# PMO IMPLEMENTATION IN ELITE ENGINEERING PVT LTD
# &
# EPM SERVER ON PROJECT TITLED "EXTENSION OF A BULK OIL STORAGE DEPOT"

**NAME:** MR. MUHAMMAD NABEEL EHTISHAM

**ENROLLMENT:** 03-298162-019

**SEMESTER:** SPRING-2017, MSPM - II

**PROGRAM: MS (PROJECT MANAGEMENT)**

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**BAHRIA UNIVERSITY LAHORE CAMPUS**

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**SUBMITTED TO: MR. AHSAN MAQBOOL**

**SUBMITION DATE: 20-JUNE-2017**

## ABSTRACT

In the modern era, role and need of project management has increased a great deal and has become a need of survival and growth. Organizations find it necessary to identify and formalize the practices of project management and to develop centers of coordination and excellence for project management. Bahria University takes this thing into account and works on such practices and development of such skills in their students of Masters in Project Management. There is a requirement of implementation of such skills in the real world on real time working organizations in the course "Dynamics of PMO & EPM Server". Current document is the project report of practical implementation of PMO and EPM Server.

This report consists of two parts. First part is about Project Management Office (PMO) and its implementation in an Oil and Gas sector Based EPC (Engineering, Procurement & Construction) company. It emphasizes the importance and need of PMO, how and which type of PMO was implemented in this organization and what was the value addition by PMO.

In the second part of this report, a timeline has been created for a selected project in the same organization and its complete resourcing, tracking and earned value analysis has been performed.

## ACKNOWLEDGEMENT

Success is never alone. It has a lot of hard work, dedication, motivation, support and guidance with it. Outcomes of this project required all these ingredients too. A number of people contributed in this success and I want to thank them all.

First of all, thanks to the Almighty ALLAH, the author of knowledge and wisdom, the Supreme Being, without whose will, nothing can be done.

Secondly, I would like to thank my mentor Mr. Ahsan Maqbool, whose guidance and motivation brought me to this achievement. His devotion to his students and is the key aspect of understanding of this course, completion of this project and even a lot more than just this course or project.

Thirdly, I would like to thank my parents and siblings, whose continuous support and motivation made me continue the effort and not to lose hope or motivation.

Last but not the least, I would like to thank my group of friends named as "Brainstormers", including Yasir Bhai, Sinnan Bhai, Anam Sister and especially my dear friend Sehar, whose support and help was with me at every step and these friends never let me feel that I was doing the project alone.

Thank you all for everything you did for me.

**Elite Engineering Pvt. Ltd.**
**Engineering, Procurement & Construction**

# CERTIFICATE

This witness statement is issued to the applicant for the fulfillment of his MS (Project Management) program requirements being carried out at Bahria University Lahore Campus (BULC).

It is witnessed that Mr. **M. Nabeel Ehtisham** Enrollment: **03-298162-019** Class: **MSPM-II** Semester: **SPRING 2017** has contacted / visited / frequently utilized our premises /participated in our real-time projects for implementing project management skills using EPM as a leading software tool.

He in case of participation in organization's project has contributed fully in the following project and within the highlighted fields (Project Planning, Project Scheduling, Earned Value Analysis, Performance Monitoring, Project Tracking, Claim Debugging and Project Coordination):

1. Zoom Petroleum Construction/Extension Project of Bulk Oil Storage Depot at Pattoki

He, in case of visiting/ frequently utilized premises, has been found skillful in applying EPM in the following highlighted fields (planning, scheduling, earned value analysis, performance monitoring and report generation).

Additionally, it is noteworthy to mention that Mr. **M. Nabeel Ehtisham** demonstrated good ethical practices, enthusiastic approach to work, task convergence capabilities, professionalism while his stay /connection with this organization.

He is skilled & has performed well in the above fields

Certified By Company Official

ELITE ENGINEERING (PVT) LTD.

**Name:** Zahid Hussain
**Designation:** GM Projects & Engineering
**Company Name:** Elite Engineering Pvt. Ltd.

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# Chapter 1 About the Company

ELITE ENGINEERING PVT. LTD.

## 1.1. Introduction

Elite Engineering Pvt. Ltd. started its journey as a consultancy company by the name SHAHZAD AYUB ASSOSIATES in year 1999. Mr. Shahzad Ayub was the owner and CEO of the company. He soon made his mark in clients for exceptional, ethical and professional services with unmatched responsiveness.

In year 2012, Shahzad Ayub Associates transformed from an incubating resource entity to a substantial venture capital corporation named as Elite Engineering Private Limited in Engineering, Procurement and Construction industry. Currently it's a C-1 category registered Engineering company in Pakistan Engineering Council.

Elite Engineering Pvt. Ltd. is committed to achieve its objectives in minimum possible time by aiding advanced technology, proficient techniques and exceptional planning and management plus yielding cost effective and quality products. So Elite Engineering Pvt. Ltd. is recognized as a professional establishment in all areas of expertise.

## 1.2. Company Vision

The vision of Elite Engineering Private Limited is to become a prominent player in engineering, procurement and construction services with commitment to comply with uncompromising standards of quality safety and environment.

### 1.3. Company Mission

The mission of Elite Engineering Private Limited is to persistently pursue commitment in building a sustainable engineering business, under professional and ethical management principles and practices, to yield optimum valued benefits to all stakeholders.

### 1.4. Corporate Policy

The corporate policy of Elite Engineering Pvt. Ltd. is to serve its clients and to maintain its position as a leader in its area of operation.

### 1.5. HSE Policy

Management of Elite Engineering Pvt. Ltd. is committed to conduct its business in a manner that assures Health, Safety and Security for its employees and avoids damage to company assets.

### 1.6. Core Values

- Integrity
- Accountability
- Leadership
- People
- Innovation
- Ownership
- Safety

### 1.7. Company Profile

Elite Engineering Private Limited has been working in several projects since 2013. Major categories of projects successfully completed by EEPL are enlisted below;

- EPC of Bulk Oil Storage Depots
- Fascia Signage of Retail filling stations
- Construction of RCC Road
- Construction of Shoe Factory
- Construction of Factory (Electrical)
- Designing and Construction of Community School

- Construction of Buildings
- Construction of Filling Stations
- Construction of a Grid Station

Currently, several projects are in process phase by Elite Engineering Pvt. Ltd, including the following;

- Construction of multiple filling stations at different sites
- EPC of Bulk oil storage depot at Sarai Naurang
- EPC of Bulk oil storage depot at Bakkhar
- EPC of Bulk oil storage depot at Mehmood Kot
- Extension and Maintenance of Bulk oil storage depots at Daulatpur and Sahiwal (respectively)
- Designing and construction of Drainage and Sump for waste water at Coca Cola plant, Gujranwala
- Fascia Signage and maintenance of filling stations

### 1.8. Strategic Market Objectives

- Strong reputation in customers
- Superior customer service
- Bigger market share
- Wider geographic coverage
- Higher product & service quality

### 1.9. Financial Objectives

- Growth in Earnings
- Growth in revenues
- Bigger cash flows
- Higher returns on capital

## 1.10. Other Objectives

- Foster strong culture
- Supporting the community
- Quality insurance
- Fabrication of fantastic products
- Managing sound environment

## 1.11. Company Offices

| Head Office | UK Office |
|---|---|
| 113-L1, Valencia Town, Lahore, Punjab, Pakistan | Titan Court, 3 Bishop Square, Hatfield Herts, AL109NA UK |
| Info@eliteengineering.com.pk | uk@eliteengineering.com.pk |

## 1.12. Company Structure

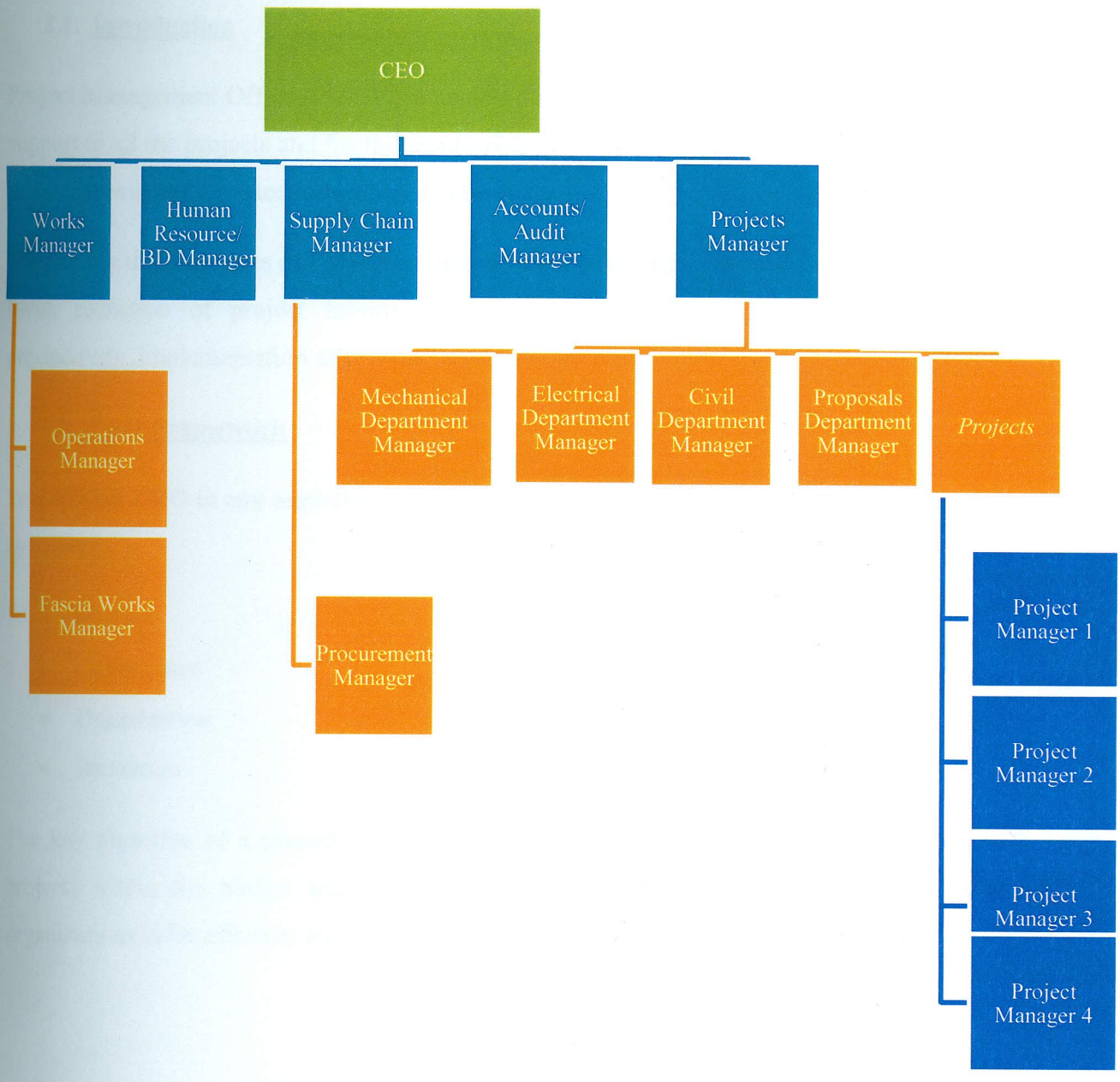



**Figure 1: Company Hierarchy of EEPL**

Elite Engineering Private Limited is a composite structured organization. The company runs on projects but it is not completely projectized company as day to day operations of retail fuel tanks and small projects of signage fascia also take place at company workshop. Company has central functional departments which deal in every matter with the operations and the projects. Company has five functional departments and Projects also fall under one of the functional department.

# Chapter 2 Project Management Office (PMO)

## 2.1. Introduction

Project Management Office (PMO) is a central department within a company which provides support to all the projects and for the description of standards and for making policies. It also maintains processes related to project management.

We can say that functions of PMO may include standardization, improvement of PM maturity level, reduction of project failure reasons and causes, increase in cost savings and productivity, implementation of project schedule and project delivery within budget.

## 2.2. PMO Framework

To establish PMO in any organization, there are basically four important elements, which are as follow;

- Process
- Governance
- Organization
- Resources

The key objective of a project management office (PMO) is to ensure the deliverance of projects within the budget and on schedule, which in turn provides an opportunity for organizations to be effective and efficient in their line of business.

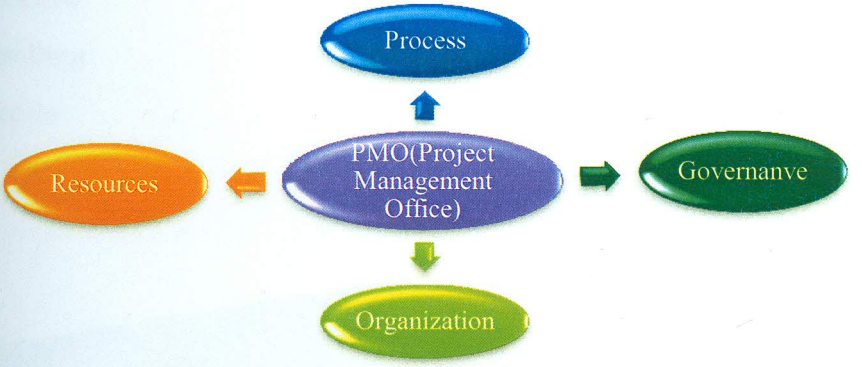



**Figure 2: PMO Framework**

**Process:**

When we are in the development phase of project management processes, we need to use the good and best practices (i.e. PM-BOK PMI, PRINCE-II etc.).

**Governance:**

The reporting structure for effective PMO operations should be governed at the project operational level, as well as program level and portfolio level strategic and tactical level.

**Organization:**

A PMO must be able to deliver benefits to the organization. The areas of focus include project accountability and business operational responsibility.

**Resources:**

People factor plays vital role in PMO organization and they should have quality conscience, ethical and extensive experience. Skills development programs should be established to build these aspects in PMO team.

## 2.3. Roles of PMO

There are several types of PMO structures as per their role in organization, each varying in degree of control and in influence on projects within the organization, such as:

- Supportive
- Controlling
- Directive


**Figure 3: Roles of PMO**

**Supportive:**

Supportive PMOs provides a consultative role to the projects by supplying the following from other projects.

- Templates
- Best practices
- Trainings
- Access to information
- Lessons learned

This type of PMO serves as a project repository. The degree of control provided by PMO is low. The supportive PMO generally provides support in the form of on-demand expertise, access to information, and expertise on other projects.

**Controlling:**

Controlling PMOs provide support and require compliance through various means. Compliance may involve adopting project management frameworks or methodologies, using specific templates, forms and tools, or conformance to governance. The degree of control provided by the PMO is moderate. This model assumes that the PMO is responsible for defining and controlling use of methodologies, standards, templates, and policies related to project delivery.

**Directive:**

Directive PMOs take control of the projects by directly managing the projects. The degree of control provided by the PMO is high. The PMO is accountable for the project management function within the company and responsible for providing program and project management resources to run projects. As organizations undertake projects, professional project managers from the PMO are assigned to the projects.

### 2.4. Types of PMO

There are three types of PMO:

1. Weather Station (Governance)
2. Control Tower (Centre of Excellence)
3. Resource Pool (Project Support)

## 2.5. PMO Responsibilities

The PMO continuously ensures that enterprise assets and resources are strategically aligned with business goals. The exact roles of a PMO vary from organization to organization depending upon their needs and nature of the on-going projects. The major role of the PMO is to define and maintain process standards by providing a framework to establish standard performance measures based on organizational goals and objectives, and providing tools and procedures to achieve this. This results into three key areas:

- Establishing Project Methodologies
- Project Tracking
- Project Support

A brief difference between PMO Manager and Project Manager can be depicted as follows;


**Figure 4: PMO Manager VS Project Manager**

## 2.6. Elements of an Effective PMO

An effective PMO is a combination of the right people, the right tools and the right data. The right people should have been covered from multiple disciplines. It is very important to select required EPM tools.

Project status reports showing right data should be provided to the management for measuring project success. These elements for an effective PMO can be depicted as:

# Chapter 3 Implementation of PMO in EEPL

## 3.1. Introduction

Elite Engineering Pvt. Ltd. is a growing projectized organization with a number of ongoing projects. The course requirement of Computer Based Training subject (MSPM-II) is to implement Project Management Office (PMO) in an organization. As I work in Elite Engineering Pvt. Ltd. and it is a composite structured organization, so I chose to apply PMO on EEPL.

Currently, EEPL has no PMO. The number of projects in EEPL is increasing as the company is itself increasing, which is in turn a good thing. But as the things increase and as the more things run in parallel, there is more chance of errors, more risks and more need of Project management maturity. PMM is even needed in single project and in fewer projects, so in more projects its need multiplies.

## 3.2. Current Structure

As already described earlier, EEPL is a composite structured company. There are multiple functional managers in the company. The project managers get assistance from the dedicated functional departments, which perform their respective role in the project. Some projects are directly managed by the functional departments as per the nature of the project like signage projects are solely managed by the works department. The company has five high level functional managers which directly report to the CEO of the company. The Engineering departments are under the Projects Manager who is also the manager of all the project Managers or we can say that who is program manager of the company.

Each project itself has its own engineering departments, accounts departments and audit departments, which are under the dedicated central respective department and report to them directly. Project manager thus has its own staff as well as staff from functional departments which play their respective role in the project. There is a conflict of interest sometimes as the functional staff deployed on a project is also reporting to the project manager. The functional departments have to achieve their own tasks and complete their own responsibilities, which sometimes can create a clash with the project work.

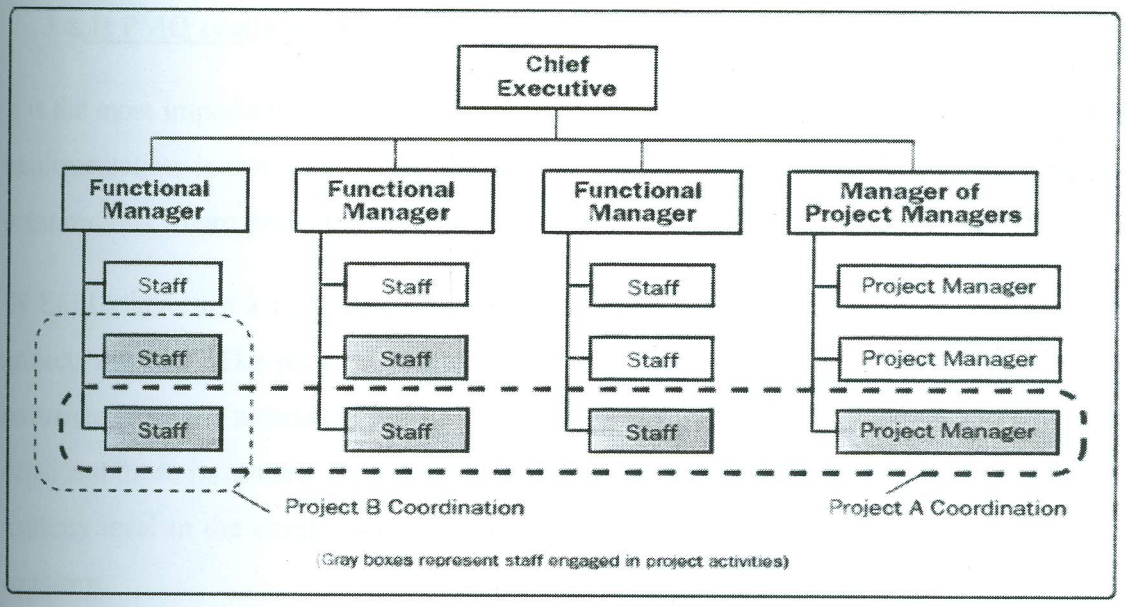



**Figure 5: Composite Company Structure**

### 3.3.Problems without PMO

Below is a list of problems which were indicated in Mughals Pakistan Pvt. Ltd which were due to absence of a centralized unit (PMO).

- Project reports are not formed on regular bases.
- There are no proper formats for documentation and everyone follows its own will.
- No risk assessment is done and mostly reactive approach is used.
- No OPA's are formed and no historical data is maintained.
- No lessons learned document is formed after a project completion and same mistakes are repeated by different managers.
- No project management practices are applied on the projects.
- Project manager has full time staff along with part time staff and the project manager has no authority in many matters.
- Projects are not documented properly.
- Project is not tracked on the set baselines properly.
- Mostly the projects are finished late and over budget.
- Project management skill is lagging in project team as well as the project manager.

### 3.4. Is PMO really required

It is the most important question before implementation of a PMO in an organization. PMO implementation is not necessarily the best option in case of smaller organizations and in organizations where projects are numbered to one.

IN EEPL, there are a number of functional departments and at the same time a number of projects ongoing. The projects are also similar in nature as well as of diverse nature. So a centralized PMO is necessary for the company. Issues EEPL is facing are discussed earlier in detail and those issues are likely to be catered by PMO. PMO will also improve management maturity level in the company andimprove the level of performance and coordination in the company.

### 3.5. Proposed type of PMO

Keeping the issues and problems in consideration which arise due to absence of PMO, Control tower PMO or Controlling PMO is the most suitable and most required type of PMO for EEPL, so it is the proposed type. As the issues are not limited to management or status, rather some new policies need to be implemented and it is needed to provide a direction, so controlling PMO is the most suitable type of PMO. It will be formed at Head Office Elite Engineering Pvt. Ltd.

### 3.6. PMO Vision

The vision of PMO Elite Engineering Pvt. Ltd. is to be a team of highly experienced and effective personnel which reduce the project issues and errors to minimum level, contributing in success of projects and of EEPL in terms of efficiency, effectiveness and achievement, and to bring EEPL in the league of organizations where . PMO in Mughals Pakistan is a team of experienced and effective members who will identify and manage the problems so that every project is a success in terms of time, cost and quality.

### 3.7. PMO Mission

The mission of PMO EEPL is to create a project management culture and supporting environment in the organization with proper documentations and implementation of modern project management practices

### 3.8. PMO Core Values

- Neutral
- Unbiased
- Organized
- Updated

### 3.9. Stakeholders

Enlisted below are the main stake holders of the company. Level of influence, power and interest of these stakeholders would be kept in mind while implementing PMO.

- CEO
- HR/ Admin Manager
- Accounts/Audit Manager
- Supply Chain Manager
- Works Manager
- Project's Manager

### 3.10. Proposed PMO Objectives

The proposed PMO will have following objectives;

- A Centralized department to support all projects and all Project works
- To standardize the project processes and to get everything streamlined at optimum level
- To introduce the good practices and project management processes.
- To develop appropriate and required set of skills in project teams.
- To provide feedback to senior management on solutions to problems and optimization.
- To create a centralized repository of project resources and documentations.
- To plan and advise for resource leveling and other optimization techniques.
- To provide support in project management and maintain the usage of project management tools.
- To ensure project baselines for project tracking.

- Verifying the reporting and audit requirements and making sure company is applying those.
- Making sure company has appropriate health and safety policies according to the project requirements.
- Assessment of new projects and filling the gaps.
- Providing and maintaining standard templates and formats throughout EEPL.
- Team development and career development.

## 3.11. PMO Roles and Responsibilities

**To develop standard formats and templates:**

Standard templates of the following documents have been developed.

- Project Charter
- Project Scope Statement
- Weekly progress report

Following document template would be developed.

- Standard HSE format for every project
- Project Management Plan
- Historical Data documents
- Risk Register and Risk management Plan
- Change Management Plan

**Implementation of standardized templates and processes:**

- All the standard documents would be prepared for every project.
- PMO will be monitoring all documentation flow and ensuring compliance to standard documents by all the respective departments.
- Standard procedure would be formed to monitor the projects and to access the new projects.
- Implementation of latest and required scheduling tools is to be made sure and relevant training would be provided.

**Coordination with all Departments:**

PMO will be coordinating with all departments for continuous improvements in all departments to eliminate the communication barriers and to increase effectiveness and one unit concept. PMO will also play its role in elimination of conflict of interest.

**Project management training:**

PMO will provide trainings to all the department teams and the project teams to increase their level of management up to the mark and to create the required set of skills in the teams. They will also make sure to create complete awareness of following the documentation and other procedures.

PMO will link between the theoretical grounds and actual grounds and apply all techniques for interaction like brainstorming, Delphi techniques etc. for feedback purposes as well as for making sure how everything is to be implemented.

**Reporting to Senior Management:**

PMO will be providing weekly status reports for all the projects.

PMO will be evaluating all the upcoming projects and providing them rating for selection purpose.

### 3.12. PMO Success Factors

Following are some factors which are very important for success of proposed PMO;

Support from senior management.

- Cooperation of all departments.
- Effective communications and stakeholders management.
- Compliance with project management standards.
- Continuous reporting and measurement of defined project goals.

## 3.13. Proposed Structure of Organization

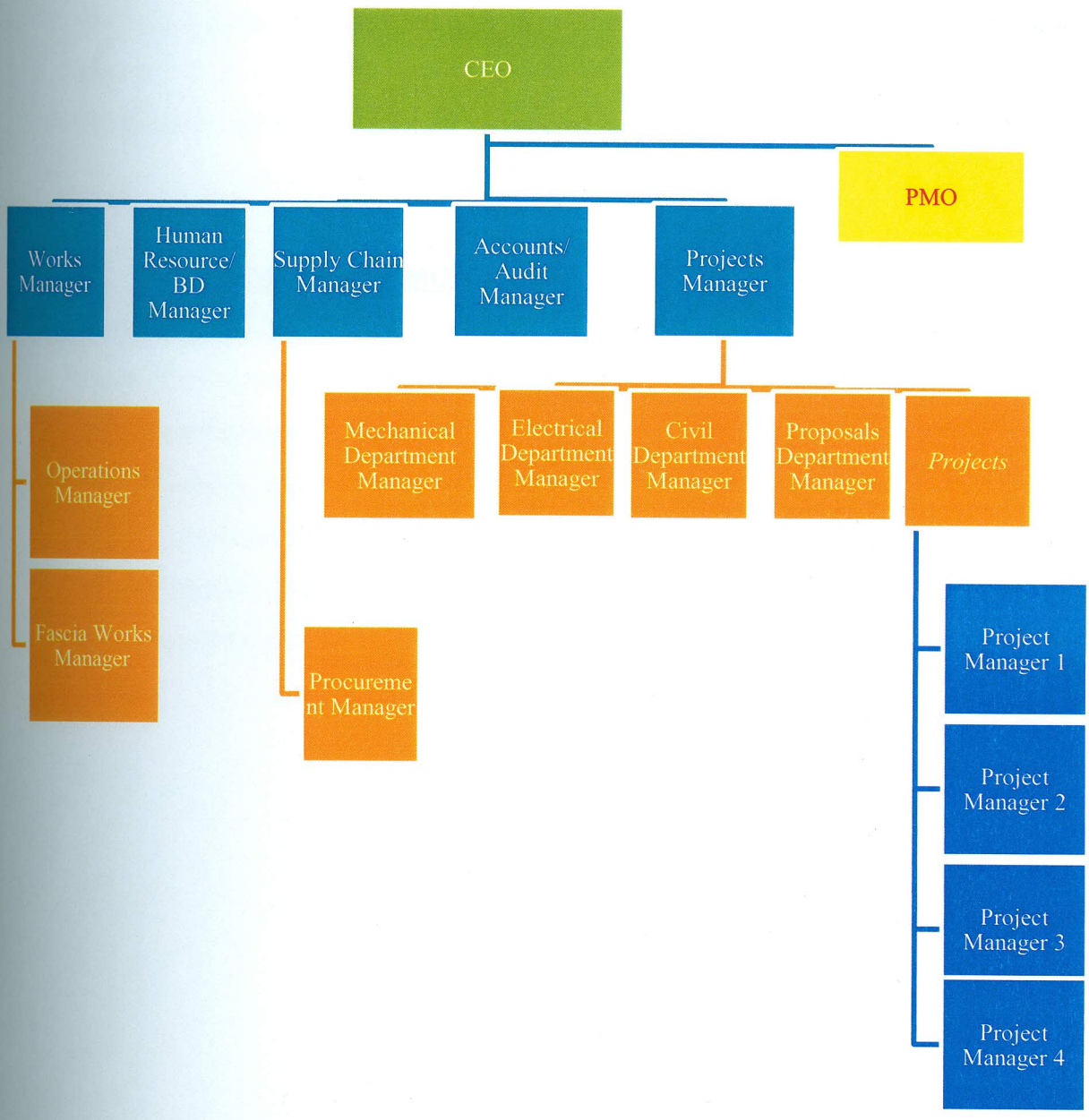



**Figure 6: New and proposed hierarchy of company**

PMO will be directly in coordination and reporting to the CEO of the company. It would not be a direct boss to any project or department for clash of authority and power avoidance, rather it would provide support and control the projects' direction and be directly reporting to CEO.

### 3.14. Challenges faced while establishing PMO

- There was no clear understanding of need and role of PMO by the senior management.
- Senior management considered it as an overhead as company was growing without it too.
- Project team and project manager considered it as a threat and showed opposition.
- Project teams take the PMO as auditors instead of facilitators

### 3.15. Value addition by PMO

- Resource Leveling
- Project Coordination and Project Tracking
- Project management application
- Standardization and Optimization
- Projects documentation
- Central Control tower for all the sites minimizing the gaps
- Formation of Organizational Process Assets

# Elite Engineering Pvt. Ltd.

# Project Charter

**Version: 1.0**

# Version History

| Version # | Issue Date | Approved By | Approval Date | Changes | Prepared By |
|---|---|---|---|---|---|
| 1.0 | 19-05-2017 | PMO | 19-05-2017 | - | M. Nabeel Ehtisham |
| | | | | | |
| | | | | | |

# Chapter 4 PROJECT CHARTER

| | |
|---|---|
| **Project Name** | Extension of a Bulk Oil Storage Depot at Pattoki |
| **Description** | A Bulk oil storage depot of Zoom petroleum Pvt. Ltd. is already constructed at Pattoki. Current project is extension of the same depot which includes fabrication and erection of a Bulk storage tank and piping from the tank to gantry area. All civil work prerequisite of this mechanical work is included. |
| **Project Objectives** | Project Objective is to construct the base of a vertical HSD tank and then fabricate and erect the tank. Along with it, provide piping from tank to the pump room and from there to the gantry area. Everything should be according to the OGRA regulations and as per the API-650 code. |
| **Acceptance Criteria** | Acceptance Criteria of this tank is successful results of NDT applied on tank and on piping. These Non-Destructive testing includes Dye Penetrant Testing, Radiographic Testing and Hydro Testing. |
| **Assumptions** | The tank would be able to store 420 tons of liters of HSD fuel at its 90% storage capacity.<br>Timely delivery of material and timely documented approvals from the concerned authorities would be made sure by the respective vendors and the client.<br>Prices or materials will not increase during the project phases. |
| **Constrains** | Material Delivery would be possible during night time only as the site is along with NHA. |
| **Project Duration** | 182 Days |
| **Project Start Date** | 8th February, 2017 |
| **Project Completion Date** | #1st August, 2017 |
| **Milestones List** | Piping Pre Work Completed<br>Piping Work Completed<br>Civil Work Completed<br>Mechanical Work Completed<br>Testing Completed |
| **Project Budget** | 27.25 Million PKR |

| | |
|---|---|
| **High Level Risks** | Material unavailability at site may delay the project.<br>Unavailability of Key resources and qualified labor may result in quality deteoration.<br>Any act of God during execution phase (Storm etc.).<br>Approval delay or rejection from concerned bodies. |
| **Major Stakeholders List** | Client (Zoom Petroleum Pvt. Ld.)<br>Elite Engineering Private Limited<br>OGRA Pakistan<br>Project Manager<br>Project Team |
| **Project Manager** | Mr. Farooq Azam |
| **Roles and Responsibilities** | Project Client:<br>• Providing specifications, details and drawing layouts<br>• Approving changes in scope<br>• Arranging OGRA visits and getting approval from OGRA and other concerned departments<br>• Providing acceptance of project<br>Project Manager:<br>• Ensuring all project phases and Execution of project on the set baselines<br>• Ensuring availability of all required resources and using them for project successful completion<br>• Monitoring and reporting project performance<br>• Complete project planning as per good practices and then following the plans<br>• Ensuring compliance with standards and processes<br>Project Team:<br>• Undertaking all tasks allocated by the project manager or their immediate supervisor<br>• Reporting to project manager on regular bases<br>• Maintaining all the documentation |

## IGNOFF

ne undersigned acknowledge that they have reviewed the project charter and authorize d fund the project. Changes to this project charter will be coordinated with and proved by the undersigned or their designated representatives.

pared By _____ Date: / 12 / 2016

me: Mr.

e:

ified By: _____ Date: / 12 / 2016

ne: M.

e:

roved By: _____ Date: / 12 / 2016

ne: M.

:

Elite Engineering Pvt. Ltd.

# Project Scope Statement

**Version: 1.0**

# Version History

| Version # | Issue Date | Approved By | Approval Date | Changes | Prepared By |
|---|---|---|---|---|---|
| 1.0 | 19-05-2017 | PMO | 29-05-2017 | - | M. Nabeel Ehtisham |
| | | | | | |
| | | | | | |

# Chapter 5 Project Scope Statement

## Introduction

The project scope statement, as per PM-BOK (PMI), describes the project scope, assumptions, constrains and major deliverables. The project scope statement is the comprehensive document which contains both the project scope and the product scope. It describes the project deliverables in detail and tells the work required to achieve those deliverables.

## Project Objectives

Project Objective is to construct the base of a vertical HSD tank and then fabricate and erect the tank on it. Along with it, provide piping from tank to the pump room and from there to the gantry area. Everything should be according to the OGRA regulations and as per the API-650 code.

## Major Deliverables

- Piping Work
  - Piping Pre Work
  - Underground Piping
  - Above the ground Piping
- Tanks Work
  - Civil Work
  - Mechanical Work

## Milestones List

- Piping Pre Work Completed
- Piping Work Completed
- Civil Work Completed
- Mechanical Work Completed
- Testing Completed

## Assumptions and Constrains

- The tank would be able to store 420 tons of liters of HSD fuel at its 90% storage capacity.
- Timely delivery of material and timely documented approvals from the concerned authorities would be made sure by the respective vendors and the client.
- Prices or materials will not increase during the project phases.
- Material Delivery would be possible during night time only as the site is along with NHA.

## Limits and Exclusions

- EEPL has the right to contract out the services.
- EEPL will be responsible for subcontracted work.
- Design specifications will be provided by ZOOM petroleum Pvt. Ltd
- All approvals and meetings would be on the client and EEPL will be responsible to follow the requirements and impositions.

## Technical Specifications

### Excavation:

Excavation will also include clearing and grabbing of the area where tank is to be erected as it is vegetation land. All the bio degradable and decomposable soil would be excavated before base formation.

### Tank specifications:

Tank Shell plates will be welded to form shells. Bottom shell would be 8mm thick and rest shells would be 6mm thick. MS plates would be used for tank fabrication which will be sand blasted first. Welders will be qualified and tested. Tank diameter would be 12m and height of tank will be 25m. According to these calculations, the tank should store 420 tons of liters of HSD at 90% storage capacity. API-650 and OGRA regulations would be followed. Detailed specifications and drawings would be verified by client first.

**NDT:**

Following non-destructive testing techniques would be applied for testing of tanks and piping.

1. Tanks:

- Radiography Testing
- Dye Penetrant Testing
- Hydro Testing

2. Piping:

- Dye Penetrant Testing
- Hydro Testing

# Chapter 6 Microsoft Project Documents List

The schedule of this project is prepared in MS project. This section contains reports of the project obtained from MS Project. Project is currently in progress. Tracking has also been performed of the project up till the project is completed. Following areas and reports of the project schedule document are attached in this report.

**Schedule Documents:**

1. Work Breakdown Structure
2. Resource Sheet
3. Project Schedule
4. Network Diagram
5. Project Milestones List
6. Project Earned Value Management

**Reports:**

1. Burndown
2. Cost Overview
3. Project Overview
4. Upcoming Tasks
5. Work Overview
6. Overallocated Resources
7. Resource Overview
8. Cash Flows
9. Cost Overruns
10. Earned Value Report
11. Resource Cost Overview
12. Task Cost Overview
13. Critical Tasks
14. Late Tasks
15. Milestones Report
16. Slipping Tasks Report
17. S-Curve

# Chapter 7 Project Schedule Documents

## 7.1. Work Breakdown Structure

| ID | WBS | ✓ | Task Mo | Task Name | Duration | Baseline Estimated Duration | Start | Finish | Predecessors |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | | | Zoom Depot Project | 208 days | 182 days | Wed Feb 8 | Sun Sep 3 | |
| 2 | 1.1 | ✓ | | Zoom Piping Work | 13 days | 6 days | Wed Feb 8 | Mon Feb 20 | |
| 3 | 1.1.1 | ✓ | | Layout | 1 day | 1 day | Wed Feb 8 | Wed Feb 8 | |
| 4 | 1.1.2 | ✓ | | Piping Pre Work | 9 days | 4 days | Thu Feb 9 | Fri Feb 17 | |
| 5 | 1.1.2.1 | ✓ | | Connection to Head | 3 days | 2 days | Thu Feb 9 | Sat Feb 11 | |
| 6 | 1.1.2.1.1 | ✓ | | Connection with Pump Head | 2 days | 1 day | Thu Feb 9 | Fri Feb 10 | 3 |
| 7 | 1.1.2.1.2 | ✓ | | Flanging and Blinding | 1 day | 1 day | Sat Feb 11 | Sat Feb 11 | 6 |
| 8 | 1.1.2.2 | ✓ | | Preparation of Pipes | 9 days | 4 days | Thu Feb 9 | Fri Feb 17 | |
| 9 | 1.1.2.2.1 | ✓ | | Wirebrush cleaning of Pipes | 2 days | 1 day | Thu Feb 9 | Fri Feb 10 | 6SS |
| 10 | 1.1.2.2.2 | ✓ | | Paint Work of Pipes | 3 days | 1 day | Sat Feb 11 | Mon Feb 13 | 9 |
| 11 | 1.1.2.2.3 | ✓ | | Epoxy of Pipes | 1 day | 1 day | Tue Feb 14 | Tue Feb 14 | 10 |
| 12 | 1.1.2.2.4 | ✓ | | Spool Preparation | 3 days | 1 day | Wed Feb 15 | Fri Feb 17 | 11,7 |
| 13 | 1.1.3 | ✓ | | Piping Pre Work Completed | 0 days | 0 days | Fri Feb 17 | Fri Feb 17 | 12 |
| 14 | 1.1.4 | ✓ | | Underground Piping | 6 days | 3 days | Thu Feb 9 | Tue Feb 14 | |
| 15 | 1.1.4.1 | ✓ | | Preparation of Ground | 6 days | 3 days | Thu Feb 9 | Tue Feb 14 | |
| 16 | 1.1.4.1.1 | ✓ | | Cutting | 1 day | 1 day | Thu Feb 9 | Thu Feb 9 | 3 |
| 17 | 1.1.4.1.2 | ✓ | | Excavation | 2 days | 1 day | Fri Feb 10 | Sat Feb 11 | 16 |
| 18 | 1.1.4.1.3 | ✓ | | Sleeves Formation | 3 days | 1 day | Sun Feb 12 | Tue Feb 14 | 17 |
| 19 | 1.1.5 | ✓ | | Above the ground Piping | 12 days | 5 days | Thu Feb 9 | Mon Feb 20 | |
| 20 | 1.1.5.1 | ✓ | | Sleepers formation | 1 day | 1 day | Thu Feb 9 | Thu Feb 9 | 3 |
| 21 | 1.1.5.2 | ✓ | | Sleepers Grouting | 2 days | 1 day | Fri Feb 10 | Sat Feb 11 | 20 |
| 22 | 1.1.5.3 | ✓ | | Spools Connection | 3 days | 1 day | Sat Feb 18 | Mon Feb 20 | 21,12 |
| 23 | 1.1.5.4 | ✓ | | Piping Work Completed | 0 days | 0 days | Mon Feb 20 | Mon Feb 20 | 22 |
| 24 | 1.2 | | | Zoom Tanks Work | 195 days | 176 days | Tue Feb 21 | Sun Sep 3 | |
| 25 | 1.2.1 | ✓ | | Civil Work | 78 days | 65 days | Tue Feb 21 | Tue May 9 | |
| 26 | 1.2.1.1 | ✓ | | Layout | 1 day | 1 day | Tue Feb 21 | Tue Feb 21 | 22 |
| 27 | 1.2.1.2 | ✓ | | Excavation | 1 day | 1 day | Wed Feb 22 | Thu Feb 23 | 26 |
| 28 | 1.2.1.3 | ✓ | | Trimming and Levelling | 2 days | 2 days | Fri Feb 24 | Sat Feb 25 | 27 |
| 29 | 1.2.1.4 | ✓ | | Preparation of NGC | 4 days | 2 days | Sun Feb 26 | Wed Mar 1 | 28 |
| 30 | 1.2.1.5 | ✓ | | PCC 1 Layer | 2 days | 2 days | Thu Mar 2 | Fri Mar 3 | 29 |

| ID | WBS | ✓ | Task Mo | Task Name | Duration | Baseline Estimated Duration | Start | Finish | Predecessors |
|---|---|---|---|---|---|---|---|---|---|
| 31 | 1.2.1.6 | ✓ | | Blind Concrete 1st Layer | 2 days | 2 days | Sat Mar 4 | Sun Mar 5 | 30 |
| 32 | 1.2.1.7 | ✓ | | Blind Concrete 2nd Layer | 2 days | 2 days | Mon Mar 6 | Tue Mar 7 | 31 |
| 33 | 1.2.1.8 | ✓ | | Steel Fixing of Ring Wall | 5 days | 4 days | Wed Mar 8 | Sun Mar 12 | 32 |
| 34 | 1.2.1.9 | ✓ | | Fixing of J Bolts | 3 days | 3 days | Mon Mar 13 | Wed Mar 15 | 33 |
| 35 | 1.2.1.10 | ✓ | | Brick work of Ring Wall | 3 days | 3 days | Thu Mar 16 | Sat Mar 18 | 34 |
| 36 | 1.2.1.11 | ✓ | | Concrete pouring of Ring Wall | 3 days | 1 day | Sun Mar 19 | Tue Mar 21 | 35 |
| 37 | 1.2.1.12 | ✓ | | 16 Layers of Sand Filling and Compaction | 21 days | 17 days | Wed Mar 22 | Tue Apr 11 | 36 |
| 38 | 1.2.1.13 | ✓ | | Top Layer Levelling and Dressing | 5 days | 4 days | Wed Apr 12 | Sun Apr 16 | 37 |
| 39 | 1.2.1.14 | ✓ | | Asphalt Work | 3 days | 3 days | Mon Apr 17 | Wed Apr 19 | 38 |
| 40 | 1.2.1.15 | ✓ | | Earth Filling around Tank Foundations | 8 days | 8 days | Thu Apr 20 | Thu Apr 27 | 39 |
| 41 | 1.2.1.16 | ✓ | | Brick Pitching around Tank Foundations | 12 days | 9 days | Fri Apr 28 | Tue May 9 | 40 |
| 42 | 1.2.2 | | | Three Sides of HSD Dyke Wall | 35 days | 23 days | Wed May 10 | Tue Jun 13 | |
| 43 | 1.2.2.1 | ✓ | | Layout | 1 day | 1 day | Wed May 10 | Wed May 10 | 41 |
| 44 | 1.2.2.2 | ✓ | | Excavation | 4 days | 3 days | Thu May 11 | Sun May 14 | 43 |
| 45 | 1.2.2.3 | ✓ | | PCC | 8 days | 8 days | Mon May 15 | Mon May 22 | 44 |
| 46 | 1.2.2.4 | ✓ | | Brick Work | 5 days | 3 days | Tue May 23 | Sat May 27 | 45 |
| 47 | 1.2.2.5 | ✓ | | Steel Fixing of Top Beam | 5 days | 2 days | Sun May 28 | Thu Jun 1 | 46 |
| 48 | 1.2.2.6 | ✓ | | Shuttering | 2 days | 2 days | Fri Jun 2 | Sat Jun 3 | 47 |
| 49 | 1.2.2.7 | | | Concrete Pouring | 2 days | 2 days | Sun Jun 4 | Mon Jun 5 | 48 |
| 50 | 1.2.2.8 | | | Plaster Work | 8 days | 2 days | Tue Jun 6 | Tue Jun 13 | 49 |
| 51 | 1.2.3 | | | Remaining side of HSD Dyke Wall | 11 days | 11 days | Sat Aug 19 | Tue Aug 29 | |
| 52 | 1.2.3.1 | | | Brick Work | 3 days | 3 days | Sat Aug 19 | Mon Aug 21 | 120 |
| 53 | 1.2.3.2 | | | Steel Fixing of Top Beam | 1 day | 1 day | Tue Aug 22 | Tue Aug 22 | 52 |
| 54 | 1.2.3.3 | | | Shuttering | 3 days | 3 days | Wed Aug 23 | Fri Aug 25 | 53 |
| 55 | 1.2.3.4 | | | Concrete Pouring | 1 day | 1 day | Sat Aug 26 | Sat Aug 26 | 54 |

| ID | WBS | | Task Mo | Task Name | Duration | Baseline Estimated Duration | Start | Finish | Predecessors |
|---|---|---|---|---|---|---|---|---|---|
| 56 | 1.2.3.5 | | | Plaster Work | 3 days | 3 days | Sun Aug 27 | Tue Aug 29 | 55 |
| 57 | 1.2.3.6 | | | Civil Work Completed | 0 days | 0 days | Tue Aug 29 | Tue Aug 29 | 56 |
| 58 | 1.2.4 | | | Mechanical Work | 117 days | 111 days | Wed May 10 | Sun Sep 3 | |
| 59 | 1.2.4.1 | | | Marking | 37 days | 25 days | Wed May 10 | Thu Jun 15 | |
| 60 | 1.2.4.1.1 | ✓ | | Bottom Plate | 2 days | 2 days | Wed May 10 | Thu May 11 | 41 |
| 61 | 1.2.4.1.2 | ✓ | | Shell Plates | 5 days | 3 days | Fri May 12 | Tue May 16 | 60 |
| 62 | 1.2.4.1.3 | | | Roof Plate | 2 days | 2 days | Wed Jun 14 | Thu Jun 15 | 42 |
| 63 | 1.2.4.1.4 | | | Manhole shells | 2 days | 1 day | Thu May 11 | Fri May 12 | 43 |
| 64 | 1.2.4.2 | ✓ | | Cutting & Grinding | 15 days | 12 days | Fri May 12 | Fri May 26 | |
| 65 | 1.2.4.2.1 | ✓ | | Bottom Plate | 2 days | 1 day | Fri May 12 | Sat May 13 | 60 |
| 66 | 1.2.4.2.2 | ✓ | | Shell Plates | 2 days | 2 days | Wed May 17 | Thu May 18 | 67 |
| 67 | 1.2.4.2.3 | ✓ | | Roof Plate | 3 days | 3 days | Sun May 14 | Tue May 16 | 65 |
| 68 | 1.2.4.2.4 | ✓ | | Manhole shells | 3 days | 1 day | Wed May 17 | Fri May 19 | 67 |
| 69 | 1.2.4.2.5 | ✓ | | Re-Pads | 3 days | 3 days | Sat May 20 | Mon May 22 | 68 |
| 70 | 1.2.4.2.6 | ✓ | | Anchor Chairs Marking & Cutting | 2 days | 2 days | Wed May 17 | Thu May 18 | 67 |
| 71 | 1.2.4.2.7 | ✓ | | Rafter Cutting & Grinding | 2 days | 2 days | Fri May 19 | Sat May 20 | 70 |
| 72 | 1.2.4.2.8 | ✓ | | Shell Nozzles | 4 days | 4 days | Fri May 19 | Mon May 22 | 66 |
| 73 | 1.2.4.2.9 | ✓ | | Roof Nozzles | 3 days | 3 days | Wed May 17 | Fri May 19 | 67 |
| 74 | 1.2.4.2.10 | ✓ | | Stairs | 4 days | 4 days | Tue May 23 | Fri May 26 | 69 |
| 75 | 1.2.4.3 | ✓ | | Rolling | 12 days | 6 days | Wed May 17 | Sun May 28 | |
| 76 | 1.2.4.3.1 | ✓ | | Shell Plates | 2 days | 2 days | Fri May 19 | Sat May 20 | 66 |
| 77 | 1.2.4.3.2 | ✓ | | Manhole shells+Repads | 6 days | 2 days | Mon May 22 | Sun May 28 | 68,69 |
| 78 | 1.2.4.3.3 | ✓ | | Curb Angle Rolling | 2 days | 2 days | Wed May 17 | Thu May 18 | 66SS |
| 79 | 1.2.4.4 | ✓ | | Bottom laying | 8 days | 7 days | Sun May 14 | Sun May 21 | |
| 80 | 1.2.4.4.1 | ✓ | | FIT UP | 1 day | 1 day | Sun May 14 | Sun May 14 | 65 |
| 81 | 1.2.4.4.2 | ✓ | | SHORT SEAM WELDING | 4 days | 1 day | Mon May 15 | Thu May 18 | 80 |
| 82 | 1.2.4.4.3 | ✓ | | LONG SEAM WELDING | 1 day | 1 day | Wed May 17 | Wed May 17 | 81 |
| 83 | 1.2.4.4.4 | ✓ | | T-WELDING | 4 days | 4 days | Thu May 18 | Sun May 21 | 82 |
| 84 | 1.2.4.5 | | | Shell erection | 77 days | 73 days | Mon May 22 | Sun Aug 6 | |

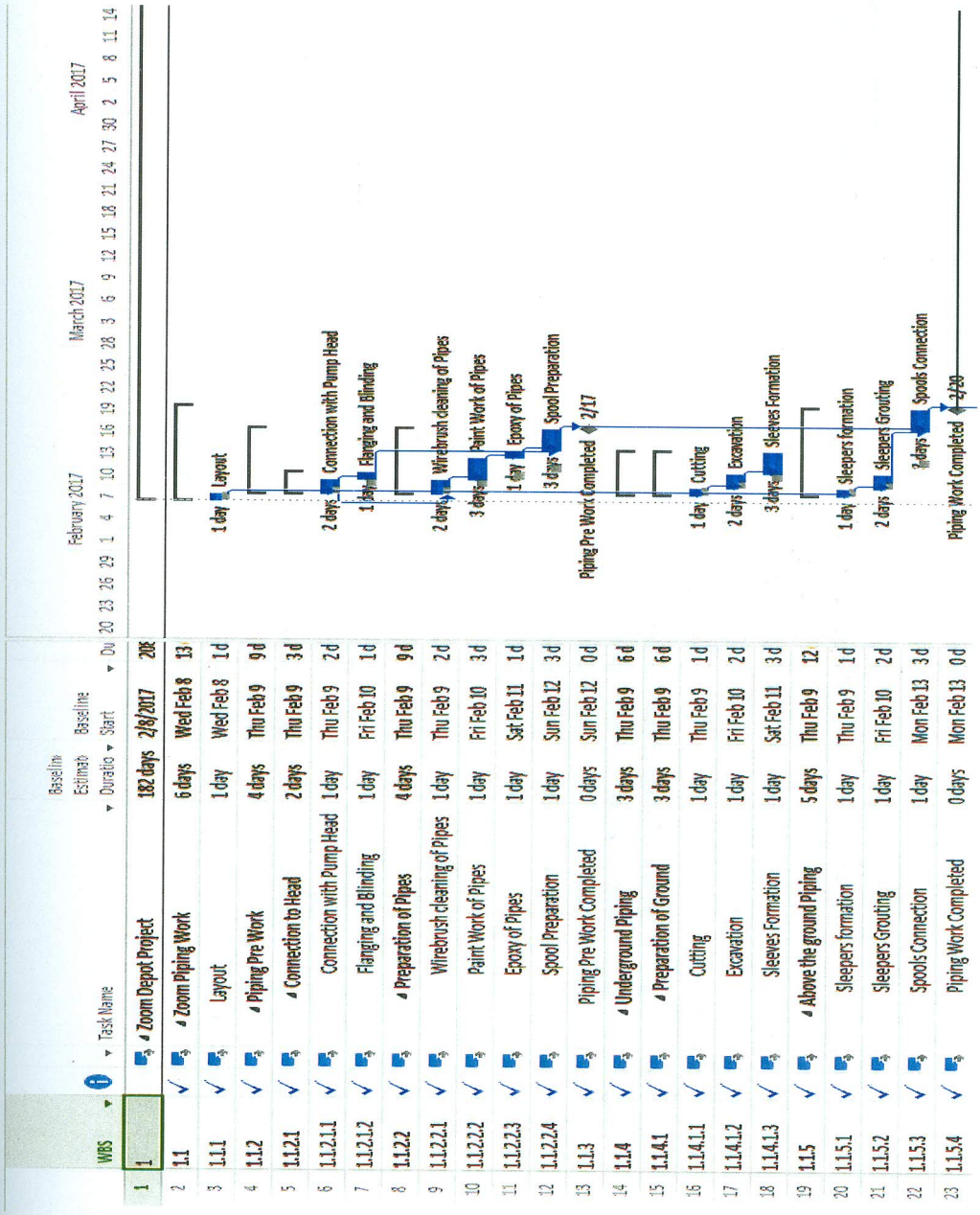
| ID | WBS | ✓ | Task Mo | Task Name | Duration | Baseline Estimated Duration | Start | Finish | Predecessors |
|---|---|---|---|---|---|---|---|---|---|
| 85 | 1.2.4.5.1 | ✓ | | 1 Fitup | 4 days | 3 days | Mon May 22 | Thu May 25 | 83 |
| 86 | 1.2.4.5.2 | ✓ | | 2 fitup | 4 days | 4 days | Fri May 26 | Mon May 29 | 76,85 |
| 87 | 1.2.4.5.3 | ✓ | | 1 Welding | 4 days | 4 days | Tue May 30 | Fri Jun 2 | 86 |
| 88 | 1.2.4.5.4 | ✓ | | 3 Fitup | 6 days | 4 days | Sat Jun 3 | Thu Jun 8 | 87 |
| 89 | 1.2.4.5.5 | ✓ | | 2 Welding | 6 days | 4 days | Wed Jun 7 | Mon Jun 12 | 88 |
| 90 | 1.2.4.5.6 | | | 1 backpass | 4 days | 4 days | Tue Jun 13 | Fri Jun 16 | 89 |
| 91 | 1.2.4.5.7 | | | 4 Fitup | 2 days | 2 days | Sat Jun 17 | Sun Jun 18 | 90 |
| 92 | 1.2.4.5.8 | | | 3 welding | 3 days | 2 days | Mon Jun 19 | Wed Jun 21 | 91 |
| 93 | 1.2.4.5.9 | | | 2 backpass | 2 days | 2 days | Thu Jun 22 | Fri Jun 23 | 92 |
| 94 | 1.2.4.5.10 | | | 5 Fitup | 1 day | 1 day | Sat Jun 24 | Sat Jun 24 | 93 |
| 95 | 1.2.4.5.11 | | | 4 Welding | 1 day | 1 day | Sun Jun 25 | Sun Jun 25 | 94 |
| 96 | 1.2.4.5.12 | | | 3 Backpass | 1 day | 1 day | Mon Jun 26 | Mon Jun 26 | 95 |
| 97 | 1.2.4.5.13 | | | Anchor Chairs Fitup & Welding | 1 day | 1 day | Tue Jun 27 | Tue Jun 27 | 96 |
| 98 | 1.2.4.5.14 | | | 6 Fitup | 1 day | 1 day | Wed Jun 28 | Wed Jun 28 | 97 |
| 99 | 1.2.4.5.15 | | | 5 Welding | 1 day | 1 day | Thu Jun 29 | Thu Jun 29 | 98 |
| 100 | 1.2.4.5.16 | | | 4 Backpass | 1 day | 1 day | Fri Jun 30 | Fri Jun 30 | 99 |
| 101 | 1.2.4.5.17 | | | 7 Fitup | 4 days | 4 days | Sat Jul 1 | Tue Jul 4 | 100 |
| 102 | 1.2.4.5.18 | | | 6 Welding | 3 days | 3 days | Wed Jul 5 | Fri Jul 7 | 101 |
| 103 | 1.2.4.5.19 | | | 5 backpass | 1 day | 1 day | Sat Jul 8 | Sat Jul 8 | 102 |
| 104 | 1.2.4.5.20 | | | 8 Fitup | 4 days | 4 days | Sun Jul 9 | Wed Jul 12 | 103 |
| 105 | 1.2.4.5.21 | | | 7 Welding | 5 days | 5 days | Thu Jul 13 | Mon Jul 17 | 104 |
| 106 | 1.2.4.5.22 | | | 6 Backpass | 2 days | 2 days | Tue Jul 18 | Wed Jul 19 | 105 |
| 107 | 1.2.4.5.23 | | | 9 Fitup | 3 days | 3 days | Thu Jul 20 | Sat Jul 22 | 106 |
| 108 | 1.2.4.5.24 | | | 8 Welding | 3 days | 3 days | Sun Jul 23 | Tue Jul 25 | 107 |
| 109 | 1.2.4.5.25 | | | 7 Backpass | 1 day | 1 day | Wed Jul 26 | Wed Jul 26 | 108 |
| 110 | 1.2.4.5.26 | | | 8 backpass | 2 days | 2 days | Thu Jul 27 | Fri Jul 28 | 109 |
| 111 | 1.2.4.5.27 | | | 9 welding | 3 days | 3 days | Sat Jul 29 | Mon Jul 31 | 110 |
| 112 | 1.2.4.5.28 | | | 9 Backpass | 6 days | 6 days | Tue Aug 1 | Sun Aug 6 | 111 |
| 113 | 1.2.4.6 | | | Center Column | 5 days | 5 days | Mon Aug 7 | Fri Aug 11 | |
| 114 | 1.2.4.6.1 | | | Column base | 3 days | 3 days | Mon Aug 7 | Wed Aug 9 | 112 |
| 115 | 1.2.4.6.2 | | | Column fab+Drum | 1 day | 1 day | Thu Aug 10 | Thu Aug 10 | 114 |

| ID | WBS | | Task Mo | Task Name | Duration | Baseline Estimated Duration | Start | Finish | Predecessors |
|---|---|---|---|---|---|---|---|---|---|
| 116 | 1.2.4.6.3 | | | Rafter Installation | 1 day | 1 day | Fri Aug 11 | Fri Aug 11 | 115 |
| 117 | 1.2.4.7 | | | Roof laying | 13 days | 13 days | Sat Aug 12 | Thu Aug 24 | |
| 118 | 1.2.4.7.1 | | | FIT UP | 1 day | 1 day | Sat Aug 12 | Sat Aug 12 | 116 |
| 119 | 1.2.4.7.2 | | | SHORT SEAM WELDING | 3 days | 3 days | Sun Aug 13 | Tue Aug 15 | 118 |
| 120 | 1.2.4.7.3 | | | LONG SEAM WELDING | 3 days | 3 days | Wed Aug 16 | Fri Aug 18 | 119 |
| 121 | 1.2.4.7.4 | | | T-WELDING | 3 days | 3 days | Sat Aug 19 | Mon Aug 21 | 120 |
| 122 | 1.2.4.7.5 | | | Curb Angle Welding | 3 days | 3 days | Tue Aug 22 | Thu Aug 24 | 121 |
| 123 | 1.2.4.8 | | | Shell Nozzles | 2 days | 2 days | Sun Aug 6 | Mon Aug 7 | 112FF+1 day |
| 124 | 1.2.4.9 | | | Roof Nozzles | 2 days | 2 days | Sun Aug 13 | Mon Aug 14 | 118 |
| 125 | 1.2.4.10 | | | Stairs Erection | 2 days | 2 days | Mon Aug 7 | Tue Aug 8 | 112FF+2 days |
| 126 | 1.2.4.11 | | | Water Spray Nozzle | 2 days | 2 days | Tue Aug 15 | Wed Aug 16 | 124 |
| 127 | 1.2.4.12 | | | Mechanical Work Completed | 0 days | 0 days | Wed Aug 16 | Wed Aug 16 | 126 |
| 128 | 1.2.4.13 | | | Pneumatic test | 2 days | 2 days | Fri Aug 25 | Sat Aug 26 | 126,122 |
| 129 | 1.2.4.14 | | | Hydro Test | 4 days | 4 days | Sun Aug 27 | Wed Aug 30 | 128 |
| 130 | 1.2.4.15 | | | Testing Completed | 0 days | 0 days | Wed Aug 30 | Wed Aug 30 | 129 |
| 131 | 1.2.4.16 | | | Paint | 3 days | 3 days | Thu Aug 31 | Sat Sep 2 | 129 |
| 132 | 1.2.4.17 | | | Piping and Tank Connection | 4 days | 4 days | Thu Aug 31 | Sun Sep 3 | 130,23 |

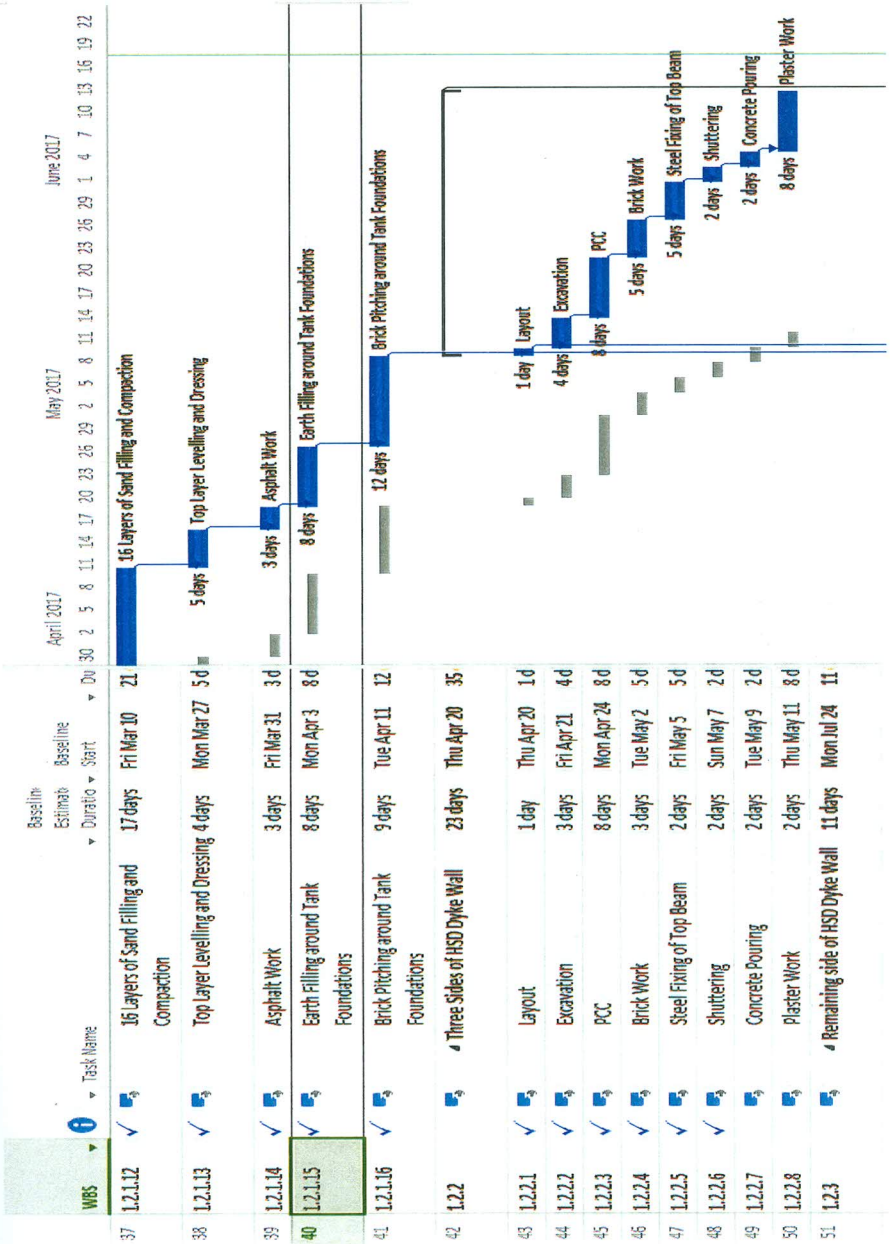
## 7.2. Resource Sheet

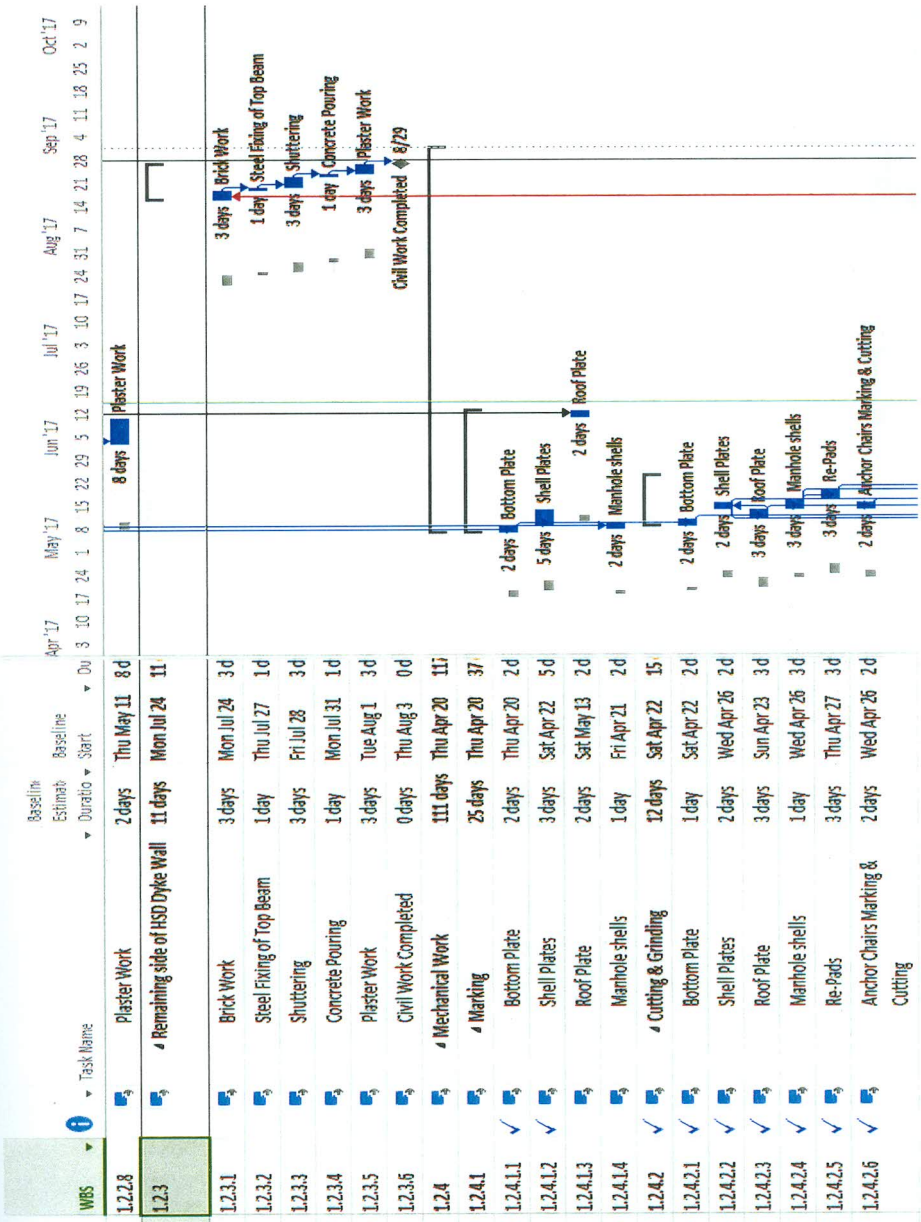
| | Resource Name | Type | Initials | Max. | Std. Rate | Ovt. Rate | Cost/Use | Accrue | Base Calendar |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Surveyor | Work | S | 200% | Rs30,000.00/mon | Rs0.00/hr | Rs0.00 | Prorated | Project Calender |
| 2 | Mechanical Fitter | Work | M | 800% | Rs22,000.00/mon | Rs0.00/hr | Rs0.00 | Prorated | Project Calender |
| 3 | Helper | Work | H | 1,200% | Rs18,000.00/mon | Rs0.00/hr | Rs0.00 | Prorated | Project Calender |
| 4 | Painter | Work | P | 600% | Rs22,000.00/mon | Rs0.00/hr | Rs0.00 | Prorated | Project Calender |
| 5 | Mason | Work | M | 700% | Rs1,000.00/day | Rs150.00/hr | Rs0.00 | Prorated | Project Calender |
| 6 | Labourer | Work | L | 1,000% | Rs700.00/day | Rs100.00/hr | Rs0.00 | Prorated | Project Calender |
| 7 | Crane | Work | C | 200% | Rs5,000.00/day | Rs0.00/hr | Rs0.00 | Prorated | Project Calender |
| 8 | Welder | Work | W | 500% | Rs1,200.00/day | Rs0.00/hr | Rs0.00 | Prorated | Project Calender |
| 9 | Excavator | Work | E | 100% | Rs4,000.00/day | Rs0.00/hr | Rs0.00 | Prorated | Project Calender |
| 10 | Mixer Machine | Work | M | 200% | Rs3,000.00/day | Rs0.00/hr | Rs0.00 | Prorated | Project Calender |
| 11 | Jumpey | Work | J | 200% | Rs1,500.00/day | Rs0.00/hr | Rs0.00 | Prorated | Project Calender |
| 12 | Construction Cost | Cost | C | | | | | Start | |
| 13 | Mechanical Cost | Cost | M | | | | | Start | |

## 7.3.Project Schedule



| | WBS | Task Name | Baseline Estimate | Duration | Baseline Start | Du |
|---|---|---|---|---|---|---|
| 22 | 1.1.5.3 | Spools Connection | | 1 day | Mon Feb 13 | 3 d |
| 23 | 1.1.5.4 | Piping Work Completed | | 0 days | Mon Feb 13 | 0 d |
| 24 | 1.2 | Zoom Tanks Work | | 176 days | Tue Feb 14 | 19( |
| 25 | 1.2.1 | Civil Work | | 65 days | Tue Feb 14 | 78 |
| 26 | 1.2.1.1 | Layout | | 1 day | Tue Feb 14 | 1 d |
| 27 | 1.2.1.2 | Excavation | | 1 day | Wed Feb 15 | 1 d |
| 28 | 1.2.1.3 | Trimming and Levelling | | 2 days | Fri Feb 17 | 2 d |
| 29 | 1.2.1.4 | Preparation of NGC | | 2 days | Sun Feb 19 | 4 d |
| 30 | 1.2.1.5 | PCC 1 Layer | | 2 days | Tue Feb 21 | 2 d |
| 31 | 1.2.1.6 | Blind Concrete 1st Layer | | 2 days | Thu Feb 23 | 2 d |
| 32 | 1.2.1.7 | Blind Concrete 2nd Layer | | 2 days | Sat Feb 25 | 2 d |
| 33 | 1.2.1.8 | Steel Fixing of Ring Wall | | 4 days | Mon Feb 27 | 5 d |
| 34 | 1.2.1.9 | Fixing of J Bolts | | 3 days | Fri Mar 3 | 3 d |
| 35 | 1.2.1.10 | Brick work of Ring Wall | | 3 days | Mon Mar 6 | 3 d |
| 36 | 1.2.1.11 | Concrete pouring of Ring Wall | | 1 day | Thu Mar 9 | 3 d |
| 37 | 1.2.1.12 | 16 Layers of Sand Filling and Compaction | | 17 days | Fri Mar 10 | 21 |
| 38 | 1.2.1.13 | Top Layer Levelling and Dressing | | 4 days | Mon Mar 27 | 5 d |
| 39 | 1.2.1.14 | Asphalt Work | | 3 days | Fri Mar 31 | 3 d |
| 40 | 1.2.1.15 | Earth Filling around Tank Foundations | | 8 days | Mon Apr 3 | 8 d |


Baseline
Estimab
Baseline
April 2017
May 2017
June 2017
WBS
Task Name
Duratio
Start
Du
30 2 5 8 11 14 17 20 23 26 29 2 5 8 11 14 17 20 23 26 29 1 4 7 10 13 16 19 22
37 1.2.1.12 16 Layers of Sand Filling and Compaction 17 days Fri Mar 10 21
38 1.2.1.13 Top Layer Levelling and Dressing 4 days Mon Mar 27 5 d
39 1.2.1.14 Asphalt Work 3 days Fri Mar 31 3 d
40 1.2.1.15 Earth Filling around Tank Foundations 8 days Mon Apr 3 8 d
41 1.2.1.16 Brick Pitching around Tank Foundations 9 days Tue Apr 11 12
42 1.2.2 Three Sides of HSD Dyke Wall 23 days Thu Apr 20 35
43 1.2.2.1 Layout 1 day Thu Apr 20 1 d
44 1.2.2.2 Excavation 3 days Fri Apr 21 4 d
45 1.2.2.3 PCC 8 days Mon Apr 24 8 d
46 1.2.2.4 Brick Work 3 days Tue May 2 5 d
47 1.2.2.5 Steel Fixing of Top Beam 2 days Fri May 5 5 d
48 1.2.2.6 Shuttering 2 days Sun May 7 2 d
49 1.2.2.7 Concrete Pouring 2 days Tue May 9 2 d
50 1.2.2.8 Plaster Work 2 days Thu May 11 8 d
51 1.2.3 Remaining side of HSD Dyke Wall 11 days Mon Jul 24 11
16 Layers of Sand Filling and Compaction
5 days
Top Layer Levelling and Dressing
3 days
Asphalt Work
8 days
Earth Filling around Tank Foundations
12 days
Brick Pitching around Tank Foundations
1 day
Layout
4 days
Excavation
8 days
PCC
5 days
Brick Work
5 days
Steel Fixing of Top Beam
2 days
Shuttering
2 days
Concrete Pouring
8 days
Plaster Work



| | WBS | Task Name | Baseline Estimate | Baseline Duration | Baseline Start | Baseline Du |
|---|---|---|---|---|---|---|
| 50 | 1.2.2.8 | Plaster Work | 2 days | Thu May 11 | 8 d |
| 51 | 1.2.3 | Remaining side of HSD Dyke Wall | 11 days | Mon Jul 24 | 11 |
| 52 | 1.2.3.1 | Brick Work | 3 days | Mon Jul 24 | 3 d |
| 53 | 1.2.3.2 | Steel Fixing of Top Beam | 1 day | Thu Jul 27 | 1 d |
| 54 | 1.2.3.3 | Shuttering | 3 days | Fri Jul 28 | 3 d |
| 55 | 1.2.3.4 | Concrete Pouring | 1 day | Mon Jul 31 | 1 d |
| 56 | 1.2.3.5 | Plaster Work | 3 days | Tue Aug 1 | 3 d |
| 57 | 1.2.3.6 | Civil Work Completed | 0 days | Thu Aug 3 | 0 d |
| 58 | 1.2.4 | Mechanical Work | 111 days | Thu Apr 20 | 11 |
| 59 | 1.2.4.1 | Marking | 25 days | Thu Apr 20 | 37 |
| 60 | 1.2.4.1.1 | Bottom Plate | 2 days | Thu Apr 20 | 2 d |
| 61 | 1.2.4.1.2 | Shell Plates | 3 days | Sat Apr 22 | 5 d |
| 62 | 1.2.4.1.3 | Roof Plate | 2 days | Sat May 13 | 2 d |
| 63 | 1.2.4.1.4 | Manhole shells | 1 day | Fri Apr 21 | 2 d |
| 64 | 1.2.4.2 | Cutting & Grinding | 12 days | Sat Apr 22 | 15 |
| 65 | 1.2.4.2.1 | Bottom Plate | 1 day | Sat Apr 22 | 2 d |
| 66 | 1.2.4.2.2 | Shell Plates | 2 days | Wed Apr 26 | 2 d |
| 67 | 1.2.4.2.3 | Roof Plate | 3 days | Sun Apr 23 | 3 d |
| 68 | 1.2.4.2.4 | Manhole shells | 1 day | Wed Apr 26 | 3 d |
| 69 | 1.2.4.2.5 | Re-Pads | 3 days | Thu Apr 27 | 3 d |
| 70 | 1.2.4.2.6 | Anchor Chairs Marking & Cutting | 2 days | Wed Apr 26 | 2 d |

| | WBS | Task Name | Baseline Estimate Duration | Baseline Start | Baseline Du |
|---|---|---|---|---|---|
| 69 | 1.2.4.2.5 | Re-Pads | 3 days | Thu Apr 27 | 3 d |
| 70 | 1.2.4.2.6 | Anchor Chairs Marking & Cutting | 2 days | Wed Apr 26 | 2 d |
| 71 | 1.2.4.2.7 | Rafter Cutting & Grinding | 2 days | Fri Apr 28 | 2 d |
| 72 | 1.2.4.2.8 | Shell Nozzles | 4 days | Fri Apr 28 | 4 d |
| 73 | 1.2.4.2.9 | Roof Nozzles | 3 days | Wed Apr 26 | 3 d |
| 74 | 1.2.4.2.10 | Stairs | 4 days | Sun Apr 30 | 4 d |
| 75 | 1.2.4.3 | Rolling | 6 days | Wed Apr 26 | 12 |
| 76 | 1.2.4.3.1 | Shell Plates | 2 days | Fri Apr 28 | 2 d |
| 77 | 1.2.4.3.2 | Manhole shells+Repads | 2 days | Sat Apr 29 | 6 d |
| 78 | 1.2.4.3.3 | Curb Angle Rolling | 2 days | Wed Apr 26 | 2 d |
| 79 | 1.2.4.4 | Bottom laying | 7 days | Sun Apr 23 | 8 d |
| 80 | 1.2.4.4.1 | FIT UP | 1 day | Sun Apr 23 | 1 d |
| 81 | 1.2.4.4.2 | SHORT SEAM WELDING | 1 day | Mon Apr 24 | 4 d |
| 82 | 1.2.4.4.3 | LONG SEAM WELDING | 1 day | Tue Apr 25 | 1 d |
| 83 | 1.2.4.4.4 | T-WELDING | 4 days | Wed Apr 26 | 4 d |
| 84 | 1.2.4.5 | Shell erection | 73 days | Sun Apr 30 | 77 |
| 85 | 1.2.4.5.1 | 1 Fitup | 3 days | Sun Apr 30 | 4 d |
| 86 | 1.2.4.5.2 | 2 fitup | 4 days | Wed May 3 | 4 d |
| 87 | 1.2.4.5.3 | 1 Welding | 4 days | Sun May 7 | 4 d |
| 88 | 1.2.4.5.4 | 3 Fitup | 4 days | Thu May 11 | 6 d |
| 89 | 1.2.4.5.5 | 2 Welding | 4 days | Mon May 15 | 6 d |

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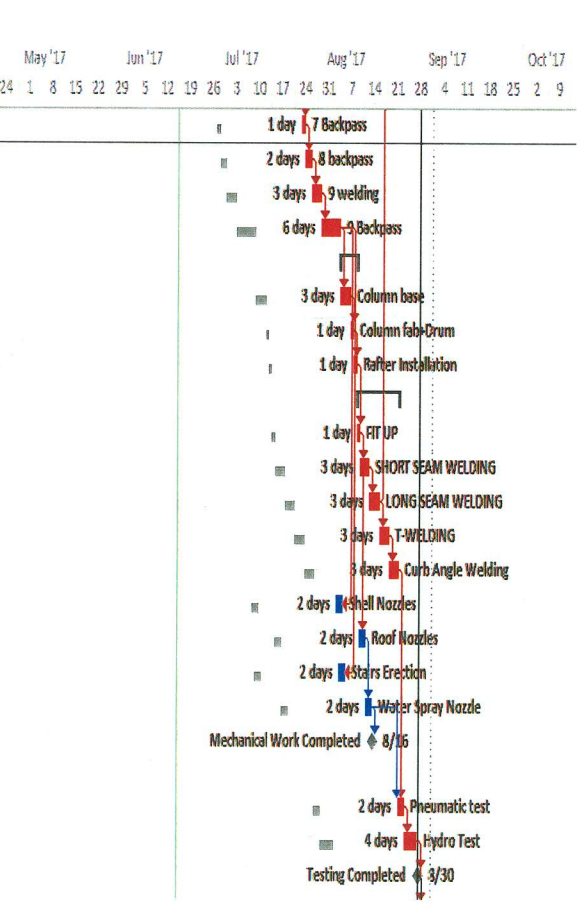
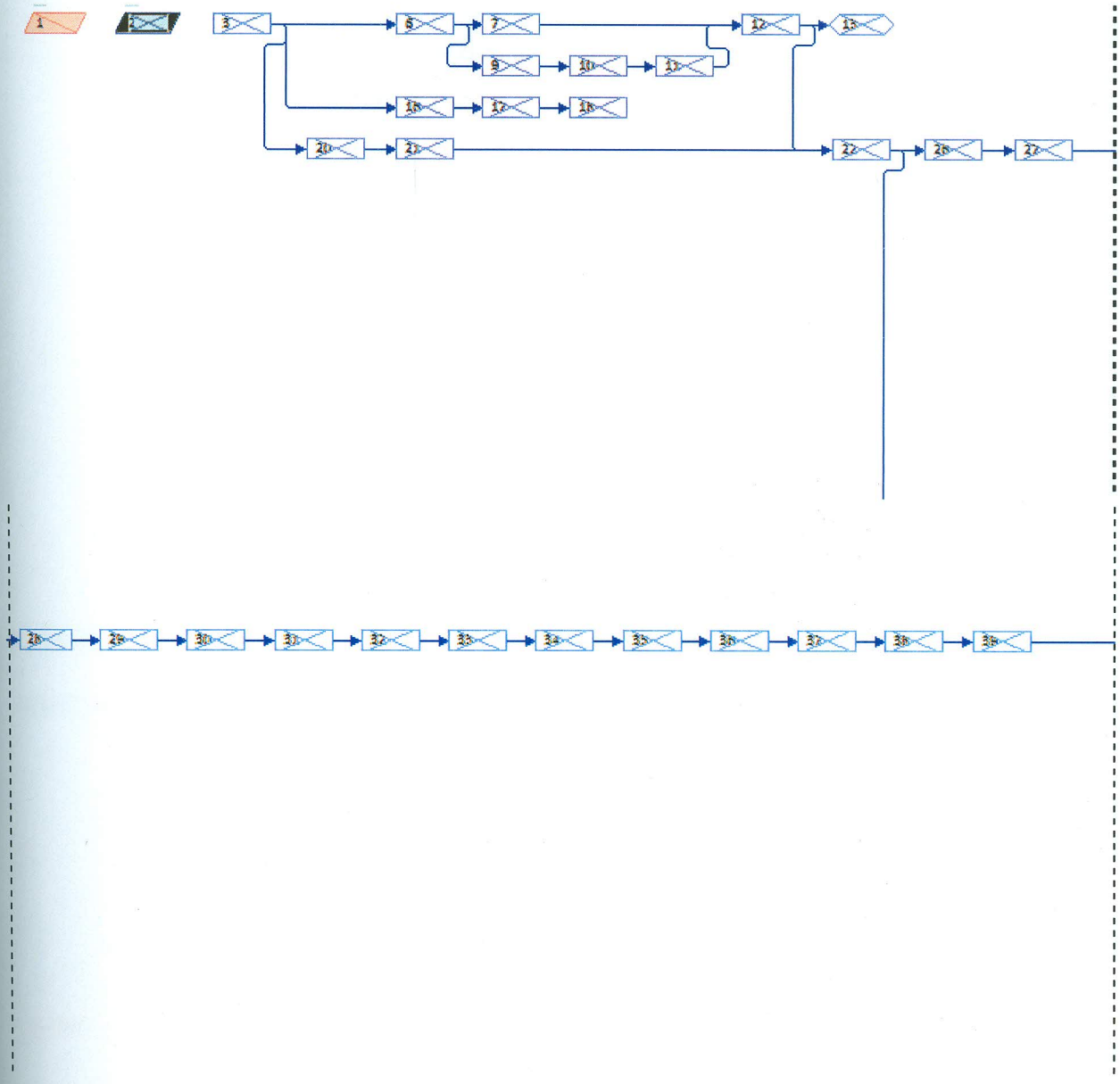
| | WBS | Task Name | Baseline Estimate | Baseline Duratio | Baseline Start | Baseline Finish |
|---|---|---|---|---|---|---|
| 88 | 1.2.4.5.4 | 3 Fitup | 4 days | Thu May 11 | 6d | |
| 89 | 1.2.4.5.5 | 2 Welding | 4 days | Mon May 15 | 6d | |
| 90 | 1.2.4.5.6 | 1 backpass | 4 days | Fri May 19 | 4d | |
| 91 | 1.2.4.5.7 | 4 Fitup | 2 days | Tue May 23 | 2d | |
| 92 | 1.2.4.5.8 | 3 welding | 2 days | Thu May 25 | 3d | |
| 93 | 1.2.4.5.9 | 2 backpass | 2 days | Sat May 27 | 2d | |
| 94 | 1.2.4.5.10 | 5 Fitup | 1 day | Mon May 29 | 1d | |
| 95 | 1.2.4.5.11 | 4 Welding | 1 day | Tue May 30 | 1d | |
| 96 | 1.2.4.5.12 | 3 Backpass | 1 day | Wed May 31 | 1d | |
| 97 | 1.2.4.5.13 | Anchor Chains Fitup & Welding | 1 day | Thu Jun 1 | 1d | |
| 98 | 1.2.4.5.14 | 6 Fitup | 1 day | Fri Jun 2 | 1d | |
| 99 | 1.2.4.5.15 | 5 Welding | 1 day | Sat Jun 3 | 1d | |
| 100 | 1.2.4.5.16 | 4 Backpass | 1 day | Sun Jun 4 | 1d | |
| 101 | 1.2.4.5.17 | 7 Fitup | 4 days | Mon Jun 5 | 4d | |
| 102 | 1.2.4.5.18 | 6 Welding | 3 days | Fri Jun 9 | 3d | |
| 103 | 1.2.4.5.19 | 5 backpass | 1 day | Mon Jun 12 | 1d | |
| 104 | 1.2.4.5.20 | 8 Fitup | 4 days | Tue Jun 13 | 4d | |
| 105 | 1.2.4.5.21 | 7 Welding | 5 days | Sat Jun 17 | 5d | |
| 106 | 1.2.4.5.22 | 6 Backpass | 2 days | Thu Jun 22 | 2d | |
| 107 | 1.2.4.5.23 | 9 Fitup | 3 days | Sat Jun 24 | 3d | |
| 108 | 1.2.4.5.24 | 8 Welding | 3 days | Tue Jun 27 | 3d | |
| 109 | 1.2.4.5.25 | 7 Backpass | 1 day | Fri Jun 30 | 1d | |

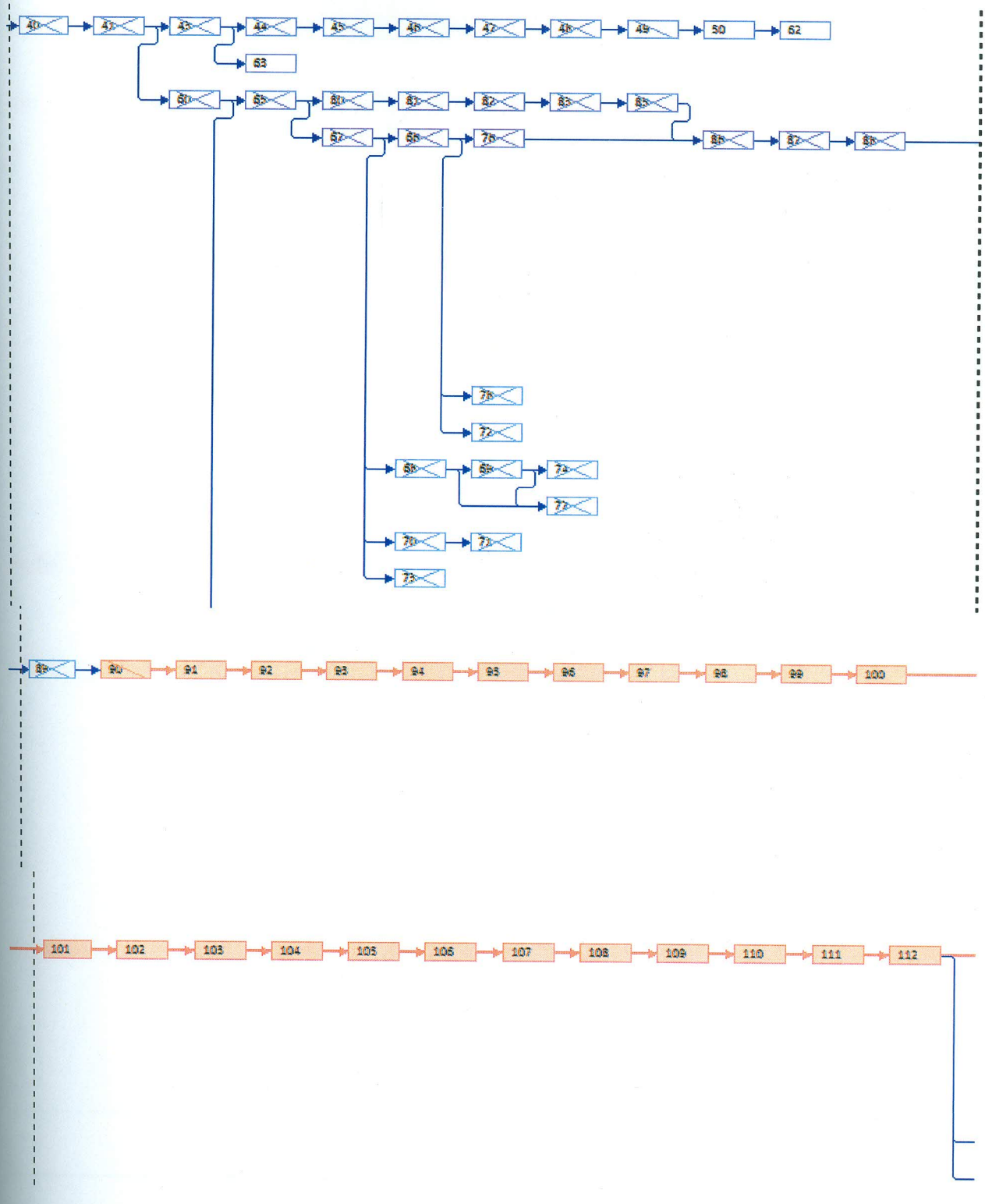
| | WBS | Task Name | Baseline Estimate Duratio | Baseline Start | Du |
|---|---|---|---|---|---|
| 109 | 1.2.4.5.25 | 7 Backpass | 1 day | Fri Jun 30 | 1 d |
| 110 | 1.2.4.5.26 | 8 backpass | 2 days | Sat Jul 1 | 2 d |
| 111 | 1.2.4.5.27 | 9 welding | 3 days | Mon Jul 3 | 3 d |
| 112 | 1.2.4.5.28 | 9 Backpass | 6 days | Thu Jul 6 | 6 d |
| 113 | 1.2.4.6 | **Center Column** | **5 days** | **Wed Jul 12** | **5 d** |
| 114 | 1.2.4.6.1 | Column base | 3 days | Wed Jul 12 | 3 d |
| 115 | 1.2.4.6.2 | Column fab+Drum | 1 day | Sat Jul 15 | 1 d |
| 116 | 1.2.4.6.3 | Rafter Installation | 1 day | Sun Jul 16 | 1 d |
| 117 | 1.2.4.7 | **Roof laying** | **13 days** | **Mon Jul 17** | **13** |
| 118 | 1.2.4.7.1 | FIT UP | 1 day | Mon Jul 17 | 1 d |
| 119 | 1.2.4.7.2 | SHORT SEAM WELDING | 3 days | Tue Jul 18 | 3 d |
| 120 | 1.2.4.7.3 | LONG SEAM WELDING | 3 days | Fri Jul 21 | 3 d |
| 121 | 1.2.4.7.4 | T-WELDING | 3 days | Mon Jul 24 | 3 d |
| 122 | 1.2.4.7.5 | Curb Angle Welding | 3 days | Thu Jul 27 | 3 d |
| 123 | 1.2.4.8 | Shell Nozzles | 2 days | Tue Jul 11 | 2 d |
| 124 | 1.2.4.9 | Roof Nozzles | 2 days | Tue Jul 18 | 2 d |
| 125 | 1.2.4.10 | Stairs Erection | 2 days | Wed Jul 12 | 2 d |
| 126 | 1.2.4.11 | Water Spray Nozzle | 2 days | Thu Jul 20 | 2 d |
| 127 | 1.2.4.12 | Mechanical Work Completed | 0 days | Fri Jul 21 | 0 d |
| 128 | 1.2.4.13 | Pneumatic test | 2 days | Sun Jul 30 | 2 d |
| 129 | 1.2.4.14 | Hydro Test | 4 days | Tue Aug 1 | 4 d |
| 130 | 1.2.4.15 | Testing Completed | 0 days | Fri Aug 4 | 0 d |



| | WBS | Task Name | Estimab | Duratio | Baselin Start | Baseline Du |
|---|---|---|---|---|---|---|
| 112 | 1.2.4.5.28 | 9 Backpass | | 6 days | Thu Jul 6 | 6 d |
| 113 | 1.2.4.6 | Center Column | | 5 days | Wed Jul 12 | 5 d |
| 114 | 1.2.4.6.1 | Column base | | 3 days | Wed Jul 12 | 3 d |
| 115 | 1.2.4.6.2 | Column fab+Drum | | 1 day | Sat Jul 15 | 1 d |
| 116 | 1.2.4.6.3 | Rafter Installation | | 1 day | Sun Jul 16 | 1 d |
| 117 | 1.2.4.7 | Roof laying | | 13 days | Mon Jul 17 | 13 |
| 118 | 1.2.4.7.1 | FIT UP | | 1 day | Mon Jul 17 | 1 d |
| 119 | 1.2.4.7.2 | SHORT SEAM WELDING | | 3 days | Tue Jul 18 | 3 d |
| 120 | 1.2.4.7.3 | LONG SEAM WELDING | | 3 days | Fri Jul 21 | 3 d |
| 121 | 1.2.4.7.4 | T-WELDING | | 3 days | Mon Jul 24 | 3 d |
| 122 | 1.2.4.7.5 | Curb Angle Welding | | 3 days | Thu Jul 27 | 3 d |
| 123 | 1.2.4.8 | Shell Nozzles | | 2 days | Tue Jul 11 | 2 d |
| 124 | 1.2.4.9 | Roof Nozzles | | 2 days | Tue Jul 18 | 2 d |
| 125 | 1.2.4.10 | Stairs Erection | | 2 days | Wed Jul 12 | 2 d |
| 126 | 1.2.4.11 | Water Spray Nozzle | | 2 days | Thu Jul 20 | 2 d |
| 127 | 1.2.4.12 | Mechanical Work Completed | | 0 days | Fri Jul 21 | 0 d |
| 128 | 1.2.4.13 | Pneumatic test | | 2 days | Sun Jul 30 | 2 d |
| 129 | 1.2.4.14 | Hydro Test | | 4 days | Tue Aug 1 | 4 d |
| 130 | 1.2.4.15 | Testing Completed | | 0 days | Fri Aug 4 | 0 d |
| 131 | 1.2.4.16 | Paint | | 3 days | Sat Aug 5 | 3 d |
| 132 | 1.2.4.17 | Piping and Tank Connection | | 4 days | Sat Aug 5 | 4 d |

## 7.4. Network Diagram

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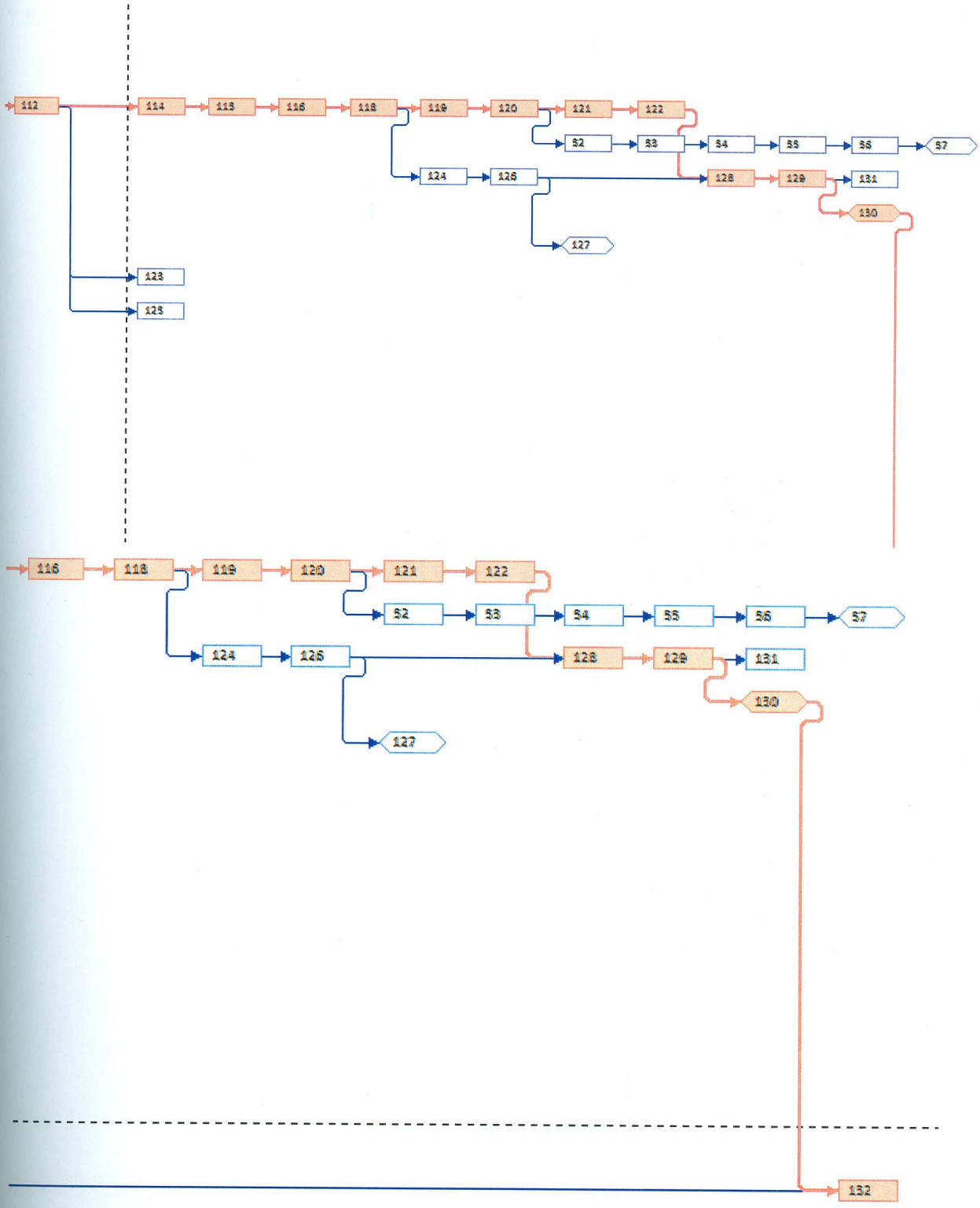
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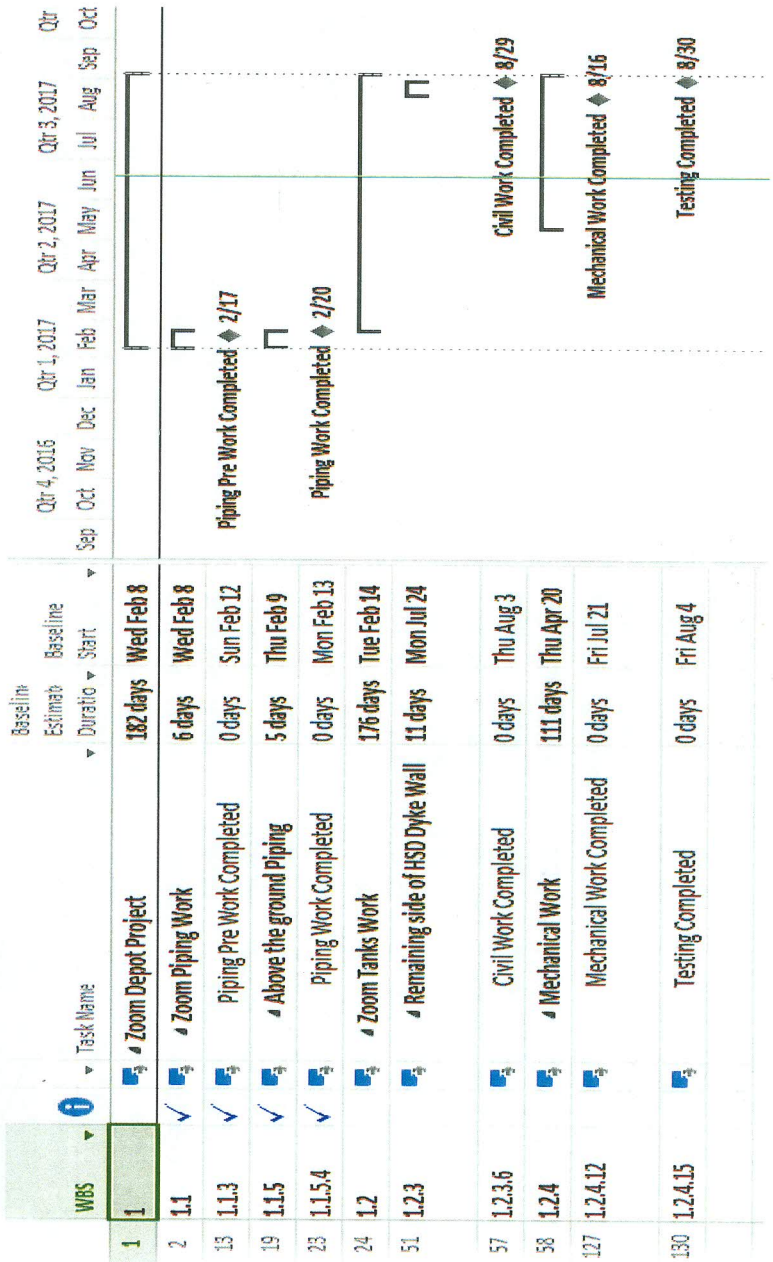
## 7.5.Milestone List



## 7.6. Earned Value Management

| | Task Name | Planned Value - PV (BCWS) | Earned Value - EV (BCWP) | AC (ACWP) | SV | C | SI | CV | EAC | BAC | VAC |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Zoom Depot Project | Rs1,710,326.67 | Rs1,500,193.33 | Rs1,916,793.33 | Rs210,133.33) | 0.78 | 0.88 | Rs416,600.00) | Rs4,807,186.23 | Rs1,859.33 | (Rs7,565,326.90) |
| 2 | Zoom Piping Work | Rs83,666.67 | Rs83,666.67 | Rs182,600.00 | Rs0.00 | 0.46 | 1 | Rs98,933.33) | Rs182,600.00 | Rs3,666.67 | (Rs98,933.33) |
| 3 | Layout | Rs1,000.00 | Rs1,000.00 | Rs1,000.00 | Rs0.00 | 1 | 1 | Rs0.00 | Rs1,000.00 | Rs1,000.00 | Rs0.00 |
| 4 | Piping Pre Work | Rs40,266.67 | Rs40,266.67 | Rs91,333.33 | Rs0.00 | 0.44 | 1 | Rs51,066.67) | Rs91,333.34 | Rs0,266.67 | (Rs51,066.67) |
| 5 | Connection to Head | Rs8,066.67 | Rs8,066.67 | Rs11,000.00 | Rs0.00 | 0.73 | 1 | (Rs2,933.33) | Rs11,000.00 | Rs8,066.67 | (Rs2,933.33) |
| 6 | Connection with Pump | Rs2,933.33 | Rs2,933.33 | Rs5,866.67 | Rs0.00 | 0.5 | 1 | (Rs2,933.33) | Rs5,866.67 | Rs2,933.33 | (Rs2,933.33) |
| 7 | Flanging and Blinding | Rs5,133.33 | Rs5,133.33 | Rs5,133.33 | Rs0.00 | 1 | 1 | Rs0.00 | Rs5,133.33 | Rs5,133.33 | Rs0.00 |
| 8 | Preparation of Pipes | Rs32,200.00 | Rs32,200.00 | Rs80,333.33 | Rs0.00 | 0.4 | 1 | Rs48,133.33) | Rs80,333.33 | Rs2,200.00 | (Rs48,133.33) |
| 9 | Wirebrush cleaning of F | Rs7,466.67 | Rs7,466.67 | Rs14,933.33 | Rs0.00 | 0.5 | 1 | (Rs7,466.67) | Rs14,933.33 | Rs7,466.67 | (Rs7,466.67) |
| 10 | Paint Work of Pipes | Rs4,400.00 | Rs4,400.00 | Rs13,200.00 | Rs0.00 | 0.33 | 1 | (Rs8,800.00) | Rs13,200.00 | Rs4,400.00 | (Rs8,800.00) |
| 11 | Epoxy of Pipes | Rs4,400.00 | Rs4,400.00 | Rs4,400.00 | Rs0.00 | 1 | 1 | Rs0.00 | Rs4,400.00 | Rs4,400.00 | Rs0.00 |
| 12 | Spool Preparation | Rs15,933.33 | Rs15,933.33 | Rs47,800.00 | Rs0.00 | 0.33 | 1 | Rs31,866.67) | Rs47,800.00 | Rs5,933.33 | (Rs31,866.67) |
| 13 | Piping Pre Work Completed | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 | 0 | 0 | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 |
| 14 | Underground Piping | Rs19,966.67 | Rs19,966.67 | Rs42,466.67 | Rs0.00 | 0.47 | 1 | Rs22,500.00) | Rs42,466.67 | Rs9,966.67 | (Rs22,500.00) |
| 15 | Preparation of Ground | Rs19,966.67 | Rs19,966.67 | Rs42,466.67 | Rs0.00 | 0.47 | 1 | Rs22,500.00) | Rs42,466.67 | Rs9,966.67 | (Rs22,500.00) |
| 16 | Cutting | Rs4,966.67 | Rs4,966.67 | Rs4,966.67 | Rs0.00 | 1 | 1 | Rs0.00 | Rs4,966.67 | Rs4,966.67 | Rs0.00 |
| 17 | Excavation | Rs7,500.00 | Rs7,500.00 | Rs15,000.00 | Rs0.00 | 0.5 | 1 | (Rs7,500.00) | Rs15,000.00 | Rs7,500.00 | (Rs7,500.00) |
| 18 | Sleeves Formation | Rs7,500.00 | Rs7,500.00 | Rs22,500.00 | Rs0.00 | 0.33 | 1 | Rs15,000.00) | Rs22,500.00 | Rs7,500.00 | (Rs15,000.00) |
| 19 | Above the ground Piping | Rs22,433.33 | Rs22,433.33 | Rs47,800.00 | Rs0.00 | 0.47 | 1 | Rs25,366.67) | Rs47,800.00 | Rs2,433.33 | (Rs25,366.67) |
| 20 | Sleepers formation | Rs6,500.00 | Rs6,500.00 | Rs6,500.00 | Rs0.00 | 1 | 1 | Rs0.00 | Rs6,500.00 | Rs6,500.00 | Rs0.00 |

| | Task Name | Planned Value - PV (BCWP) | Earned Value - EV (BCWP) | AC (ACWP) | SV | CV | EAC | BAC | VAC |
|---|---|---|---|---|---|---|---|---|---|
| 22 | Spools Connection | Rs9,433.33 | Rs9,433.33 | Rs28,300.00 | Rs0.00 0.33 1 | (Rs18,866.67) | Rs28,300.00 | Rs9,433.33 | (Rs18,866.67) |
| 23 | Piping Work Completed | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 0 0 | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 |
| 24 | **Zoom Tanks Work** | **Rs1,626,660.00** | **Rs1,416,526.67** | **Rs1,734,193.33** | **Rs210,133.33 0.82 0.87** | **(Rs317,666.67)** | **Rs33,248,683.67** | **Rs27,158,192.67** | **(Rs6,090,491.01)** |
| 25 | **Civil Work** | **Rs894,000.00** | **Rs894,000.00** | **Rs1,078,000.00** | **Rs0.00 0.83 1** | **(Rs184,000.00)** | **Rs10,121,662.00** | **Rs8,393,999.33** | **(Rs1,727,662.67)** |
| 26 | Layout | Rs13,000.00 | Rs13,000.00 | Rs13,000.00 | Rs0.00 1 1 | Rs0.00 | Rs13,000.00 | Rs13,000.00 | Rs0.00 |
| 27 | Excavation | Rs13,000.00 | Rs13,000.00 | Rs13,000.00 | Rs0.00 1 1 | Rs0.00 | Rs7,512,999.33 | Rs7,512,999.33 | Rs0.00 |
| 28 | Trimming and Levelling | Rs26,000.00 | Rs26,000.00 | Rs26,000.00 | Rs0.00 1 1 | Rs0.00 | Rs26,000.00 | Rs26,000.00 | Rs0.00 |
| 29 | Preparation of NGC | Rs26,000.00 | Rs26,000.00 | Rs52,000.00 | Rs0.00 0.5 1 | (Rs26,000.00) | Rs52,000.00 | Rs26,000.00 | (Rs26,000.00) |
| 30 | PCC 1 Layer | Rs32,000.00 | Rs32,000.00 | Rs32,000.00 | Rs0.00 1 1 | Rs0.00 | Rs32,000.00 | Rs32,000.00 | Rs0.00 |
| 31 | Blind Concrete 1st Layer | Rs32,000.00 | Rs32,000.00 | Rs32,000.00 | Rs0.00 1 1 | Rs0.00 | Rs32,000.00 | Rs32,000.00 | Rs0.00 |
| 32 | Blind Concrete 2nd Layer | Rs32,000.00 | Rs32,000.00 | Rs32,000.00 | Rs0.00 1 1 | Rs0.00 | Rs32,000.00 | Rs32,000.00 | Rs0.00 |
| 33 | Steel Fixing of Ring Wall | Rs52,000.00 | Rs52,000.00 | Rs65,000.00 | Rs0.00 0.8 1 | (Rs13,000.00) | Rs65,000.00 | Rs52,000.00 | (Rs13,000.00) |
| 34 | Fixing of J Bolts | Rs39,000.00 | Rs39,000.00 | Rs39,000.00 | Rs0.00 1 1 | Rs0.00 | Rs39,000.00 | Rs39,000.00 | Rs0.00 |
| 35 | Brick work of Ring Wall | Rs39,000.00 | Rs39,000.00 | Rs39,000.00 | Rs0.00 1 1 | Rs0.00 | Rs39,000.00 | Rs39,000.00 | Rs0.00 |
| 36 | Concrete pouring of Ring Wall | Rs16,000.00 | Rs16,000.00 | Rs57,000.00 | Rs0.00 0.28 1 | (Rs41,000.00) | Rs57,000.00 | Rs16,000.00 | (Rs41,000.00) |
| 37 | 16 Layers of Sand Filling and Compaction | Rs221,000.00 | Rs221,000.00 | Rs273,000.00 | Rs0.00 0.81 1 | (Rs52,000.00) | Rs273,000.00 | Rs221,000.00 | (Rs52,000.00) |
| 38 | Top Layer Levelling and Dressing | Rs52,000.00 | Rs52,000.00 | Rs65,000.00 | Rs0.00 0.8 1 | (Rs13,000.00) | Rs65,000.00 | Rs52,000.00 | (Rs13,000.00) |

| | Task Name | Planned Value - PV (BCWS) | Earned Value - EV (BCWP) | AC (ACWP) | SV | CV | SI | EAC | BAC | VAC |
|---|---|---|---|---|---|---|---|---|---|---|
| 37 | 16 Layers of Sand Filling and Compaction | Rs221,000.00 | Rs221,000.00 | Rs273,000.00 | Rs0.00 | 0.81 | 1 | (Rs52,000.00) | Rs273,000.00 | Rs221,000.00 | (Rs52,000.00) |
| 38 | Top Layer Levelling and Dressing | Rs52,000.00 | Rs52,000.00 | Rs65,000.00 | Rs0.00 | 0.8 | 1 | (Rs13,000.00) | Rs65,000.00 | Rs52,000.00 | (Rs13,000.00) |
| 39 | Asphalt Work | Rs48,000.00 | Rs48,000.00 | Rs48,000.00 | Rs0.00 | 1 | 1 | Rs0.00 | Rs48,000.00 | Rs48,000.00 | Rs0.00 |
| 40 | Earth Filling around Tank Foundations | Rs136,000.00 | Rs136,000.00 | Rs136,000.00 | Rs0.00 | 1 | 1 | Rs0.00 | Rs136,000.00 | Rs136,000.00 | Rs0.00 |
| 41 | Brick Pitching around Tank Foundations | Rs117,000.00 | Rs117,000.00 | Rs156,000.00 | Rs0.00 | 0.75 | 1 | (Rs39,000.00) | Rs156,000.00 | Rs117,000.00 | (Rs39,000.00) |
| 42 | Three Sides of HSD Dyke Wall | Rs299,000.00 | Rs267,800.00 | Rs345,800.00 | (Rs31,200.00) | 0.77 | 0.9 | (Rs78,000.00) | Rs386,087.70 | Rs299,000.00 | (Rs87,087.70) |
| 43 | Layout | Rs13,000.00 | Rs13,000.00 | Rs13,000.00 | Rs0.00 | 1 | 1 | Rs0.00 | Rs13,000.00 | Rs13,000.00 | Rs0.00 |
| 44 | Excavation | Rs39,000.00 | Rs39,000.00 | Rs52,000.00 | Rs0.00 | 0.75 | 1 | (Rs13,000.00) | Rs52,000.00 | Rs39,000.00 | (Rs13,000.00) |
| 45 | PCC | Rs104,000.00 | Rs104,000.00 | Rs104,000.00 | Rs0.00 | 1 | 1 | Rs0.00 | Rs104,000.00 | Rs104,000.00 | Rs0.00 |
| 46 | Brick Work | Rs39,000.00 | Rs39,000.00 | Rs65,000.00 | Rs0.00 | 0.6 | 1 | (Rs26,000.00) | Rs65,000.00 | Rs39,000.00 | (Rs26,000.00) |
| 47 | Steel Fixing of Top Beam | Rs26,000.00 | Rs26,000.00 | Rs65,000.00 | Rs0.00 | 0.4 | 1 | (Rs39,000.00) | Rs65,000.00 | Rs26,000.00 | (Rs39,000.00) |
| 48 | Shuttering | Rs26,000.00 | Rs26,000.00 | Rs26,000.00 | Rs0.00 | 1 | 1 | Rs0.00 | Rs26,000.00 | Rs26,000.00 | Rs0.00 |
| 49 | Concrete Pouring | Rs26,000.00 | Rs20,800.00 | Rs20,800.00 | (Rs5,200.00) | 1 | 0.8 | Rs0.00 | Rs26,000.00 | Rs26,000.00 | Rs0.00 |
| 50 | Plaster Work | Rs26,000.00 | Rs0.00 | Rs0.00 | (Rs26,000.00) | 0 | 0 | Rs0.00 | Rs104,000.00 | Rs26,000.00 | (Rs78,000.00) |
| 51 | Remaining side of HSD Dyke Wall | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 | 0 | 0 | Rs0.00 | Rs143,000.00 | Rs143,000.00 | Rs0.00 |

| | Task Name | Planned Value - PV (BCWS) | Earned Value - EV (BCWP) | AC (ACWP) | SV | CV | SV % | CV % | EAC | BAC | VAC |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 51 | **Remaining side of HSD Dyke Wall** | **Rs0.00** | **Rs0.00** | **Rs0.00** | **Rs0.00** | **0** | **0** | **0** | **Rs0.00** | **Rs143,000.00** | **Rs143,000.00** | **Rs0.00** |
| 52 | Brick Work | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 | 0 | 0 | 0 | Rs0.00 | Rs39,000.00 | Rs39,000.00 | Rs0.00 |
| 53 | Steel Fixing of Top Beam | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 | 0 | 0 | 0 | Rs0.00 | Rs13,000.00 | Rs13,000.00 | Rs0.00 |
| 54 | Shuttering | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 | 0 | 0 | 0 | Rs0.00 | Rs39,000.00 | Rs39,000.00 | Rs0.00 |
| 55 | Concrete Pouring | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 | 0 | 0 | 0 | Rs0.00 | Rs13,000.00 | Rs13,000.00 | Rs0.00 |
| 56 | Plaster Work | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 | 0 | 0 | 0 | Rs0.00 | Rs39,000.00 | Rs39,000.00 | Rs0.00 |
| 57 | Civil Work Completed | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 | 0 | 0 | 0 | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 |
| 58 | **Mechanical Work** | **Rs433,660.00** | **Rs254,726.67** | **Rs310,393.33** | **Rs178,933.33)** | **0.82** | **0.59** | **(Rs55,666.67)** | **Rs22,326,437.53** | **Rs18,322,193.33** | **(Rs4,004,244.19)** | |
| 59 | **Marking** | **Rs32,266.67** | **Rs21,666.67** | **Rs30,333.33** | **(Rs10,600.00)** | **0.71** | **0.67** | **(Rs8,666.67)** | **Rs24,545,369.45** | **Rs17,532,266.67** | **(Rs7,013,102.79)** | |
| 60 | Bottom Plate | Rs8,666.67 | Rs8,666.67 | Rs8,666.67 | Rs0.00 | 1 | 1 | Rs0.00 | Rs17,508,666.67 | Rs17,508,666.67 | Rs0.00 | |
| 61 | Shell Plates | Rs13,000.00 | Rs13,000.00 | Rs21,666.67 | Rs0.00 | 0.6 | 1 | (Rs8,666.67) | Rs21,666.67 | Rs13,000.00 | (Rs8,666.67) | |
| 62 | Roof Plate | Rs6,266.67 | Rs0.00 | Rs0.00 | (Rs6,266.67) | 0 | 0 | Rs0.00 | Rs6,266.67 | Rs6,266.67 | Rs0.00 | |
| 63 | Manhole shells | Rs4,333.33 | Rs0.00 | Rs0.00 | (Rs4,333.33) | 0 | 0 | Rs0.00 | Rs8,666.67 | Rs4,333.33 | (Rs4,333.33) | |
| 64 | **Cutting & Grinding** | **Rs48,333.33** | **Rs48,333.33** | **Rs54,133.33** | **Rs0.00** | **0.89** | **1** | **(Rs5,800.00)** | **Rs54,133.33** | **Rs48,333.33** | **(Rs5,800.00)** | |
| 65 | Bottom Plate | Rs1,933.33 | Rs1,933.33 | Rs3,866.67 | Rs0.00 | 0.5 | 1 | (Rs1,933.33) | Rs3,866.67 | Rs1,933.33 | (Rs1,933.33) | |
| 66 | Shell Plates | Rs3,866.67 | Rs3,866.67 | Rs3,866.67 | Rs0.00 | 1 | 1 | Rs0.00 | Rs3,866.67 | Rs3,866.67 | Rs0.00 | |
| 67 | Roof Plate | Rs5,800.00 | Rs5,800.00 | Rs5,800.00 | Rs0.00 | 1 | 1 | Rs0.00 | Rs5,800.00 | Rs5,800.00 | Rs0.00 | |
| 68 | Manhole shells | Rs1,933.33 | Rs1,933.33 | Rs5,800.00 | Rs0.00 | 0.33 | 1 | (Rs3,866.67) | Rs5,800.00 | Rs1,933.33 | (Rs3,866.67) | |
| 69 | Re-Pads | Rs5,800.00 | Rs5,800.00 | Rs5,800.00 | Rs0.00 | 1 | 1 | Rs0.00 | Rs5,800.00 | Rs5,800.00 | Rs0.00 | |

| | Task Name | Planned Value - PV (BCWS) | Earned Value - EV (BCWP) | AC (ACWP) | SV | | CV | EAC | BAC | VAC |
|---|---|---|---|---|---|---|---|---|---|---|
| 69 | Re-Pads | Rs5,800.00 | Rs5,800.00 | Rs5,800.00 | Rs0.00 | 1 | Rs0.00 | Rs5,800.00 | Rs5,800.00 | Rs0.00 |
| 70 | Anchor Chairs Marking & Cutting | Rs3,866.67 | Rs3,866.67 | Rs3,866.67 | Rs0.00 | 1 | Rs0.00 | Rs3,866.67 | Rs3,866.67 | Rs0.00 |
| 71 | Rafter Cutting & Grinding | Rs3,866.67 | Rs3,866.67 | Rs3,866.67 | Rs0.00 | 1 | Rs0.00 | Rs3,866.67 | Rs3,866.67 | Rs0.00 |
| 72 | Shell Nozzles | Rs7,733.33 | Rs7,733.33 | Rs7,733.33 | Rs0.00 | 1 | Rs0.00 | Rs7,733.33 | Rs7,733.33 | Rs0.00 |
| 73 | Roof Nozzles | Rs5,800.00 | Rs5,800.00 | Rs5,800.00 | Rs0.00 | 1 | Rs0.00 | Rs5,800.00 | Rs5,800.00 | Rs0.00 |
| 74 | Stairs | Rs7,733.33 | Rs7,733.33 | Rs7,733.33 | Rs0.00 | 1 | Rs0.00 | Rs7,733.33 | Rs7,733.33 | Rs0.00 |
| 75 | ◢ Rolling | Rs21,200.00 | Rs21,200.00 | Rs28,933.33 | Rs0.00 | 0.73 1 | (Rs7,733.33) | Rs28,933.33 | Rs21,200.00 | (Rs7,733.33) |
| 76 | Shell Plates | Rs8,666.67 | Rs8,666.67 | Rs8,666.67 | Rs0.00 | 1 | Rs0.00 | Rs8,666.67 | Rs8,666.67 | Rs0.00 |
| 77 | Mannole shells+Repads | Rs3,866.67 | Rs3,866.67 | Rs11,600.00 | Rs0.00 | 0.33 1 | (Rs7,733.33) | Rs11,600.00 | Rs3,866.67 | (Rs7,733.33) |
| 78 | Curb Angle Rolling | Rs8,666.67 | Rs8,666.67 | Rs8,666.67 | Rs0.00 | 1 | Rs0.00 | Rs8,666.67 | Rs8,666.67 | Rs0.00 |
| 79 | ◢ Bottom laying | Rs25,473.33 | Rs25,473.33 | Rs34,873.33 | Rs0.00 | 0.73 1 | (Rs9,400.00) | Rs34,873.33 | Rs25,473.33 | (Rs9,400.00) |
| 80 | FIT UP | Rs4,333.33 | Rs4,333.33 | Rs4,333.33 | Rs0.00 | 1 | Rs0.00 | Rs4,333.33 | Rs4,333.33 | Rs0.00 |
| 81 | SHORT SEAM WELDING | Rs3,733.33 | Rs3,733.33 | Rs13,133.33 | Rs0.00 | 0.28 1 | (Rs9,400.00) | Rs13,133.33 | Rs3,733.33 | (Rs9,400.00) |
| 82 | LONG SEAM WELDING | Rs3,733.33 | Rs3,733.33 | Rs3,733.33 | Rs0.00 | 1 | Rs0.00 | Rs3,733.33 | Rs3,733.33 | Rs0.00 |
| 83 | T-WELDING | Rs13,673.33 | Rs13,673.33 | Rs13,673.33 | Rs0.00 | 1 | Rs0.00 | Rs13,673.33 | Rs13,673.33 | Rs0.00 |
| 84 | ◢ Shell erection | Rs306,386.67 | Rs138,053.33 | Rs162,120.00 | Rs168,333.33 | 0.85 0.45 | (Rs24,066.67) | Rs565,384.64 | Rs481,453.33 | (Rs83,931.30) |
| 85 | 1 Fitup | Rs19,720.00 | Rs19,720.00 | Rs21,653.33 | Rs0.00 | 0.91 1 | (Rs1,933.33) | Rs21,653.33 | Rs19,720.00 | (Rs1,933.33) |

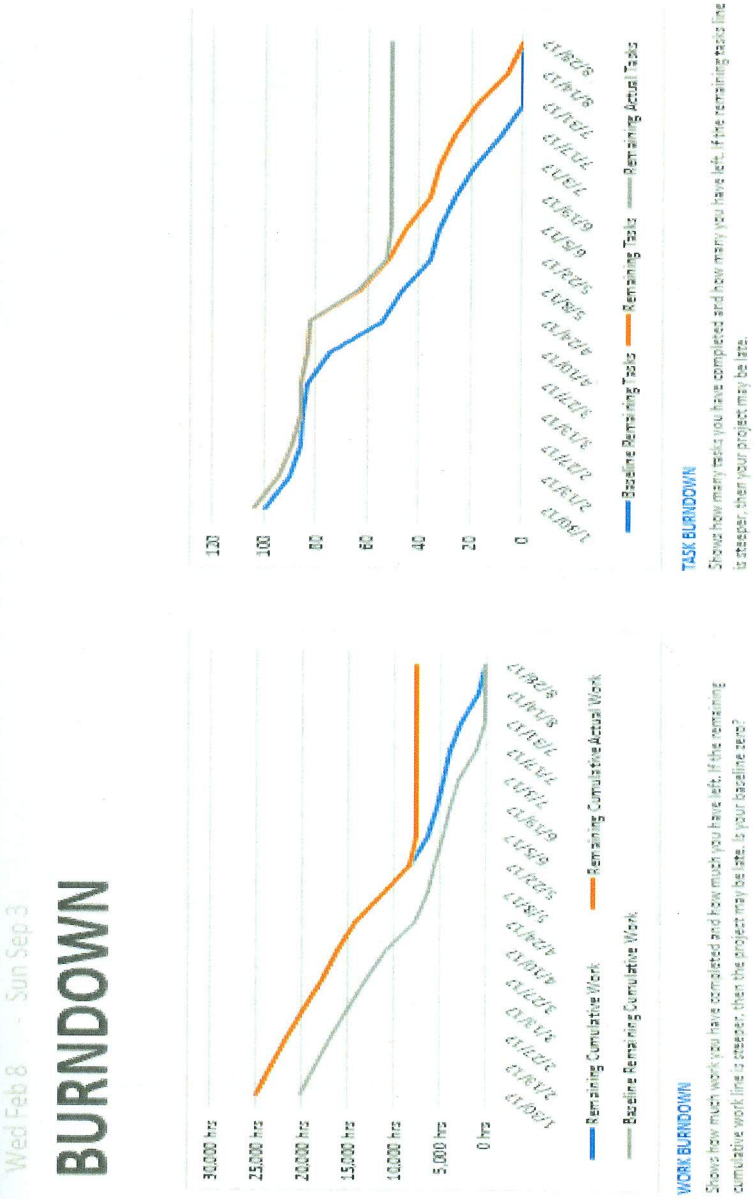
| | Task Name | Planned Value - PV (BCWS) | Earned Value - EV (BCWP) | AC (ACWP) | SV | C | SI | CV | EAC | BAC | VAC |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 85 | 1 Fitup | Rs19,720.00 | Rs19,720.00 | Rs21,653.33 | Rs0.00 | 0.91 | 1 | (Rs1,933.33) | Rs21,653.33 | Rs19,720.00 | (Rs1,933.33) |
| 86 | 2 fitup | Rs26,933.33 | Rs26,933.33 | Rs26,933.33 | Rs0.00 | 1 | 1 | Rs0.00 | Rs26,933.33 | Rs26,933.33 | Rs0.00 |
| 87 | 1 Welding | Rs26,933.33 | Rs26,933.33 | Rs26,933.33 | Rs0.00 | 1 | 1 | Rs0.00 | Rs26,933.33 | Rs26,933.33 | Rs0.00 |
| 88 | 3 Fitup | Rs22,133.33 | Rs22,133.33 | Rs33,200.00 | Rs0.00 | 0.67 | 1 | (Rs11,066.67) | Rs33,200.00 | Rs22,133.33 | (Rs11,066.67) |
| 89 | 2 Welding | Rs22,133.33 | Rs22,133.33 | Rs33,200.00 | Rs0.00 | 0.67 | 1 | (Rs11,066.67) | Rs33,200.00 | Rs22,133.33 | (Rs11,066.67) |
| 90 | 1 backpass | Rs26,933.33 | Rs20,200.00 | Rs20,200.00 | (Rs6,733.33) | 1 | 0.75 | Rs0.00 | Rs26,933.33 | Rs26,933.33 | Rs0.00 |
| 91 | 4 Fitup | Rs13,466.67 | Rs0.00 | Rs0.00 | (Rs13,466.67) | 0 | 0 | Rs0.00 | Rs13,466.67 | Rs13,466.67 | Rs0.00 |
| 92 | 3 welding | Rs13,466.67 | Rs0.00 | Rs0.00 | (Rs13,466.67) | 0 | 0 | Rs0.00 | Rs20,200.00 | Rs13,466.67 | (Rs6,733.33) |
| 93 | 2 backpass | Rs13,466.67 | Rs0.00 | Rs0.00 | (Rs13,466.67) | 0 | 0 | Rs0.00 | Rs13,466.67 | Rs13,466.67 | Rs0.00 |
| 94 | 5 Fitup | Rs6,733.33 | Rs0.00 | Rs0.00 | (Rs6,733.33) | 0 | 0 | Rs0.00 | Rs6,733.33 | Rs6,733.33 | Rs0.00 |
| 95 | 4 Welding | Rs6,733.33 | Rs0.00 | Rs0.00 | (Rs6,733.33) | 0 | 0 | Rs0.00 | Rs6,733.33 | Rs6,733.33 | Rs0.00 |
| 96 | 3 Backpass | Rs6,733.33 | Rs0.00 | Rs0.00 | (Rs6,733.33) | 0 | 0 | Rs0.00 | Rs6,733.33 | Rs6,733.33 | Rs0.00 |
| 97 | Anchor Chairs Fitup & Welding | Rs6,733.33 | Rs0.00 | Rs0.00 | (Rs6,733.33) | 0 | 0 | Rs0.00 | Rs6,733.33 | Rs6,733.33 | Rs0.00 |
| 98 | 6 Fitup | Rs6,733.33 | Rs0.00 | Rs0.00 | (Rs6,733.33) | 0 | 0 | Rs0.00 | Rs6,733.33 | Rs6,733.33 | Rs0.00 |
| 99 | 5 Welding | Rs6,733.33 | Rs0.00 | Rs0.00 | (Rs6,733.33) | 0 | 0 | Rs0.00 | Rs6,733.33 | Rs6,733.33 | Rs0.00 |
| 100 | 4 Backpass | Rs6,733.33 | Rs0.00 | Rs0.00 | (Rs6,733.33) | 0 | 0 | Rs0.00 | Rs6,733.33 | Rs6,733.33 | Rs0.00 |
| 101 | 7 Fitup | Rs26,933.33 | Rs0.00 | Rs0.00 | (Rs26,933.33) | 0 | 0 | Rs0.00 | Rs26,933.33 | Rs26,933.33 | Rs0.00 |
| 102 | 6 Welding | Rs20,200.00 | Rs0.00 | Rs0.00 | (Rs20,200.00) | 0 | 0 | Rs0.00 | Rs20,200.00 | Rs20,200.00 | Rs0.00 |
| 103 | 5 backpass | Rs6,733.33 | Rs0.00 | Rs0.00 | (Rs6,733.33) | 0 | 0 | Rs0.00 | Rs6,733.33 | Rs6,733.33 | Rs0.00 |

| | Task Name | Planned Value - PV (BCWS) | Earned Value - EV (BCWP) | AC (ACWP) | SV | CV | EAC | BAC | VAC |
|---|---|---|---|---|---|---|---|---|---|
| 103 | 5 backpass | Rs6,733.33 | Rs0.00 | Rs0.00 | (Rs6,733.33) | 0 | Rs0.00 | Rs6,733.33 | Rs0.00 |
| 104 | 8 Fitup | Rs20,200.00 | Rs0.00 | Rs0.00 | (Rs20,200.00) | 0 | Rs0.00 | Rs26,933.33 | Rs0.00 |
| 105 | 7 Welding | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 | 0 | Rs0.00 | Rs33,666.67 | Rs0.00 |
| 106 | 6 Backpass | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 | 0 | Rs0.00 | Rs13,466.67 | Rs0.00 |
| 107 | 9 Fitup | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 | 0 | Rs0.00 | Rs20,200.00 | Rs0.00 |
| 108 | 8 Welding | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 | 0 | Rs0.00 | Rs20,200.00 | Rs0.00 |
| 109 | 7 Backpass | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 | 0 | Rs0.00 | Rs6,733.33 | Rs0.00 |
| 110 | 8 backpass | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 | 0 | Rs0.00 | Rs13,466.67 | Rs0.00 |
| 111 | 9 welding | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 | 0 | Rs0.00 | Rs20,200.00 | Rs0.00 |
| 112 | 9 Backpass | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 | 0 | Rs0.00 | Rs40,400.00 | Rs0.00 |
| 113 | **Center Column** | **Rs0.00** | **Rs0.00** | **Rs0.00** | **Rs0.00** | **0** | **Rs0.00** | **Rs30,066.67** | **Rs0.00** |
| 114 | Column base | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 | 0 | Rs0.00 | Rs16,600.00 | Rs0.00 |
| 115 | Column fab+Drum | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 | 0 | Rs0.00 | Rs6,733.33 | Rs0.00 |
| 116 | Rafter Installation | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 | 0 | Rs0.00 | Rs6,733.33 | Rs0.00 |
| 117 | **Roof laying** | **Rs0.00** | **Rs0.00** | **Rs0.00** | **Rs0.00** | **0** | **Rs0.00** | **Rs87,533.33** | **Rs0.00** |
| 118 | FIT UP | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 | 0 | Rs0.00 | Rs6,733.33 | Rs0.00 |
| 119 | SHORT SEAM WELDING | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 | 0 | Rs0.00 | Rs20,200.00 | Rs0.00 |
| 120 | LONG SEAM WELDING | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 | 0 | Rs0.00 | Rs20,200.00 | Rs0.00 |
| 121 | T-WELDING | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 | 0 | Rs0.00 | Rs20,200.00 | Rs0.00 |
| 122 | Curb Angle Welding | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 | 0 | Rs0.00 | Rs20,200.00 | Rs0.00 |

| | Task Name | Planned Value - PV (BCWS) | Earned Value - EV (BCWP) | AC (ACWP) | SV | CV | EAC | BAC | VAC |
|---|---|---|---|---|---|---|---|---|---|
| 118 | FIT UP | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 | 0 | Rs0.00 | Rs6,733.33 | Rs6,733.33 | Rs0.00 |
| 119 | SHORT SEAM WELDING | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 | 0 | Rs0.00 | Rs20,200.00 | Rs20,200.00 | Rs0.00 |
| 120 | LONG SEAM WELDING | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 | 0 | Rs0.00 | Rs20,200.00 | Rs20,200.00 | Rs0.00 |
| 121 | T-WELDING | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 | 0 | Rs0.00 | Rs20,200.00 | Rs20,200.00 | Rs0.00 |
| 122 | Curb Angle Welding | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 | 0 | Rs0.00 | Rs20,200.00 | Rs20,200.00 | Rs0.00 |
| 123 | Shell Nozzles | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 | 0 | Rs0.00 | Rs10,400.00 | Rs10,400.00 | Rs0.00 |
| 124 | Roof Nozzles | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 | 0 | Rs0.00 | Rs10,400.00 | Rs10,400.00 | Rs0.00 |
| 125 | Stairs Erection | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 | 0 | Rs0.00 | Rs10,400.00 | Rs10,400.00 | Rs0.00 |
| 126 | Water Spray Nozzle | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 | 0 | Rs0.00 | Rs10,400.00 | Rs10,400.00 | Rs0.00 |
| 127 | Mechanical Work Completed | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 | 0 | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 |
| 128 | Pneumatic test | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 | 0 | Rs0.00 | Rs7,733.33 | Rs7,733.33 | Rs0.00 |
| 129 | Hydro Test | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 | 0 | Rs0.00 | Rs12,533.33 | Rs12,533.33 | Rs0.00 |
| 130 | Testing Completed | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 | 0 | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 |
| 131 | Paint | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 | 0 | Rs0.00 | Rs13,200.00 | Rs13,200.00 | Rs0.00 |
| 132 | Piping and Tank Connection | Rs0.00 | Rs0.00 | Rs0.00 | Rs0.00 | 0 | Rs0.00 | Rs20,800.00 | Rs20,800.00 | Rs0.00 |

# Chapter 8 Project Reports

## 8.1.Burndown Report



## 8.2.Cost Overview Report

# COST OVERVIEW

WED FEB 8 - SUN SEP 3

COST

Rs28,767,868.67

REMAINING COST

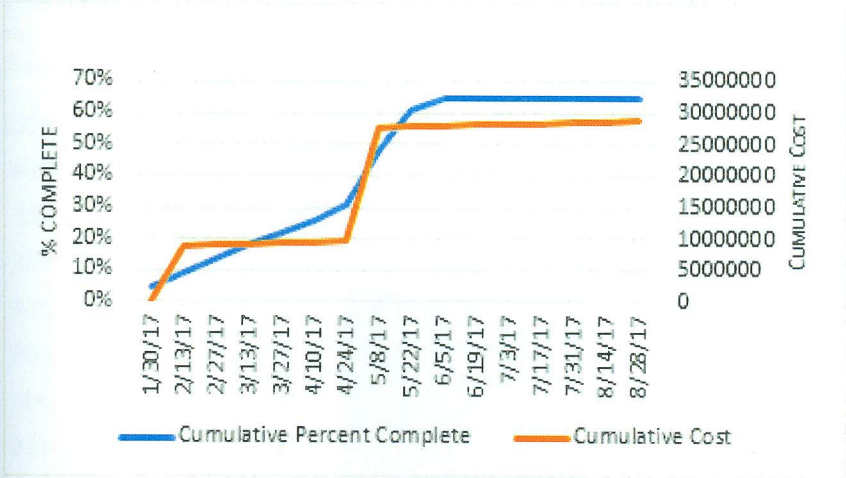
Rs26,849,728.67

% COMPLETE

65%

### PROGRESS VERSUS COST

Progress made versus the cost spent over time. If % Complete line below the cumulative cost line,your project may be over budget.




### COST STATUS

Cost status for top level tasks.

| Name | Actual Cost | Remaining Cost | Baseline Cost | Cost | Cost Variance |
|---|---|---|---|---|---|
| Zoom Depot Project | Rs1,918,140.00 | Rs26,849,728.67 | Rs27,241,859.33 | Rs28,767,868.67 | Rs1,526,009.33 |

## 8.3.Project Overview Report

# PROJECT OVERVIEW

WED FEB 8 - SUN SEP 3

% COMPLETE

65%

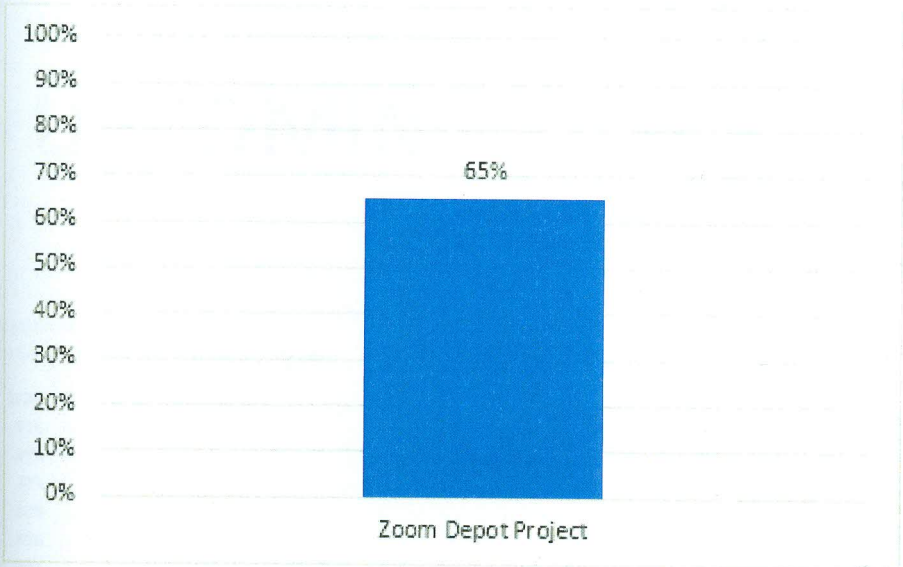
MILESTONES DUE

Milestones that are coming soon.

| Name | Finish |
|---|---|
| Civil Work Completed | Tue Aug 29 |
| Mechanical Work Completed | Wed Aug 16 |
| Testing Completed | Wed Aug 30 |

% COMPLETE

Status for all top-level tasks. To see the status for subtasks, click on the chart and update the outline level in the Field List.

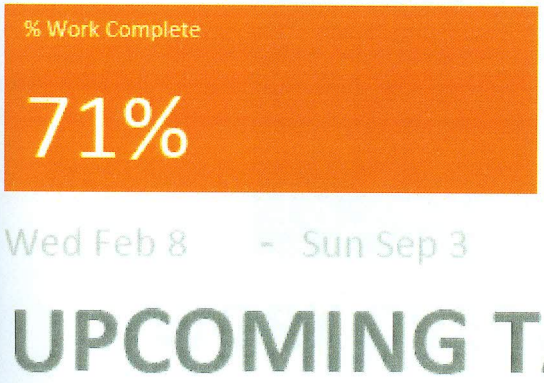


LATE TASKS

Tasks that are past due.

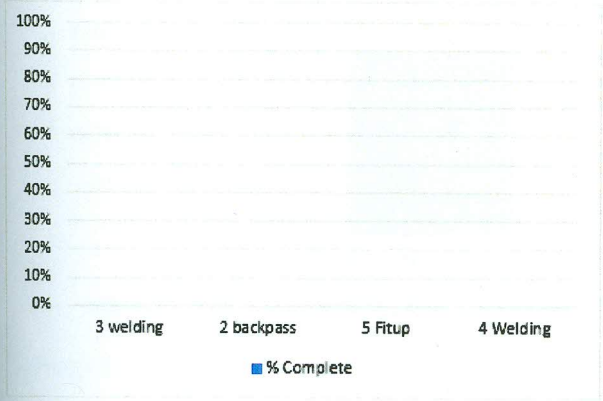
| Name | Start | Finish | Duration | % Complete | Resource Names |
|---|---|---|---|---|---|
| Concrete Pouring | Sun Jun 4 | Mon Jun 5 | 2 days | 80% | Labourer[1,000%],Mason[600%] |
| Plaster Work | Tue Jun 6 | Tue Jun 13 | 8 days | 0% | Labourer[1,000%],Mason[600%] |
| Roof Plate | Wed Jun 14 | Thu Jun 15 | 2 days | 0% | Mechanical Fitter,Helper[200%],Welder |
| Manhole shells | Thu May 11 | Fri May 12 | 2 days | 0% | Mechanical Fitter,Helper[200%],Welder[200%] |

## 8.4.Upcoming Tasks Report




REMAINING TASKS

Status of remaining tasks that are due this week



TASKS STARTING SOON

Status of tasks starting in the next week

| Name | Resource Names | Start | Finish | Work |
|---|---|---|---|---|
| 3 welding | Welder[400%],Mechanical Fitter,Helper[200%] | Mon Jun 19 | Wed Jun 21 | 168 hrs |
| 2 backpass | Welder[400%],Mechanical Fitter,Helper[200%] | Thu Jun 22 | Fri Jun 23 | 112 hrs |
| 5 Fitup | Welder[400%],Mechanical Fitter,Helper[200%] | Sat Jun 24 | Sat Jun 24 | 56 hrs |
| 4 Welding | Welder[400%],Mechanical Fitter,Helper[200%] | Sun Jun 25 | Sun Jun 25 | 56 hrs |

## 8.5.Project Work Overview Report

WORK BURNDOWN

Shows how much work you have completed and how much you have left. If the remaining cumulative work line is steeper, then the project may be late.

Try setting a baseline

% Work Complete

71%

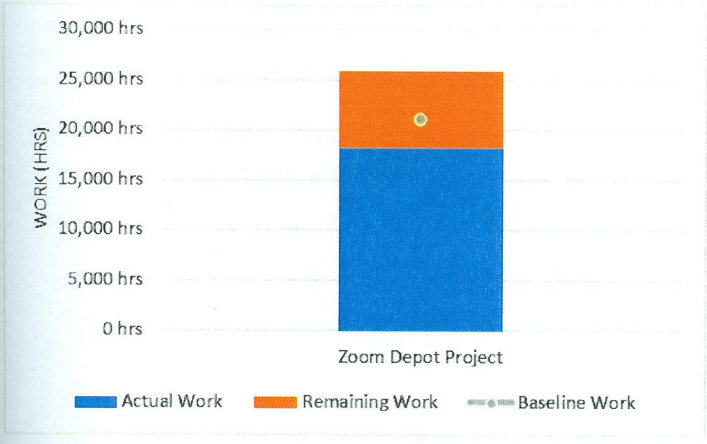
Remaining Work

7,584 hrs

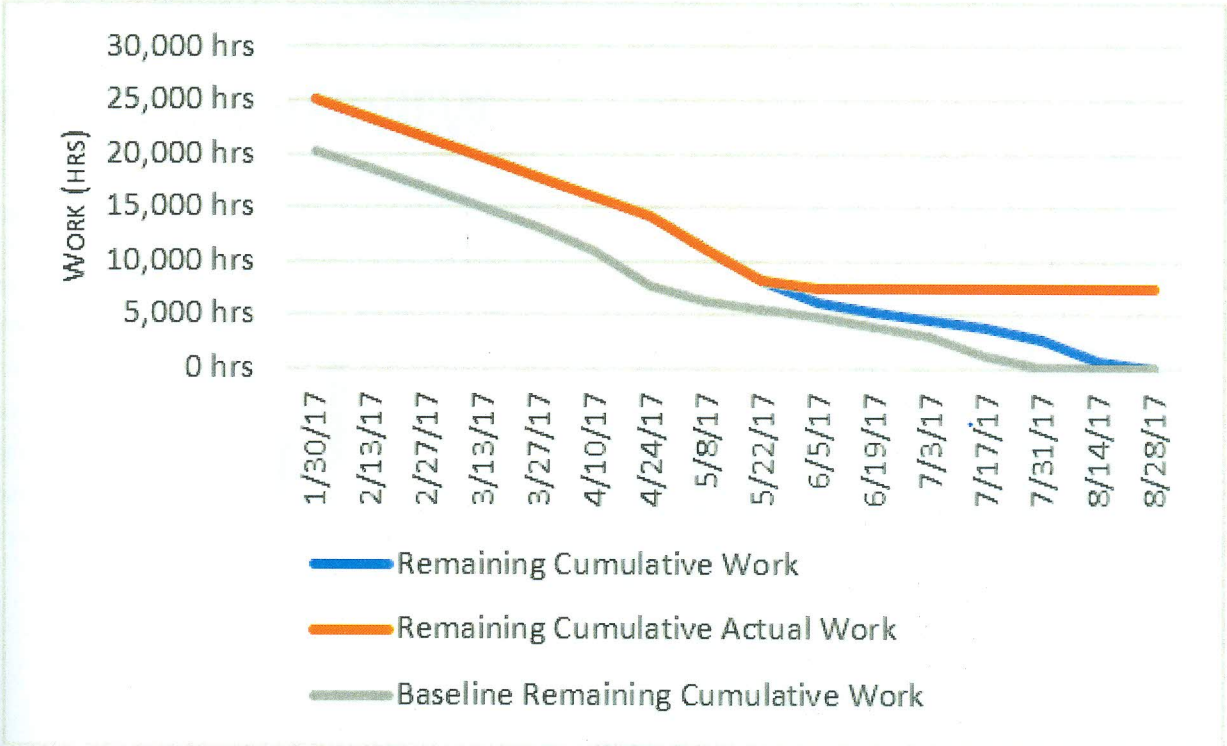
Actual Work

18,268 hrs

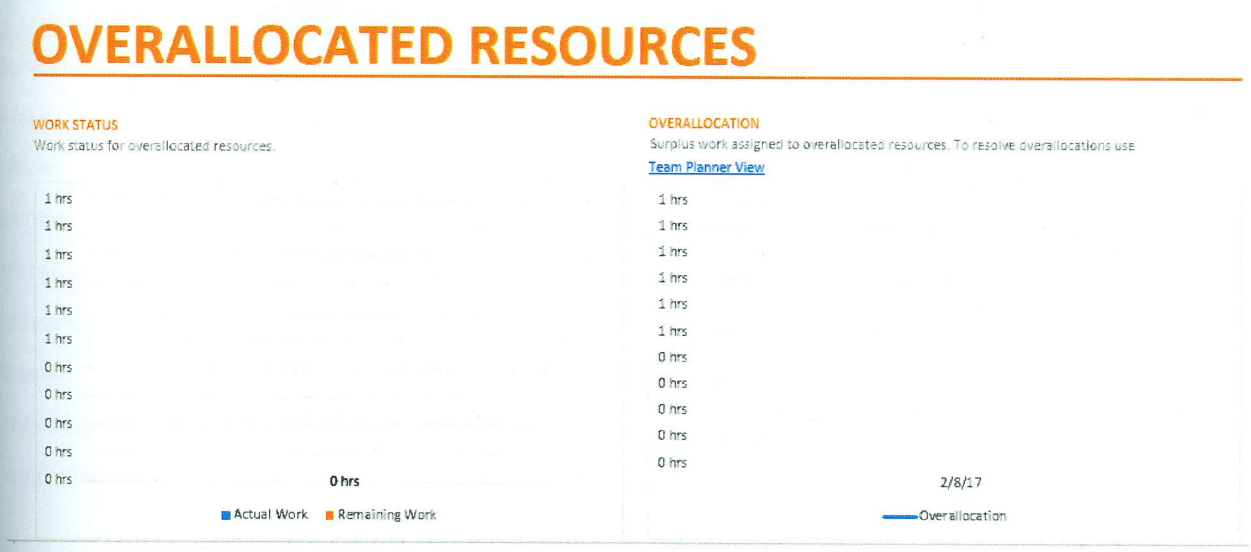
WORK OVERVIEW




WORK STATS




## 8.6. Project Overallocated Resources Report

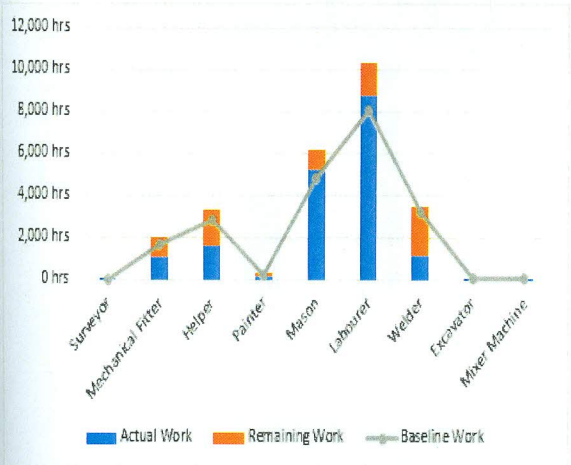


## 8.7. Project Resource Overview Report

# RESOURCE OVERVIEW

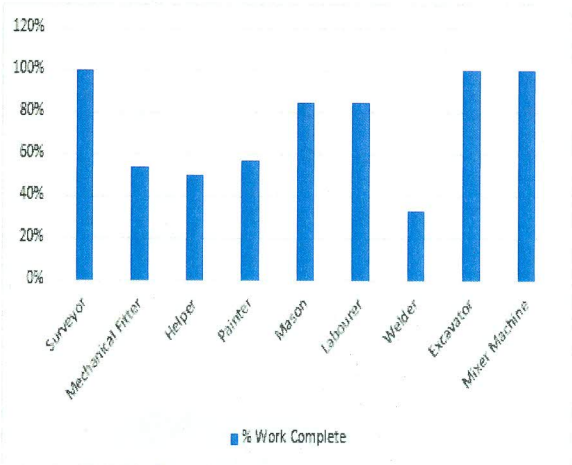
RESOURCE STATS

Work status for all work resources.




WORK STATUS

% work done by all the work resources.




RESOURCE STATUS

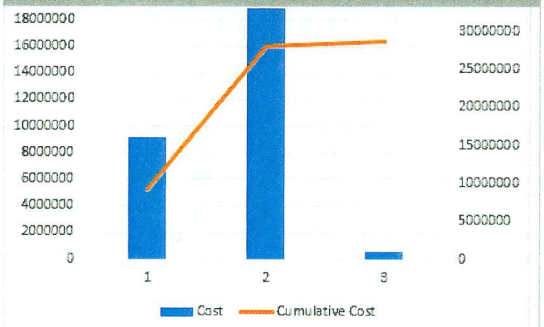
Remaing work for all work resources.

| Name | Start | Finish | Remaining Work |
|---|---|---|---|
| Surveyor | Wed Feb 8 | Wed Feb 8 | 0 hrs |
| Mechanical Fitter | Thu Feb 9 | Sun Sep 3 | 942.4 hrs |
| Helper | Thu Feb 9 | Sun Sep 3 | 1,660.8 hrs |
| Painter | Sat Feb 11 | Sat Sep 2 | 144 hrs |
| Mason | Thu Feb 9 | Tue Aug 29 | 931.2 hrs |
| Labourer | Thu Feb 9 | Tue Aug 29 | 1,552 hrs |
| Welder | Wed Feb 15 | Sun Sep 3 | 2,353.6 hrs |
| Excavator | Fri Feb 10 | Thu Apr 27 | 0 hrs |
| Mixer Machine | Thu Mar 2 | Wed Apr 19 | 0 hrs |

## 8.8.Project Cost Overrun Report

CASH FLOW

| Actual Cost | Baseline Cost | Remaining Cost | Cost Variance |
|---|---|---|---|
| Rs1,918,140.00 | Rs27,241,859.33 | Rs26,849,728.67 | Rs1,526,009.33 |




The chart shows the project's cumulative cost and the cost per quater.
To see the costs for a different time period, select the Edit option from the Field List.

The table below shows cost information for all top-level tasks.
To see cost stats for all tasks, set the Outline Level in the Field List.

| Name | Remaining Cost | Actual Cost | Cost | ACWP | BCWP | BCWS |
|---|---|---|---|---|---|---|
| Zoom Depot Project | Rs26,849,728.67 | Rs1,918,140.00 | Rs28,767,868.67 | Rs1,916,793.33 | Rs1,500,193.33 | Rs1,710,326.67 |

# COST OVERRUNS

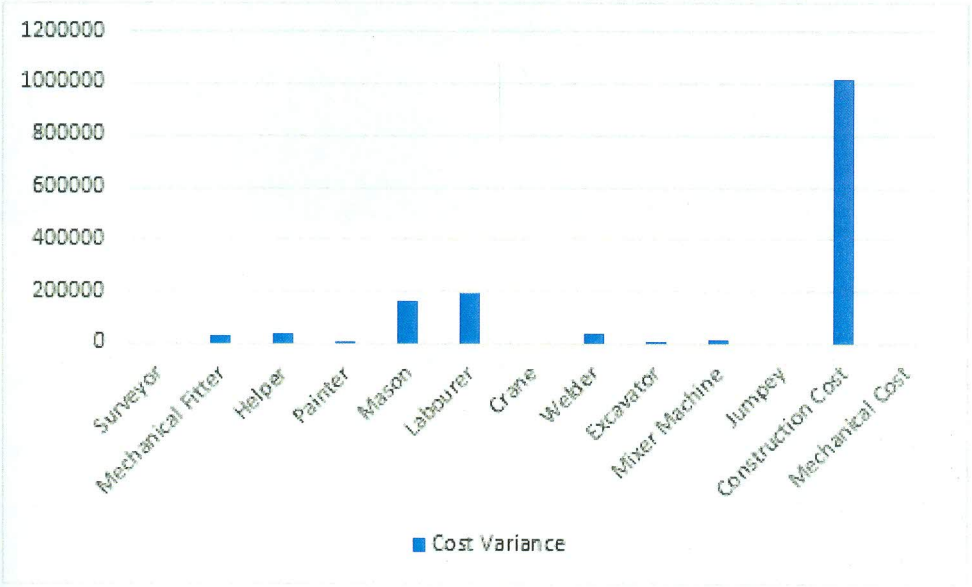
TASK COST VARIANCE

Cost variance for all top-level tasks in the project.


| Name | % Complete | Cost | Baseline Cost | Cost Variance |
|---|---|---|---|---|
| Zoom Depot Project | 65% | Rs28,767,868.67 | Rs27,241,859.33 | Rs1,526,009.33 |

## RESOURCE COST VARIANCE

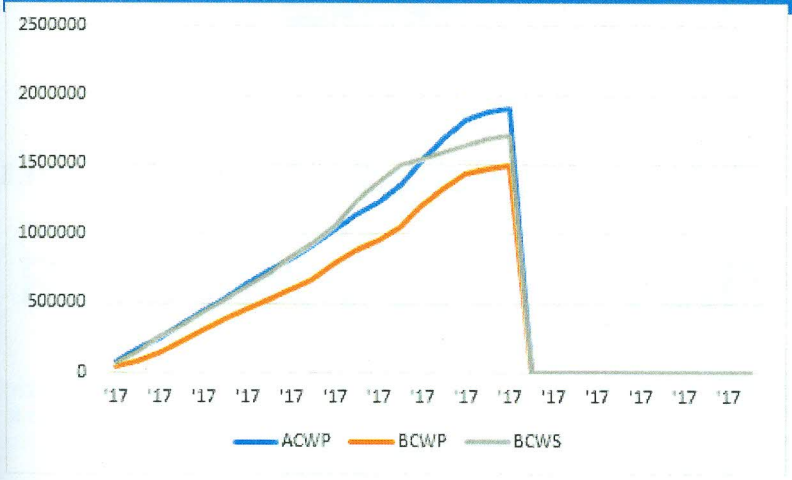
Cost variance for all the work resources.




| Name | Cost | Baseline Cost | Cost Variance |
|---|---|---|---|
| Surveyor | Rs1,000.00 | Rs1,000.00 | Rs0.00 |
| Mechanical Fitter | Rs186,266.67 | Rs151,800.00 | Rs34,466.67 |
| Helper | Rs248,340.00 | Rs208,740.00 | Rs39,600.00 |
| Painter | Rs30,800.00 | Rs22,000.00 | Rs8,800.00 |
| Mason | Rs768,000.00 | Rs601,000.00 | Rs167,000.00 |
| Labourer | Rs903,000.00 | Rs707,000.00 | Rs196,000.00 |
| Welder | Rs525,120.00 | Rs484,320.00 | Rs40,800.00 |
| Excavator | Rs40,000.00 | Rs36,000.00 | Rs4,000.00 |
| Mixer Machine | Rs45,000.00 | Rs30,000.00 | Rs15,000.00 |

## 8.9. Project Earned Value Report

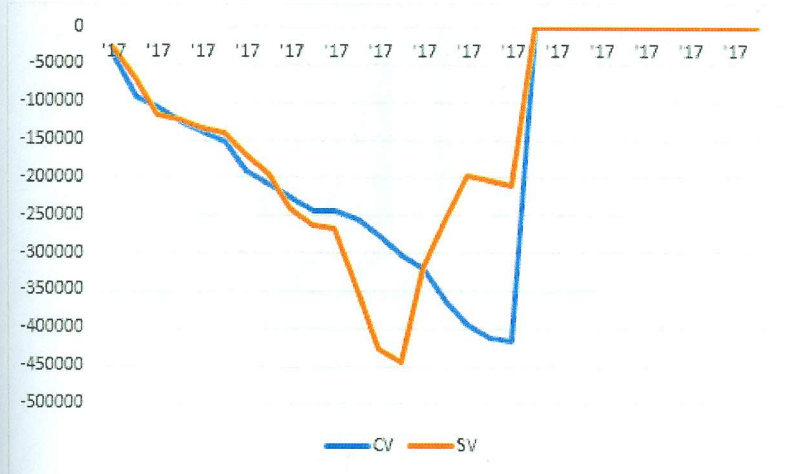
| EAC | ACWP | BCWP |
|---|---|---|
| Rs34,807,186.23 | Rs1,916,793.33 | Rs1,500,193.33 |




**EARNED VALUE OVER TIME**

The project's earned value based on the status date. If actual cost (ACWP) is higher than earned value (BCWP), then the project is over budget. If planned value (BCWS) is higher than earned value, then the project is behind schedule.

Learn more about earned value




**VARIANCE OVER TIME**

Cost and schedule variances for the project based on status date. If CV is negative then, the project is over budget. If SV is positive then the project is behind schedule.


INDICES OVER TIME

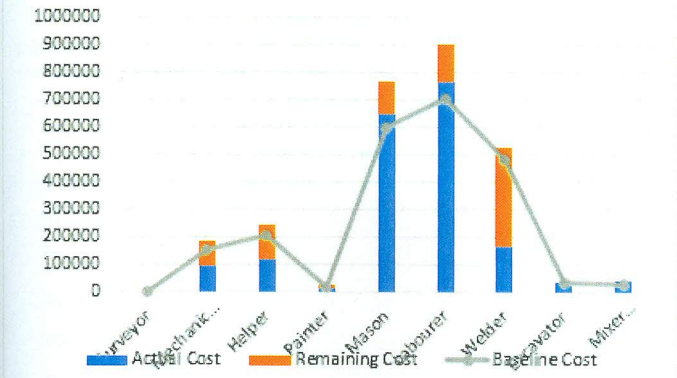
Cost and schedule performance indices for the project based on status date. The greater the performance index, the more on schedule and cost saving the project.

## 8.10. Resource Cost Overview Report

# RESOURCE COST OVERVIEW

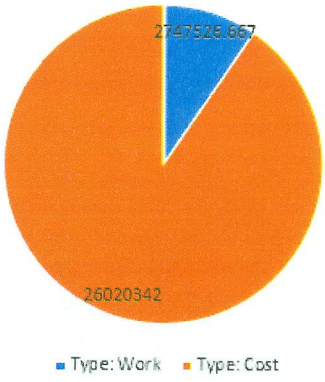
COST STATUS

Cost status for work resources.




COST DISTRIBUTION

How costs are spread out amongst different resource types.



COST DETAILS

Cost details for all work resources.

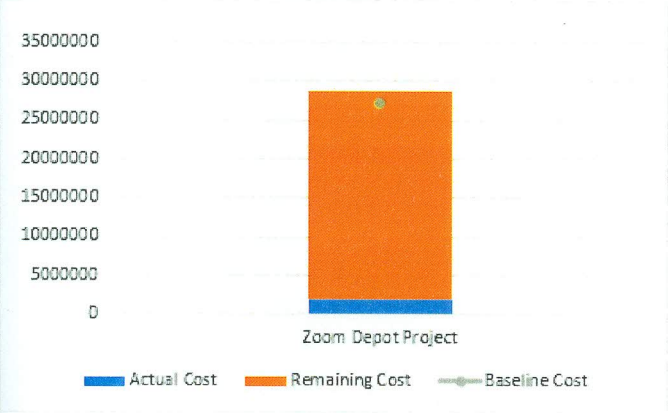
| Name | Actual Work | Actual Cost | Standard Rate |
|---|---|---|---|
| Surveyor | 8 hrs | Rs1,000.00 | Rs30,000.00/mon |
| Mechanical Fitter | 1,089.6 hrs | Rs99,880.00 | Rs22,000.00/mon |
| Helper | 1,650.4 hrs | Rs123,780.00 | Rs18,000.00/mon |
| Painter | 192 hrs | Rs17,600.00 | Rs22,000.00/mon |
| Mason | 5,212.8 hrs | Rs651,600.00 | Rs1,000.00/day |
| Labourer | 8,768 hrs | Rs767,200.00 | Rs700.00/day |
| Welder | 1,147.2 hrs | Rs172,080.00 | Rs1,200.00/day |
| Excavator | 80 hrs | Rs40,000.00 | Rs4,000.00/day |
| Mixer Machine | 120 hrs | Rs45,000.00 | Rs3,000.00/day |

## 8.11. Task Cost Overview Report

# TASK COST OVERVIEW

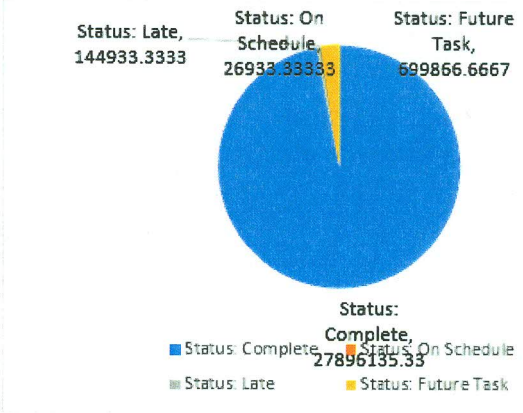
COST STATUS

Cost status for top-level tasks.




COST DISTRIBUTION

How costs are spread out amongst tasks based on their status.




COST DETAILS

Cost details for all top-level tasks.

| Name | Fixed Cost | Actual Cost | Remaining Cost | Cost | Baseline Cost | Cost Variance |
|---|---|---|---|---|---|---|
| Zoom Depot Project | Rs0.00 | Rs1,918,140.00 | Rs26,849,728.67 | Rs28,767,868.67 | Rs27,241,859.33 | Rs1,526,009.33 |

## 8.12. Critical Tasks Report

# CRITICAL TASKS

- Status: Complete
- Status: On Schedule
- Status: Late
- Status: Future Task

A task is critical if there is no room in the schedule for it to slip.

Learn more about managing your project's critical path.

| Name | Start | Finish | % Complete | Remaining Work | Resource Names |
|---|---|---|---|---|---|
| 1 backpass | Tue Jun 13 | Fri Jun 16 | 80% | 44.8 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 4 Fitup | Sat Jun 17 | Sun Jun 18 | 0% | 112 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 3 welding | Mon Jun 19 | Wed Jun 21 | 0% | 168 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 2 backpass | Thu Jun 22 | Fri Jun 23 | 0% | 112 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 5 Fitup | Sat Jun 24 | Sat Jun 24 | 0% | 56 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 4 Welding | Sun Jun 25 | Sun Jun 25 | 0% | 56 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 3 Backpass | Mon Jun 26 | Mon Jun 26 | 0% | 56 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |

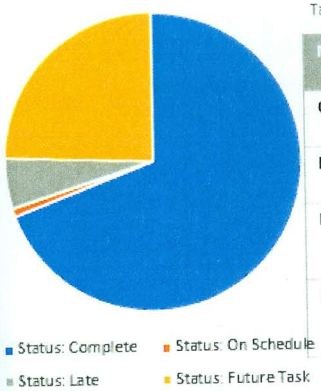
| | | | | | |
|---|---|---|---|---|---|
| Anchor Chairs Fitup & Welding | Tue Jun 27 | Tue Jun 27 | 0% | 56 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 6 Fitup | Wed Jun 28 | Wed Jun 28 | 0% | 56 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 5 Welding | Thu Jun 29 | Thu Jun 29 | 0% | 56 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 4 Backpass | Fri Jun 30 | Fri Jun 30 | 0% | 56 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 7 Fitup | Sat Jul 1 | Tue Jul 4 | 0% | 224 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 6 Welding | Wed Jul 5 | Fri Jul 7 | 0% | 168 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 5 backpass | Sat Jul 8 | Sat Jul 8 | 0% | 56 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 8 Fitup | Sun Jul 9 | Wed Jul 12 | 0% | 224 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 7 Welding | Thu Jul 13 | Mon Jul 17 | 0% | 280 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |

| | | | | | |
|---|---|---|---|---|---|
| 6 Backpass | Tue Jul 18 | Wed Jul 19 | 0% | 112 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 9 Fitup | Thu Jul 20 | Sat Jul 22 | 0% | 168 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 8 Welding | Sun Jul 23 | Tue Jul 25 | 0% | 168 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 7 Backpass | Wed Jul 26 | Wed Jul 26 | 0% | 56 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 8 backpass | Thu Jul 27 | Fri Jul 28 | 0% | 112 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 9 welding | Sat Jul 29 | Mon Jul 31 | 0% | 168 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 9 Backpass | Tue Aug 1 | Sun Aug 6 | 0% | 336 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| Column base | Mon Aug 7 | Wed Aug 9 | 0% | 144 hrs | Welder[300%],Mechanical Fitter,Helper[200%] |
| Column fab+Drum | Thu Aug 10 | Thu Aug 10 | 0% | 56 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |

| | | | | | |
|---|---|---|---|---|---|
| Rafter Installation | Fri Aug 11 | Fri Aug 11 | 0% | 56 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| FIT UP | Sat Aug 12 | Sat Aug 12 | 0% | 56 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| SHORT SEAM WELDING | Sun Aug 13 | Tue Aug 15 | 0% | 168 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| LONG SEAM WELDING | Wed Aug 16 | Fri Aug 18 | 0% | 168 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| T-WELDING | Sat Aug 19 | Mon Aug 21 | 0% | 168 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| Curb Angle Welding | Tue Aug 22 | Thu Aug 24 | 0% | 168 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| Pneumatic test | Fri Aug 25 | Sat Aug 26 | 0% | 96 hrs | Mechanical Fitter[200%],Helper[400%] |
| Hydro Test | Sun Aug 27 | Wed Aug 30 | 0% | 160 hrs | Mechanical Fitter,Helper[400%] |
| Testing Completed | Wed Aug 30 | Wed Aug 30 | 0% | 0 hrs | |
| Piping and Tank Connection | Thu Aug 31 | Sun Sep 3 | 0% | 224 hrs | Welder,Mechanical Fitter[300%],Helper[300%] |

## 8.13. Project Late Tasks Report

# LATE TASKS




Tasks that are late as compared to the status date. A task is late if its finish date has passed or it is not progressing as planned.

| Name | Start | Finish | % Complete | Remaining Work | Resource Names |
|---|---|---|---|---|---|
| Concrete Pouring | Sun Jun 4 | Mon Jun 5 | 80% | 51.2 hrs | Labourer[1,000%],Mason[600%] |
| Plaster Work | Tue Jun 6 | Tue Jun 13 | 0% | 1,024 hrs | Labourer[1,000%],Mason[600%] |
| Roof Plate | Wed Jun 14 | Thu Jun 15 | 0% | 64 hrs | Mechanical Fitter,Helper[200%],Welder |
| Manhole shells | Thu May 11 | Fri May 12 | 0% | 80 hrs | Mechanical Fitter,Helper[200%],Welder[200%] |

## 8.14. Project Milestones Report

# MILESTONE REPORT

**LATE MILESTONES**

Milestones that are past due.

| Name | Finish |
|---|---|

**MILESTONES UP NEXT**

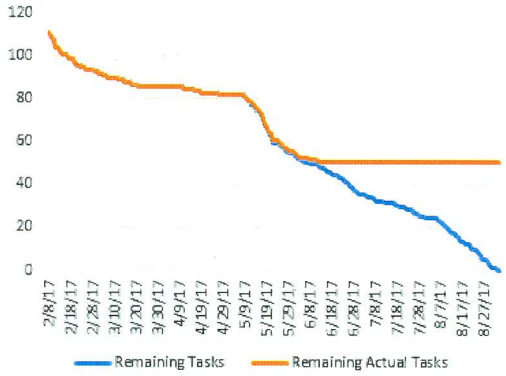
Milestones due in this month.

| Name | Finish |
|---|---|

**COMPLETED MILESTONES**

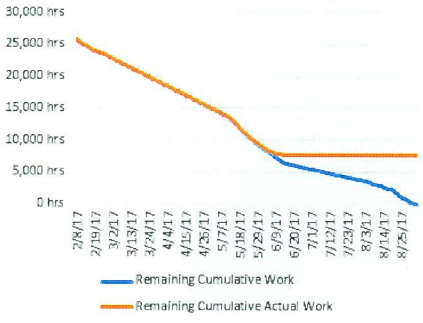
Milestones that are 100% complete.

| Name | Finish |
|---|---|
| Piping Pre Work Completed | Fri Feb 17 |
| Piping Work Completed | Mon Feb 20 |




## 8.15. Project Slipping Tasks Report

# SLIPPING TASKS




Tasks where the finish date is past the baseline finish date.

| Name | Start | Finish | % Complete | Remaining Work | Resource Names |
|---|---|---|---|---|---|
| Concrete Pouring | Sun Jun 4 | Mon Jun 5 | 80% | 51.2 hrs | Labourer[1,000%],Mason[600%] |
| Plaster Work | Tue Jun 6 | Tue Jun 13 | 0% | 1,024 hrs | Labourer[1,000%],Mason[600%] |
| Brick Work | Sat Aug 19 | Mon Aug 21 | 0% | 384 hrs | Labourer[1,000%],Mason[600%] |
| Steel Fixing of Top Beam | Tue Aug 22 | Tue Aug 22 | 0% | 128 hrs | Labourer[1,000%],Mason[600%] |
| Shuttering | Wed Aug 23 | Fri Aug 25 | 0% | 384 hrs | Labourer[1,000%],Mason[600%] |
| Concrete Pouring | Sat Aug 26 | Sat Aug 26 | 0% | 128 hrs | Labourer[1,000%],Mason[600%] |
| Plaster Work | Sun Aug 27 | Tue Aug 29 | 0% | 384 hrs | Labourer[1,000%],Mason[600%] |
| Civil Work Completed | Tue Aug 29 | Tue Aug 29 | 0% | 0 hrs | |
| Roof Plate | Wed Jun 14 | Thu Jun 15 | 0% | 64 hrs | Mechanical Fitter,Helper[200%], |

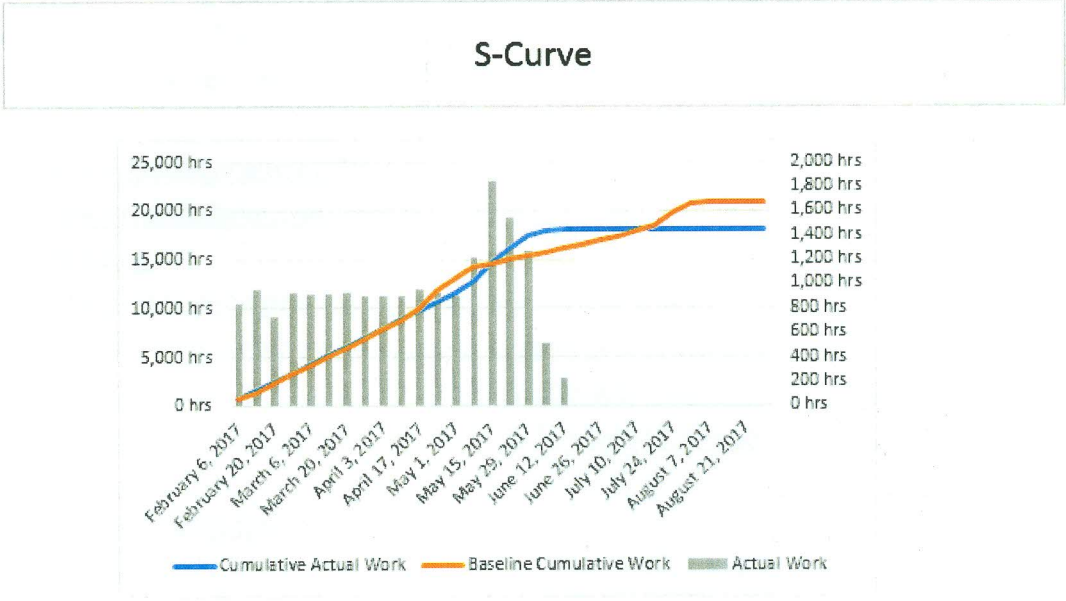
| | | | | | |
|---|---|---|---|---|---|
| Manhole shells | Thu May 11 | Fri May 12 | 0% | 80 hrs | Mechanical Fitter,Helper[200%], Welder[200%] |
| 1 backpass | Tue Jun 13 | Fri Jun 16 | 80% | 44.8 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 4 Fitup | Sat Jun 17 | Sun Jun 18 | 0% | 112 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 3 welding | Mon Jun 19 | Wed Jun 21 | 0% | 168 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 2 backpass | Thu Jun 22 | Fri Jun 23 | 0% | 112 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 5 Fitup | Sat Jun 24 | Sat Jun 24 | 0% | 56 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 4 Welding | Sun Jun 25 | Sun Jun 25 | 0% | 56 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 3 Backpass | Mon Jun 26 | Mon Jun 26 | 0% | 56 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| Anchor Chairs Fitup & Welding | Tue Jun 27 | Tue Jun 27 | 0% | 56 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |

| | | | | | |
|---|---|---|---|---|---|
| Anchor Chairs Fitup & Welding | Tue Jun 27 | Tue Jun 27 | 0% | 56 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 6 Fitup | Wed Jun 28 | Wed Jun 28 | 0% | 56 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 5 Welding | Thu Jun 29 | Thu Jun 29 | 0% | 56 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 4 Backpass | Fri Jun 30 | Fri Jun 30 | 0% | 56 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 7 Fitup | Sat Jul 1 | Tue Jul 4 | 0% | 224 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 6 Welding | Wed Jul 5 | Fri Jul 7 | 0% | 168 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 5 backpass | Sat Jul 8 | Sat Jul 8 | 0% | 56 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 8 Fitup | Sun Jul 9 | Wed Jul 12 | 0% | 224 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 7 Welding | Thu Jul 13 | Mon Jul 17 | 0% | 280 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |

| | | | | | |
|---|---|---|---|---|---|
| 6 Backpass | Tue Jul 18 | Wed Jul 19 | 0% | 112 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 9 Fitup | Thu Jul 20 | Sat Jul 22 | 0% | 168 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 8 Welding | Sun Jul 23 | Tue Jul 25 | 0% | 168 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 7 Backpass | Wed Jul 26 | Wed Jul 26 | 0% | 56 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 8 backpass | Thu Jul 27 | Fri Jul 28 | 0% | 112 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 9 welding | Sat Jul 29 | Mon Jul 31 | 0% | 168 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| 9 Backpass | Tue Aug 1 | Sun Aug 6 | 0% | 336 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| Column base | Mon Aug 7 | Wed Aug 9 | 0% | 144 hrs | Welder[300%],Mechanical Fitter,Helper[200%] |
| Column fab+Drum | Thu Aug 10 | Thu Aug 10 | 0% | 56 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |

| | | | | | |
|---|---|---|---|---|---|
| Rafter Installation | Fri Aug 11 | Fri Aug 11 | 0% | 56 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| FIT UP | Sat Aug 12 | Sat Aug 12 | 0% | 56 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| SHORT SEAM WELDING | Sun Aug 13 | Tue Aug 15 | 0% | 168 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| LONG SEAM WELDING | Wed Aug 16 | Fri Aug 18 | 0% | 168 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| T-WELDING | Sat Aug 19 | Mon Aug 21 | 0% | 168 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| Curb Angle Welding | Tue Aug 22 | Thu Aug 24 | 0% | 168 hrs | Welder[400%],Mechanical Fitter,Helper[200%] |
| Shell Nozzles | Sun Aug 6 | Mon Aug 7 | 0% | 112 hrs | Welder,Mechanical Fitter[300%],Helper[300%] |
| Roof Nozzles | Sun Aug 13 | Mon Aug 14 | 0% | 112 hrs | Welder,Mechanical Fitter[300%],Helper[300%] |
| Stairs Erection | Mon Aug 7 | Tue Aug 8 | 0% | 112 hrs | Welder,Mechanical Fitter[300%],Helper[300%] |
| Water Spray Nozzle | Tue Aug 15 | Wed Aug 16 | 0% | 112 hrs | Welder,Mechanical Fitter[300%],Helper[300%] |
| Mechanical Work Completed | Wed Aug 16 | Wed Aug 16 | 0% | 0 hrs | |
| Pneumatic test | Fri Aug 25 | Sat Aug 26 | 0% | 96 hrs | Mechanical Fitter[200%],Helper[400%] |
| Hydro Test | Sun Aug 27 | Wed Aug 30 | 0% | 160 hrs | Mechanical Fitter,Helper[400%] |
| Testing Completed | Wed Aug 30 | Wed Aug 30 | 0% | 0 hrs | |
| Paint | Thu Aug 31 | Sat Sep 2 | 0% | 144 hrs | Painter[600%] |
| Piping and Tank Connection | Thu Aug 31 | Sun Sep 3 | 0% | 224 hrs | Welder,Mechanical Fitter[300%],Helper[300%] |

## 8.16. Project S-Curve



# Chapter 9 References


- A guide to PMBOK 5th edition.
- The Program Management Office: Establishing, Managing and Growing the Value of a PMO (By Craig J. Letavec).
- The Complete Project Management Office Handbook (Third Edition, By Gerard M. Hill).
- https://en.wikipedia.org/wiki/Project_management_office
- http://www.brighthubpm.com/certification/69777-understanding-pmo-roles-and-responsibilities/
- http://www.pmi.org/learning/pmo-managed-services-model-9331
- http://www.ittoolkit.com/how-to-it/projects/project-management-office.html
- http://www.slideshare.net/anandsubramaniam/project-management-office-pmo
- https://www.linkedin.com/pulse/20140627225913-4817564-roles-and-types-of-pmo-structures
- https://www.eliteengineering.com.pk

# Chapter 10 Appendix (Project Template Documents)

## PROJECT CHARTER

| Version # | Issue Date | Approved By | Approval Date | Changes | Prepared By |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |

| | |
|---|---|
| **Project Name** | |
| **Description** | |
| **Project Objectives** | |
| **Acceptance Criteria** | |
| **Assumptions** | |
| **Constrains** | |
| **Project Duration** | |
| **Project Start Date** | |
| **Project Completion Date** | |
| **Milestones List** | |
| **Project Budget** | |
| **High Level Risks** | |
| **Major Stakeholders List** | |
| **Project Manager** | |
| **Roles and Responsibilities** | |
| **SIGNOFF** | |
| | |

**Project Scope Statement**

# Version History

| Version # | Issue Date | Approved By | Approval Date | Changes | Prepared By |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |

**Introduction**

**Project Objectives**

**Major Deliverables**

**Milestones List**

**Limits and Exclusions**

**Technical Specifications**

| WEEKLY PROJECTS PROGRESS REPORT | | | | DATED: //2017 | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SR # | Activity /description | Planned Start Date | Planned Comp. Date | Revised Comp. date | Delay (Days) | Status | %age Comp. (to date) | Reason of Delay / Hold | Remarks |

| 1 – Zoom depot Pattoki | | Overall Project Completion: | |
|---|---|---|---|
| Project Start date: | //2017 | Project Planned Completion date: | //2017 |
| Project Revised Completion date: | //2017 | Total Delay of the project: | 0 days |

# Report II

ORIGINALITY REPORT

| 0% | 0% | 0% | 0% |
|---|---|---|---|
| SIMILARITY INDEX | INTERNET SOURCES | PUBLICATIONS | STUDENT PAPERS |

PRIMARY SOURCES

| | | | |
|---|---|---|---|
| EXCLUDE QUOTES | OFF | EXCLUDE MATCHES | OFF |
| EXCLUDE BIBLIOGRAPHY | ON | | |

20/6/17

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