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# ADDIS ABABA INSTITUTE OF TECHONOLOGY



# Introduction

- About the Company
- About the Site
- About the Working Conditions



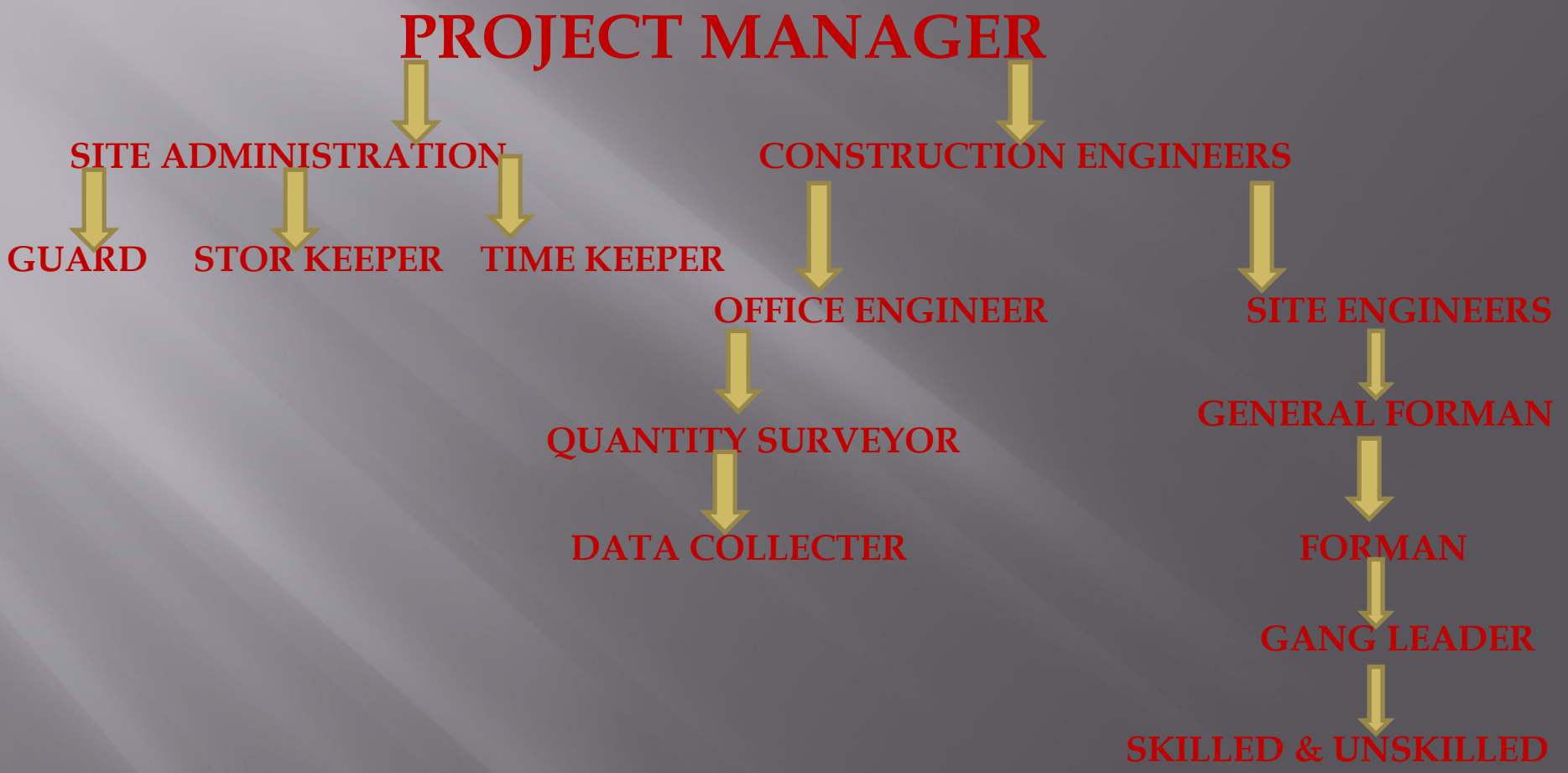
# Overview of the hosting company




- The company I've spent the internship period with is Zamra Construction P.L.C
- Zamra Construction P.L.C is a non-governmental(private) construction company established in 1992 E.c,

# About The Working Condition

## WORK FLOW OF THE COMPANY IN MY SITE



# Description of the project

- **The construction site is found around KOLFE KERANIYO.**
- **Client=KOLFE KERANIYO Sub-City Administration.**
- **Contractor =ZAMRA Construction PLC.**
- **Consultant= MGM Consult PLC.**
- **The project consists 3 blocks, 3 parking lots, 2 monumental fountains and a basement beneath the two blocks.**
- **The cost estimated is to be 250,476,941.40 ETB.**
- **Block A - B+G+12 bldg. - Total area coverage is around 1000 m2.**
- **Block B - Two typical B+G+7 blocks.**
- **Block C - Conference Hall.**

# WORKS I PERFORMED

Site Works

&

Office Works

# Site Works

**Checking Formworks in different Structural Elements for:-**

- *Dimension(Size)*
- *Nailing*
- *Alignment*
- *Surface finish*



# Site Works

## Formworks for Columns





# Site Works

Checking Reinforcement Bars for:-

- *Placement*
- *Number &*
- *Spacing*



# Site Works

Conducting and Supervising Concrete Works during:-

- *Mixing,*
- *Placing &*
- *compacting*



# Site Works

## HCB Work





# Site Works

## Water Proofing Works



# Site Works

Performing Tests like

- Jar Test
- Slump Test
- Cube Test & etc.



# Special site visits

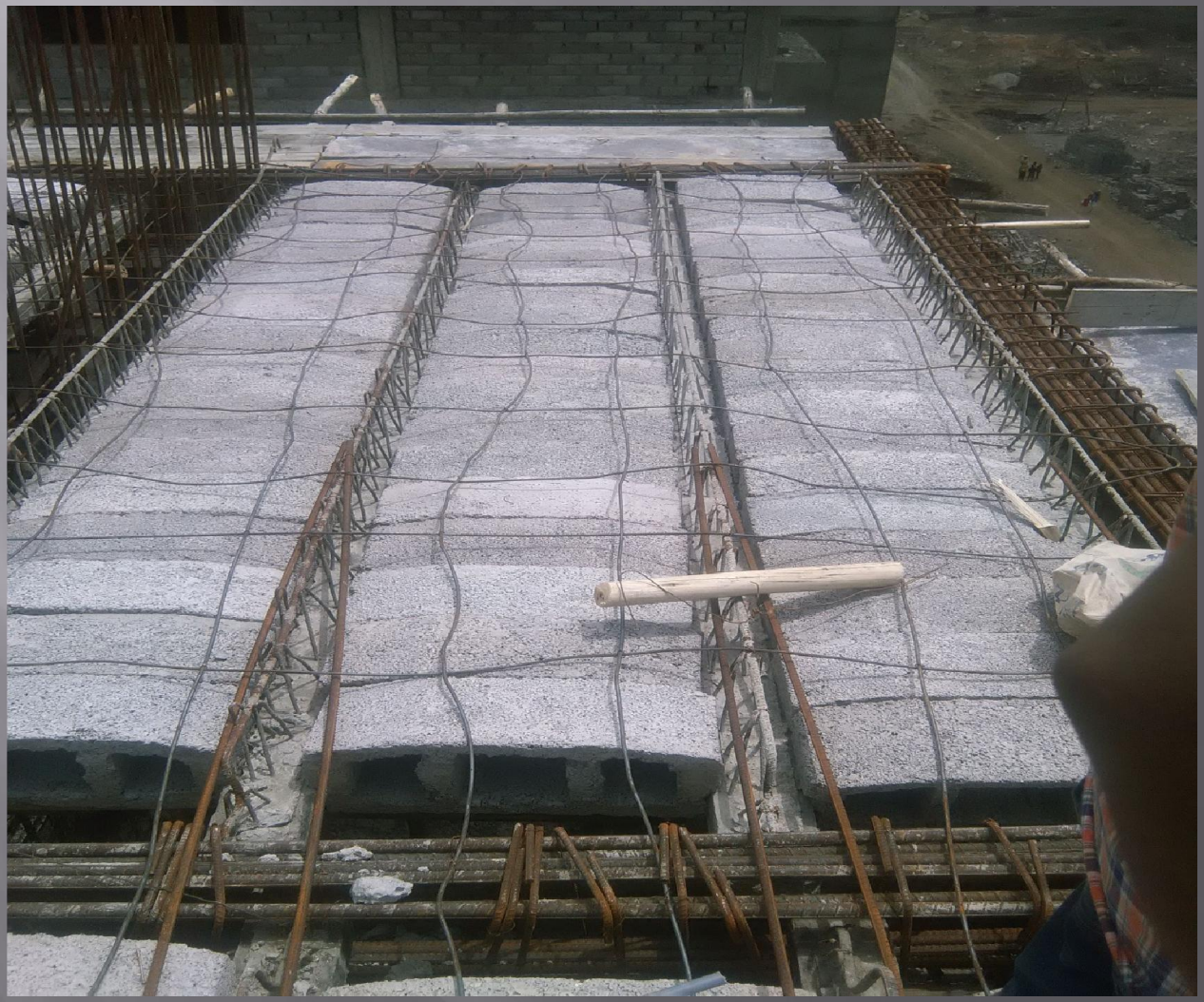
# Shoring





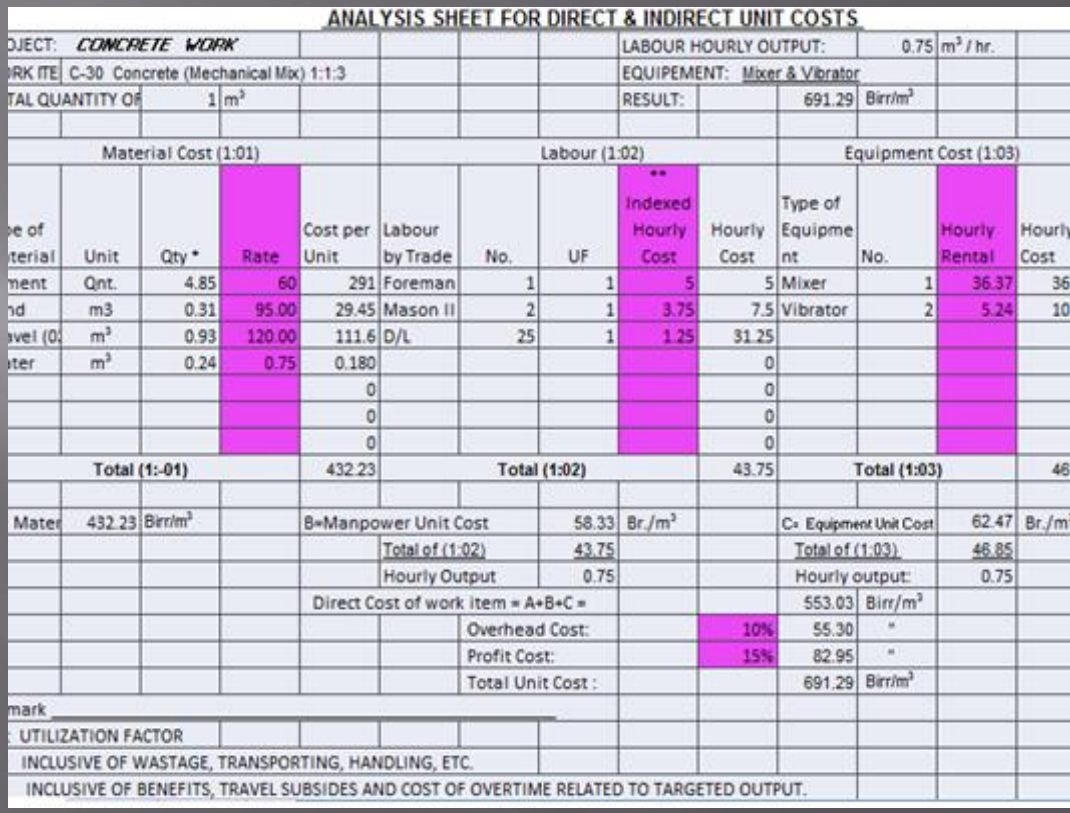


# Ribbed Slab



# Office Works

- Take Off Sheet
- Bar Schedule
- BOQ
- Unit Cost Analysis



ANALYSIS SHEET FOR DIRECT & INDIRECT UNIT COSTS

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OJECT: | CONCRETE WORK | | | | | | | LABOUR HOURLY OUTPUT: | | 0.75 | m³ / hr. | | | |
| RK ITE | C-30 Concrete (Mechanical Mix) 1:1:3 | | | | | | | EQUIPEMENT: | Mixer & Vibrator | | | | | |
| TAL QUANTITY OF | 1 | m³ | | | | | | RESULT: | | 691.29 | Birr/m³ | | | |
| | Material Cost (1:01) | | | | Labour (1:02) | | | | | Equipment Cost (1:03) | | | | |
| e of terial | Unit | Qty * | Rate | Cost per Unit | Labour by Trade | No. | UF | ** Indexed Hourly Cost | Hourly Cost | Type of Equipment | No. | Hourly Rental | Hourly Cost | |
| ment | Qnt. | 4.85 | 60 | 291 | Foreman | 1 | 1 | 5 | 5 | Mixer | 1 | 36.37 | 36 | |
| nd | m3 | 0.31 | 95.00 | 29.45 | Mason II | 2 | 1 | 3.75 | 7.5 | Vibrator | 2 | 5.24 | 10 | |
| vel (0 | m³ | 0.93 | 120.00 | 111.6 | D/L | 25 | 1 | 1.25 | 31.25 | | | | | |
| ter | m³ | 0.24 | 0.75 | 0.180 | | | | | 0 | | | | | |
| | | | | 0 | | | | | 0 | | | | | |
| | | | | 0 | | | | | 0 | | | | | |
| | | | | 0 | | | | | 0 | | | | | |
| Total (1:-01) | | | | 432.23 | Total (1:02) | | | | 43.75 | Total (1:03) | | | | 46 |
| Mater | 432.23 | Birr/m³ | | B=Manpower Unit Cost | | | 58.33 | Br./m³ | | C= Equipment Unit Cost | | 62.47 | Br./m | |
| | | | | | Total of (1:02) | | 43.75 | | | Total of (1:03) | | 46.85 | | |
| | | | | | Hourly Output | | 0.75 | | | Hourly output: | | 0.75 | | |
| | | | | Direct Cost of work item = A+B+C = | | | | | | 553.03 | Birr/m³ | | | |
| | | | | | Overhead Cost: | | | | 10% | 55.30 | " | | | |
| | | | | | Profit Cost: | | | | 15% | 82.95 | " | | | |
| | | | | | Total Unit Cost : | | | | | 691.29 | Birr/m³ | | | |

mark

UTILIZATION FACTOR

INCLUSIVE OF WASTAGE, TRANSPORTING, HANDLING, ETC.

INCLUSIVE OF BENEFITS, TRAVEL SUBSIDES AND COST OF OVERTIME RELATED TO TARGETED OUTPUT.

# Office Works

Software Programs Such as;

- MS-Project
- Auto Cad
- Micro soft Excel

# SKILLS & BENEFITS I ACQUIRED AFTER THE INTERNSHIP PROGRAM

# Skills & Overall Benefits

The internship program has helped me to in many ways as follows:

- I have learned new terms that are used by the skilled laborers
- I have improved my communication skills
- I have improved my technical knowledge
- I have improved my practical knowledge
- Now I know how to act as a leader
- I have understood the workplace ethics

# Challenges I've faced during the internship period

- I was a little bit challenged while trying to socialize with the workers. This is due to the fact that all the working crew came from different background and have got different perceptions towards things.
- The working environment was full of dust and adapting this was also another issue to handle.
- The leftover metals and other materials were also dangerous to walk around.
- Repetition of work segments was also a boring stuff to face

# Measures taken to overcome those challenges

I have tried to overcome these challenges by:-

- Wearing safety shoes.
- Trying to be simple and socialize with the working crew
- From time to time got used to the working environment
- Visiting another site to avoid being bored of the repetitive of work at my site.

# Wrong Doings I observed in the Site

## Formworks With Openings



# Wrong Doings I observed in the Site

Not Cleaning Mixer after use



# Wrong Doings I observed in the Site

## Using Dirty Crane Bucket



# Wrong Doings I observed in the Site

## Segregation( Honeycombing)





# Wrong Doings I observed in the Site

Creep on Sheer Walls Due to Poor Formworks



# Wrong Doings I observed in the Site

## Wrong Overlap



# Conclusion

- It was a Great Experience both;
  - ✓ *Technically and*
  - ✓ *Practically*
- The overall internship experience has been very great .
- I had the chance to see and closely monitor construction activities.
- It enabled me to gain the confidence I need as an engineer.
- It helped me enhance my theoretical knowledge.

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# Recommendation




- Avoid Carelessness
- Hire Professionals
- On Time Delivery of Materials should be cared up on
- Great Concern should be given for Quality within minimum Cost
- etc…

# FINALIY I WOULD LIKE TO SAY THANK YOU TO

**W/t- LILY = MY ADVISORE**
**Ato- LEGESSE T. = MGM CONSULTANT**
**W/t- BEZAWIT W.= ASS. OFFICE ENGINEER**
**Ato- BINIYAM T = CONSTRACTION ENIGNEER**

**AND**I would like to express my heartfelt appreciation to my family and friends for their encouragement, tolerance and endless support throughout my stay in the internship program.



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# THANK YOU!!