



**DEPARTMENT OF BUILDING UNIVERSITI TEKNOLOGI MARA
(PERAK)**

PRACTICAL TRAINING REPORT

Prepared by: MUHAMMAD FAQIH BIN CHE ABDUL HAMID

2019242378

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

JANUARY 2022

It is recommended that the report of this practical
training provided

By

**MUHAMMAD FAQIH BIN CHE ABDUL
HAMID**

2019242378

entitled

**PROJEK PEMBINAAN RUMAH
KELUARGA ANGKATAN TENTERA
(RKAT)PELBAGAI KELAS KEM
TUMBI,JELI KELANTAN**

be accepted in partial fulfillment of requirement has
for obtaining Diploma in Building.

Report Supervisor : Dr. Hafizah Binti Mohd Latif.

Practical Training Coordinator : Ts. Muhammad Naim Bin Mahyuddi

Programme Coordinator : Dr. Dzulkarnaen Bin Ismail.

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(PERAK)**

10 JANUARY 2022

STUDENT'S DECLARATION

I hereby declare that this report is my own work, except for extract and summaries for which the original references stated herein, prepared during a practical training session that I underwent at Cakna Enterprise Sdn Bhd for duration of 20 weeks starting from 1 september 2021 and ended on 7 January 2022. It is submitted as one of the prerequisite requirements of BGN310 and accepted as a partial fulfillment of the requirements for obtaining the Diploma in Building.

Name :

MUHAMMAD FAQIH BIN CHE ABDUL HAMID

UiTM ID No : 2019242378

Date :10/1/2022

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Alhamdulillah, all praise to Allah, without his love and mercy, it would be impossible for me to complete this industrial training report.

I would like to thank to Cakna Sdn Bhd for the guidance, advice and help rendered throughout the period of 4 month training in this company. First of all, I would like to thank Mrs Suzana Binti Mohd Berolding for give me opportunity to complete my industrial training at his company. Throughout my industrial training, I have been taught in some matters and how to deal with the problems that arise. Although the duration of the program was relatively short, I was able to gain a lot of experience during my training. I feel this experience is very useful when it comes to working life later.

Next, I would like to extend my appreciation to all the UiTM lectures especially my supervising lecturer, Dr Salehan Bin Ismail, Practical Training Coordinator En. Mohamad Naim Mahyuddin and Dr. Dzulkarnaen Bin Ismail, Head of Department that have taught and guide me to complete this report.

Finally, I would like to thank my parent for amazing support throughout this process and completing this report. Thank you.

ABSTRACT

Objective of this research is to know the construction method of ‘Projek Pembinaan Rumah Keluarga Angkatan Tentera (RKAT) Kem Tumbi Jeli , Kelantan. Besides, can study the factors that required in construction also to identify the material used in construction and identify the machineries that used in this construction. This contract period of this project is 130 weeks which start at 3 September 2019 and ended on 28 February 2022. The contract value of this project is RM58,355,555.55. Method of the study that perform in this project is observation, interview, literature review and document review

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CHAPTER 1: INTRODUCTION

Construction industry is one of the industries that play an important role in developing and enhancing economic sector and the development of one's country. Although the construction industry contributes to the development but at the same time this is not an environmentally friendly activity because a lot of problems may exist if the progress and development of this industry are not well planned. This is supported by Shen (2002), where construction industry is not by nature an environmentally friendly activity and it is a major contributor to environmental impacts, which are typically classified as air pollution, noise pollution and water pollution. While according to Tam et al., (2006), construction industry is one of the biggest generators of pollution in Hong Kong and becoming a critical issue. Moreover, wastes generated from construction industry consist of relatively huge amount of chemical waste (Bossink, 1996).

1.1 Objective

The objective of this study is:

1. To describe the construction methods of structural members for soldier quarters located at Jeli , Kelantan
2. To identify the material that used in this project
3. To identify the machieneries that used in this project

1.2 Scope of study

During my practical training, I am monitoring a lot of site project which are at Kelantan . But for my report assignment I just focused on 2 sites. The 2 sites are located at Jelawat and Jeli, Kelantan. What I just focused as supervisor in this both site is “what are the type of foundation uses” and “what is the materials needed” in finishing a house based on client needed. Next,

what others I studied during my practical training is communicate with people. For example, have a good communication with labours, officers and clients. Furthermore, for what I am not studied here is do the soil investigation before starting the project and prepared the Building Quantities (BQ) when the house project nearly start.

1.3 Research Method

1.3.1 Primary Source

The primary source are obtained from:

1. Observation :

The observation method is directly on site. This method are supported by using camera to take photographs and written or record in notebook that related to the report study. All photos taken can be used in the report as the references for the descriptions of any data.

2. Interview :

Interview was conducted to get more detail information about the project from every person who have experience in this field work. The persons that involved in this interview including:

- a. Site Manager
- b. Site Supervisor
- c. Engineers.

3. Document review:

Construction drawing was important because it contains the all the details and specifications of the construction. By refer to the drawings can help to

identify the type, dimension and materials that will be used for the whole construction.

4. Literature review:

Internet to be used to obtain the information about the construction of the quarters. There are several websites that have been used to get more information about the quarter's construction including it various type and material used.

CHAPTER 2 : COMPANY BACKGROUND

2.1:introduction



Figure 1: Logo of Cakna Sdn Bhd

Source: Cakna Sdn Bhd company profile

Cakna Enterprise Sdn Bhd is an enterprise located in Malaysia, with the main office in Kota Bharu. The enterprise currently operates in the Construction sector. It was established on June 16, 1998. In 2019, the company reported a net sales revenue drop of 29.98%. There was a total growth of 0.88% in Cakna Enterprise Sdn Bhd's total assets over the same period. The net profit margin of Cakna Enterprise Sdn Bhd increased by 0.31% in 2019

Among the departments listed in the Cakna Enterprise Sdn Bhd. are Internal Audit Department Project Department, Total Quality Management Department, QAQC Department, Safety and Health Department, Contract Department, Purchasing Department, Human Resources and Admin Department and finally the Account Department.

There are various successes achieved by the Cakna Enterprise Sdn Bhd for example in 2009 the Integrated (QESH) Management System was brought into KSB Policy. The company has also been known and recognized as a finishing contractor in 2020



Figure 2: Kontraktor Penyiap Sijil award

MISSION AND VISION OF THE COMPANY

- Aspires to provide design and consultancy services for realizing affordable real estate to the community

VISION

- Aspire to be a real estate company that they can afford, build and provide affordable property development services to the community.

2.2 Company Profile

- i. Registered Name of Company : Cakna Enterprise Sdn Bhd

- ii. Registered Address : Lot. 1834,TING 2, jalan
Hospital Cherang, 15200 Kota
Bharu Kelantan

- iii. Contact No :
 - a) Telephone No : 09 747 1555

- iv. Company Registration No : 0464145p

- v. Date of Incorporation : 16 June 1998

- vi. Registration With :
 - a) CIDB G7 : Registration No. : 1961018 – SL 009468
 - b) SPAN KELAS C : SPAN / EKS / (PT) / 800 – 2C/1/12/297
 - c) PKK KELAS A : 1002 A 2006 0407

2.1 Completed Project

Construction of house that already complete after do the 100% check list by supervisor and client .In the table 1 below is the complete project that handle by Cakna Enterprise Sdn Bhd.

Table 1: Completed project

Project's Name	Contractor's	Price(RM)	Duration	Started	Estimated to finis
Grade					
Universiti sains Malaysia (usm)	Grade 7	95,955,555.55	178 weeks	3/4/2010	3/6/2013
Menyiapkan kerja Terbengkalai projek Institute kemahiran Belia negara (IKBN)	Grade 7	52,800.00	87 weeks	23/7/2014	12/10/2015
Projek mahkamah Kota Bharu Kelantan (Reka&Bina)	Grade 7	96,730,888.88	200 weeks	12/3/2017	14/4/2021



Figure 3: complete project of Mahkamah Kota Bharu Kelantan

List of projects

Project name : Mahkamah Kota Bharu Kelantan

Contract Period : 200 weeks

Contract Value : RM96,730,888.88



Figure 4:complete project

List of complete project

Project Name;

Menyiapkan Kerja Terbangkalai Projek Institut Kemahiran Belia Negara(IKBN) Tanah Merah Kelantan

Contract Perioud:

87 weeks

Contract value:

RM52,800,000.00



Figure 5:complete Project

List of complete project

Project name:

University Sains Malaysia (USM) Bangunan/Peralatan HUSM Bangunan Pentadbiran, Bangunan Pusat Jagaan Harian & Trauma Dan Bangunan Perkhidmatan Dobi (pakej1)

Contract Period:

178 weeks

Contract value:

RM95,955,555.55

2.2 Ongoing Project

Construction work that still ongoing and monitoring by Cakna Enterprise Sdn Bhd staff that shown in the table 2.

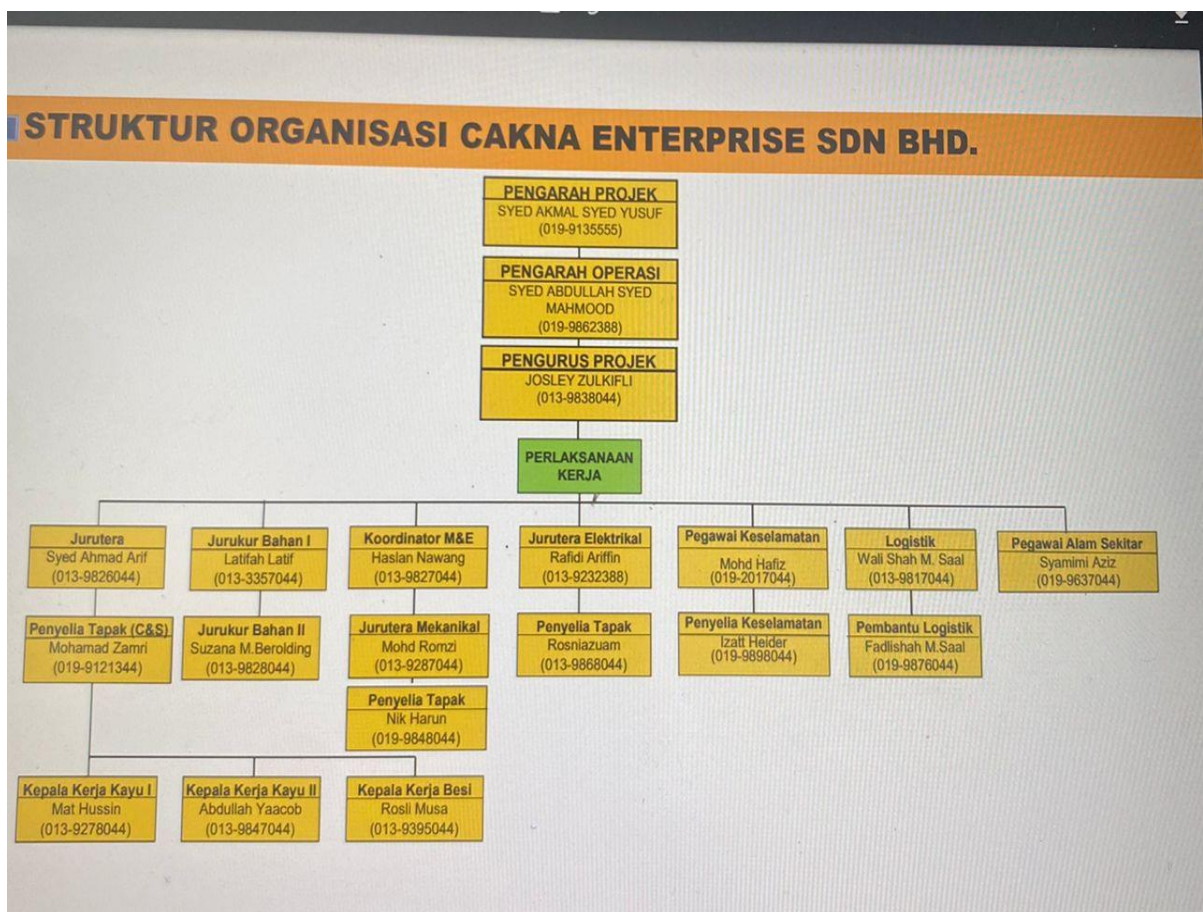
Table 2 : Ongoing project

Project's Name	Contractor's	Price(RM)	Duration	Started	Estimated to finish
Menyiapkan baki kerja Cadangan hospital bachok Kelantan	grade 7	67,185,670.20	96 weeks	28/10/2021	27/10/2023
Projek pembinaan RKAT pelbagai kelas Kem tumbi, Jeli Kelantan	Grade 7	58,355,555.55	130 weeks	3/9/2019	28/2/2022

2.3 Organization Chart

The organization chart below shows that the role and the responsibilities that have to be carried by every individuals that work under the Cakna Enterprise Sdn Bhd. The executive chairman and chief executive officer is the highest role and can give any orders about construction activities. The responsibilities and task is followed based on positioning shown in Figure ? below.

Figure 6 :Main Office Organisational Chart



CHAPTER 3:CASE STUDY

INTRODUCTION:The case study of this report is about construction of projek pembinaan rumah keluarga Angkatan tentera Malaysia(RKAT) pelbagai kelas kem tumbi Jeli,Kelantan. This construction project is Cakna Enterprise Sdn Bhd. In figures 2 , below showed



figure 7:Projek summary of projek pembinaan rumah keluarga Angkatan tentera (RKAT)pelbagai kelas kem tumbi jeli kelantan

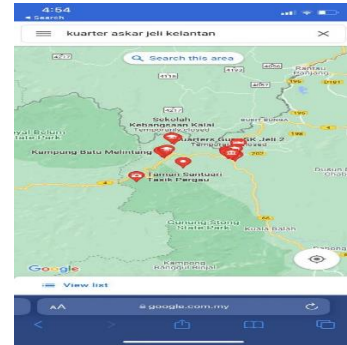


Figure 8:The location RKAT in Jeli, Kelantan

The name of this construction is ‘Projek Pembinaan Rumah Keluarga Angkatan Tentera (RKAT) Pelbagai Kelas Kem Tumbi , Jeli Kelantan. The sst date of this project is 20hb August

Kontrak nom.:JKR/IP/CKUB/128/2019

Next,the price of original contract of this project is Rm58,355,555.55 and the price of the current contract is same as the original contract



Figure 9: parties involved in this project

There are several parties involved directly and indirectly and responsible for the construction and completion of this project. Mohamad fairul Ikhwan bin hamid is official architect for this project had prepared all the drawing plan including the design of this project. Ehsan Engineering & Construction as structural designer while PE Associates Sdn. Bhd. as mechanical and electrical engineer had prepared all the engineering drawing needed for the project.

Mr. Josley Zulqifli as a construction manager representing the main contractor, Cakna Enterprise Sdn Bhd assisted by Mr Nik Harun as a site manager has been assigned to complete the project within a specified time frame. Mr. Afiq, Mr. Syafik, Mr Farhan, Mr Farhan as the site supervisor to help the site agent to monitor the construction work while Mr Hafiz as the Safety and Health Officer assist by Mr Izat Helder, the Safety Site Supervisor are tasked to monitor safety issues at construction site

The total duration given to complete this project is 130 weeks from 3 September 2019 and expected completion date is on 28 February 2022 with total contract sum is fifty-eight million , three hundred fifty five thousand, five hundred fifty five and fifty five sen (RM58,355,555.55)This project is combination between Cakna Enterprise and Jabatan Kerja Raya Kelantan(JKR)

3.1.1 Method that used in this project

3.1.2 Levelling the Earth (Setting Out)

This is the first task of construction work. Before that, the site should be in a cleared and graded condition. It involves the removal of trees, removing all old underground infrastructure, and any other obstacles that might affect the road construction process in the future or hinder the project to be done.

A surveyor will survey the site and line out exactly where the boundary of site is to be built. The function of the surveyor is to locate the boundaries of the level of building to be built and is denoted with physical markers, for this site the surveyor use 1x2inch wood to marking the level of building. However, the surveyor's marks are also communicated to the contractor as to the actual elevation and the required cut or fill necessary to obtain the design elevation. This is carried out following the dimensions specified in layout drawings. Contractors use the surveyor's marks to verify the horizontal and vertical location to the construction plans.



Figure 10: Surveyor used dumpy level to marking construction level.

3.2 The material used in construction

3.2.1 Coarse sand



Figure 11: coarse sand

The sand is classified according to the size of grains, the sand is classified as fine, coarse and gravelly. The sand which is passing through a screen with clear openings of 3.175 mm is known as the coarse sand. It is generally used for brick. (<https://www.theconstructioncivil.org/classification-of-sand/>).

Coarse Sand is concrete sand that is washed and screened to a larger grit than our Fine Washed Sand (masonry sand). Coarse Sand is used with aggregate, water, and cement in the production of ready-mix concrete.

3.1.2Crusher run



Figure 12: Crusher run

Crusher Run or hardcore is a 40mm down to dust construction material that is commonly used as foundations for a range of surfaces. Manufactured from crushed rock and stone dust the crusher run or hardcore is blended to provide a low-void content that tightly locks together. Widely used for in construction, building, driveways, patios & footpaths.

3.2.2 Tack Coat

Tack coat is a very light application of asphalt, usually asphalt emulsion diluted with water. It provides proper bonding between two layers of binder course and must be thin, uniformly cover the entire surface, and set very fast.

3.2.3 Prime Coat

Prime coat is an application of low viscous cutback bitumen to an absorbent surface like granular bases on which binder layer is placed. It provides bonding between two layers. Unlike tack coat, prime coat penetrates into the layer below, plugs the voids, and forms a watertight surface.

3.3 The Machinery Used on Road Construction

3.3.1 Excavator



Figure 13: Excavator

Excavators was used as an earthmoving vehicle that feature a bucket, arm, rotating cab, and movable tracks. These components provide superior digging power and mobility,

allowing this heavy equipment to perform a variety of functions, from digging trenches and breaking holes to lifting away waste and other.

3.3.2 Back pusher



Figure 14: Back-pusher

Back pusher was used as a back-pusher to transfer or levelling the crusher run and coarse sand.

3.3.3 Compactor



Figure 15: smooth wheel roller

Smooth wheel roller was used as a compacter for the crusher run and coarse sand. This machine is not suitable for thick layer because this machine cannot produce high compaction compared to another compacter.

CHAPTER 4 : CONCLUSION

Conclusion

Based on my observation at Elmina West 168 (EV5) site with the help of site manager, Mrs. Suzana and the all-site supervisors and engineer, plus some research and my experience on the construction of this construction, the following conclusion and recommendation can be made.

Throughout the process of the construction. the author can study and learn the process of construction, the types of material used, type of testing and types of machinery that was used in construction. Besides that, the author also learned without supervision by supervision by skilled and knowledge of construction, there are many disadvantages will be happened if the process or method that used not follow the actual method and it can be increase the cost of maintenance. I also learned that safety while doing the construction work is especially important for laborers. the importance of wearing safety equipment is to protect oneself from being inflicted by minor or major injuries. Next, something that gave me the most knowledge about the course I studied was the rules for building a house or any type of building. Before starting a construction project, the Supervisor must do research first such as soil condition, site area, entrance of hardware truck or concrete truck, provision of shared houses for labour workers and more. During the project, the supervisor must monitor and research the work of the craftsman and if there is a problem such as the installation of the house structure is not correct then immediately give a reprimand and make a report to the office regarding the problem.

Overall, the objectives of this practical report which to learn the process of construction, the types of material used, type of testing and types of machinery that was used in construction was achieved

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Books

Braja M. Das and Khaled Sobhan.(2010). Principles of Geotechnical Engineering. Cengage Learning. Stamford, USA.

Notes

Puan Suryani Ahmad, (2015). Building Construction, UiTM Seri Iskandar, Perak.

Interview

This study also have interview few workers in this company such as quality inspection, supervisor, and clerk of works.

Internet

<http://www.ruralworks.com/reports/profileboard/ProfileBoard.html>

[https://www.brainkart.com/article/Typical-layers-of--a--flexible-](https://www.brainkart.com/article/Typical-layers-of--a--flexible-pavement_3892/#:~:text=Typical%20layers%20of%20a%20conventional,%2C%20a)

[pavement_3892/#:~:text=Typical%20layers%20of%20a%20conventional,%2C%20a](https://www.brainkart.com/article/Typical-layers-of--a--flexible-pavement_3892/#:~:text=Typical%20layers%20of%20a%20conventional,%2C%20a)
[nd%20natural%20sub%2D%20grade.](https://www.brainkart.com/article/Typical-layers-of--a--flexible-pavement_3892/#:~:text=Typical%20layers%20of%20a%20conventional,%2C%20a)

