender No	Tender Prices	Total After Review	Different
1	1/2	RM3,334,094.25	RM3,334,094.27	0.02
2	2/2	RM2,797,576.90	RM2,825,736.40	28,159.50

Based on the table above, the lowest price is RM2,825,736.40 it is tenderer Srilcon (M) Sdn.Bhd.(2/2) Then, the highest price is RM3,334,094.25 . The tenderer is Zuricon Sdn. Bhd.(1/2). After that, the consultant cost estimate is RM 3,595,770.00

Based on overall analysis of tender, Tenderer namely **Zuricon Sdn. Bhd** was suggested by Quantity surveyor to be a Contractor in this project and also fulfills from below items .The lowest price of Tender compare to the Quantity Surveyor's estimate, reasonable and competitive with the total RM 3,334,094.25.

From the tender report that submitted by Quantity Surveyor Ilham Kos Konsultan Sdn. Bhd. to the client, all parties agreed to choose Zuricon Sdn. Bhd. to be the contractor for this project with agreed price and others criteria that analyzed.

3.12 Tender Evaluation Report

3.12.1 Background of Tender

Name of tender:

Cadangan Pembinaan Sebuah Masjid Di Taman Kenari, Kulim,
Kedah Darul Aman

The tender for this project is a Selective Tender and only two (2) bidders listed below are invited by the mosque committee to take the tender documents and related plans Azlina Abdullah Architect Office.

i) 1/2 - Zuricon Pvt. Limited.

ii) 2/2 - Srilcon (M) Sdn Bhd.

Scope of work

i) Preliminaries

ii) Piling Works

iii) Building Works

-Mosque

iii) Infrastructure Work

-Land Work

-Road and Parking

-Furniture Street

- 'Interlocking Pavers'

-Fences and Gates

-Drains Work

iv) Mechanical and Electrical

v) Provisional Sum of RM 40,000.00 to Landscape Work

- Received tender

Number of tender received : two (2) tenderer

- Consultant estimated

The consultant estimated cost is **RM 3,029,935.90**. This cost is as reference in evaluate the tender price which is offer by the tenderer.

- Construction period

The construction period this is 18 months.

- Evaluation criteria**.**

The evaluation process is prepared in two stages based on the requirement and criteria which is suitable and reasonable.

3.12.2 Tender price offered by the bidders

i) 1/2 - Zuricon Pvt. Limited. tender offer at RM3, 474,094.25 and the completion period is not specified

ii) 2/2 - Srilcon (M) Sdn Bhd. tender offer at RM2, 797,576.90 and the completion period is not specified.

3.14.3 Analysis calculation errors

Revision of the calculation error was made on the second (2) the tenderer. There is an increase of RM 0.02 for bidders 1/2, while bidders 2/2 calculating the offense of RM 28,159.50.

3.13 Recommendations and support

Based on the assessment that has been done, the following is recommended tenderer for consideration: -

Tenderer 1/2 Zuricon Sdn. Bhd. with an offer price of RM3, 474,094.25 by reason of good financial standing and experience in the construction of the mosque. However, we recommend that the new offer price and the completion of the renegotiated to get a more competitive price.

Tenderer 2/2 Srilcon (M) Sdn. Bhd. not recommended because, although failed to submit financial information that has been requested twice.

3.13 TYPE OF CONTRACT DOCUMENT

3.13.1 Contract for This Project

For this project, **"Cadangan Pembinaan Sebuah Masjid di Taman Kenari, Kulim, Kedah Darul Aman ".** The type of contract used is PWD 203A, which is based on the bills of quantities. Information like drawings and specifications are needed to prepare the bills of quantities. After the bills of quantities have been prepared, it will be issued to the Contractors for pricing. The other documents like specifications and drawing also give to the contractor to help the contractor in pricing that bill of quantities.

CHAPTER 4

(PROBLEMS & RECOMMENDATION)

4.0 MAIN PROBLEMS & RECOMMENDATION

By construction at the pre contract level as the project "**Cadangan Pembinaan Sebuah Masjid di Taman Kenari, Kulim, Kedah Darul Aman**" few problems that arise. Problem arise starts from stage feasibility study until level award tender. Following make problems that propose by this project:

1. **Problem at the level Preliminary estimate**

   Price fluctuation building material influence estimate preliminary because preliminary estimate make with take into account building cost rate today. If often client made the change on design. This resulted Quantity Surveyor forced contact Architect and Engineer to obtain information that complete.

2. **Problem at the level preparation Document Tender**

   Quantity Surveyor to faced problem late receiving drawing from the Architect and Engineer, resulted preparation tender document delay.

   Factors drawing delay caused by uniformity architectural and engineer drawing. For example, those particulars is in architectural drawing not exist profound engineer drawing. These require both sides make modification drawing not suffer contradiction. Caused this mistake, it need time to improve him before stated drawing submits to Quantity Surveyor.

3. Problem at the level Tender Report

Problem that often occurs at stage is tendered not delivery complete information considered for consultant to preparing assessment. For example as background business, finance and experience company.

Side error tendered make the price tender, this will cause difficulty on the Quantity Surveyor to preparing assessment to find eligible contractor manage the project.

4. Problem at the level Design Stage

Demand toward design change by client will cause preliminary estimate those made by the Quantity Surveyor transformed. These changes will cause terms of quantity change. Therefore, Quantity Surveyor will make taking off repeatedly.

Recommendation

To complete any project to satisfy the client, we face any problem to complete this project. So we have suggestion to solve the problem.

1. **Problem at the level preparation Document Tender**

   For this problem, our recommendation is to client, when client decided the project, a client should give the schedule for all consultants to complete their work, and so all work can finish on time. And all consultants should follow the schedule and ready their work on time.

2. **Problem at the level Tender Report**

   For this problem, the tenderer give a problem such as not give a proper document. So, to solve this problem, we have to repeat tell the tenderer to complete all documents that we want at tender report. And if the tenderer can't follow the instructors, we have to reject the tenderer document because does not have complete document.

3. **Problem at the level Design Stage**

For this problem, when client or local authority demands to change the design, the leads consultant (Architect) needs to apply extra time to complete new design and costing.

CHAPTER 5

(CONCLUSION)

5.0 CONCLUSION

For conclusion, preparation pre contract report had given knowledge about scope work conducted. Pre contract report has also given understanding well-defined of scope of work Quantity Surveyor at the pre contract level beginning from design works to project level almost completed.

In project construction, pre contract is most important, where client with consultants is involved make decision and evaluation for any action will be undertaken especially when contractor election.

Any mistake and negligence happened at this stage could cause failed Quantity Surveyor role is importance to make sure of allocation client can be obeyed perfectly.

May knowledge acquired through this preparation of the report relating with project pre contract "Cadangan Pembinaan Sebuah Masjid di Taman Kenari, Kulim, Kedah Darul Aman" can I use to business soon.

REFERENCE

REFERENCES

i) Ilham Kos Konsultan Sdn. Bhd.

ii) Lecturer Supervisor (En. Hasnan Bin Hashim)

iii) Contract document for this project

Cadangan Pembinaan Sebuah Masjid di Taman Kenari, Kulim, Kedah Darul Aman.

iv) Quantity Surveyor interview

- Sr Rohaizat bin Suradi (Supervisor)
- En. Mohd Izuanshahril bin Che Azmi
- Pn. Lailiza binti Ishak
- En. Rosmaili bin Hj. Nazri

v) All files which is related with this project.

vi) The entire lecturer's note.

APPENDIXES

APPENDIXES

Figure 6.1 SIGN BOARD IN CONSTRUCTION SITE

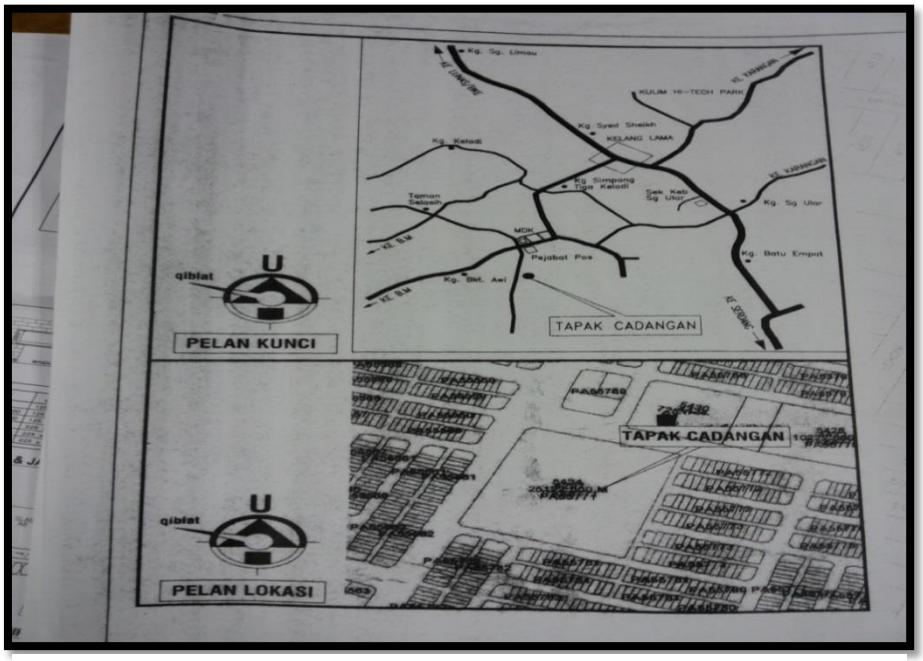


Figure 6.2 KEY & LOCATION PLAN OF PROJECT

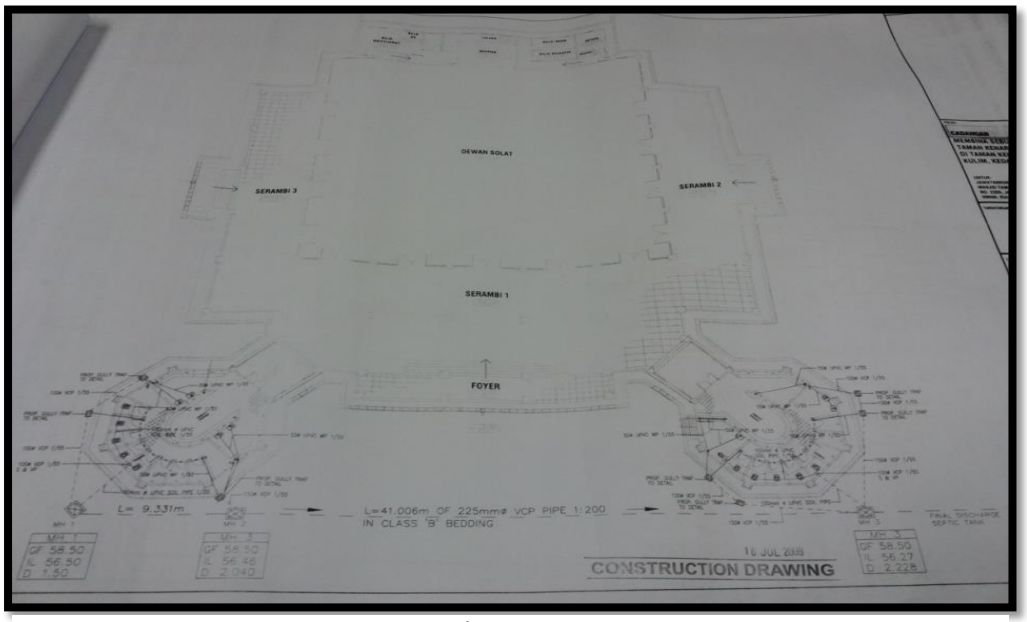


Figure 6.3 PROJECT'S CONSTRUCTION DRAWING

Figure 6.4 30% COMPLETE OF PROJECT