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**DEPARTMENT: PETROLEUM ENGINEERNG**

**MATRIC NO: 18/ENG07/008**

**COURSE TITLE: ENGINEERS IN SOCIETY**

**COURSE CODE: ENG 284**

**ASSIGNMENT TITLE: ENGINEERING CONSULTANCY ASSIGNMENT**

**Scope of Work**

**Glossary**: The scope of work is that of the Alfa Belgore rehabilitation project ongoing at Afe Babalola University, Ado-Ekiti. The project is going to serve the staffs and students of the school very well. It is the first of its kind in the institution.

**Problem Statement**: This rehabilitation project is going to serve the school in various ways such as;

* Education and Training in Rehabilitation Science and Engineering
* Assessing the field
* Rehabilitation- related Research in Existing Disciplines
* Multiple Perspectives on a Common Goal
* Integrating the Multiple Perspectives
* Assessing the Need for a New Discipline
* The Nature of The Discipline

Rehabilitation is a scientific and academic field of study but not a professional discipline whose purpose is to generate new knowledge for use by professionals and consumers.

**Goal of the Agreement**: The goal of the agreement is to construct a rehabilitation project that will serve Afe Babalola staffs and students.

**Objective of the Agreement/Deliverables**: The objectives of the agreement are;

* The Contractor shall supply the deliverables and reports as designated within Attachment XX Project Deliverables Matrix. All deliverables shall be submitted for review and/or Owner approval in accordance with requirements of the Owner’s standards.
* The Contractor shall prepare the following procedures, report templates and plans for the Owner’s review and approval, these procedures and reports form part of the Contract. Any revisions to the procedure and reports shall be reviewed and agreed upon by both parties, prior to implementing any changes. Contractor reporting to Owner is intended to provide the Owner with information on the Work status to discuss, schedule status, cost/schedule variances with explanation and current issues.
* All of the following Deliverables shall be provided in the detail and format provided in the form provided in the applicable attachment. The due date for each Deliverable is determined from the date of the execution of the Contract, with each Deliverable being due the number of days indicated in the table below calculated from the date of the execution of the Contract.

**Administration**: PI will be required to give weekly reports consisting of: how far the project has gone, how much has been spent so far to that point, resources required etc.

**Timeline**: The project commenced on the 1st of April, 2020. It has been estimated to last a period of six months. If all goes according to plan, the project should be completed by 1st October, 2020. Below are the timelines allocated to each work;

|  |  |  |
| --- | --- | --- |
|  Milestone | Start Date | Completion Date |
| Site Commencement Date  | 1st April, 2020 | 12th April, 2020 |
| Submission of Execution Plan  | 12th April, 2020 | 19th April, 2020 |
| Owner Review of Project Execution Plan  | 20th April, 2020 | 5th May, 2020 |
| Approval of the Project Execution Plan  | 5th May, 2020 | 12th May, 2020 |
| Substantial Completion of the Work | 12th May, 2020 | 29th July, 2020 |
| Final Completion of the Work | 29th July, 2020 | 1st October, 2020 |

Human Resources are required in this project and as thus a team has being set up to manage these human resources i.e. Human Resources Management. HRM involves the following core activities:

* Role Analysis
* Role Specification
* Workforce Planning
* Recruitment and selection of temporary and permanent staff as required
* Training and development
* Performance management
* Compensation(remuneration)
* Legal issues
* Managing employee payroll, benefits and compensation
* Communicating with employees
* Resolving disputes
* Evaluating disputes
* Managing employee relations
* Ensuring equal opportunities
* Making sure staff facilities are suitable and well-maintained

Project Team includes the following professionals:

* **Geotechnic Engineer**: It is a discipline within civil engineering related to the performance of soil and rock mechanics. A geotechnical engineer determines and designs the type of foundations, earthworks, and/or pavement subgrades required for the intended man-made structure to be built.
* **Land Surveyor**: A land surveyor is the government authorized specialist who is licensed to determine boundaries, they determine the relative positions of places on or beneath the surface of the earth by measuring distances, directions, and elevations. They are the first professionals to carry out physical work on the construction site.
* **Architect:** Architects are licensed professionals trained in the art and science of building design, develop the concept into images and plans. Before, constructing a building, an architect needs to draw a plan of the building.
* **Structural Engineer**: He is concerned with the research, planning, design, construction, inspection, monitoring, maintenance, rehabilitation and demolition of permanent and temporary structures, as well as structural systems and their components.
* **Quantity Surveyor**: A quantity surveyor is a construction industry professional who specialises in estimating the value of construction works.
* **The Builder**: Builders are the most monopolised professionals in the construction industry with the way things are structured other have taken up most of their responsibilities.
* **Building Service Engineers**: This is an aspect handled by Mechanical and Electrical Engineers they are referred to as (M&E).
* **Artisans**: These are the real workmen on site. They are mostly technicians that have acquired various skills either on the job or in various skill acquisition institutes.
* **The Consultants**: The building consultancy teams bring together project managers, building surveyors, quantity surveyors, architects, engineers, interior designers and other construction professionals, but his loyalties is with the building owner.
* **The building contractor**: The building contractor draws up a plan to carry out the construction project.

The members of the consultant team that are likely to be required on most projects are:

* Architect
* Cost consultant
* Services engineer
* Structural engineer

The client may wish to allocate the roles of lead consultant to one or more of these consultants to coordinate the work of the rest of the team.

**Why is the site secured?**

* To prevent theft of construction materials
* To prevent loss of lives
* To save the operational cost of the project
* To prevent loss and liability
* To prevent destruction and vandalism
* To prevent damage to the project

BEME for the project is given by;

Total estimated cost: N100m (100 million naira)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| S/N | DECSRIPTION | QUANTITY | UNIT PRICE | COST | REMARKS |
| 1 | SITE PREPARATION |  |  | 5,000,000 | AA PETANA FACILITY MANAGEMENT SERVICES |
| 2 | CONSULTANCY FEE |  |  | 15,000,000 | JULIUS BERGER NIGERIA PLC |
| 3 | TRANSPORTATION |  |  | 12,000,000 | CHINA CIVIL ENGINEERING AND CONSTRUCTION CORPORATION(CCECC) |
| 4 | CONSTRUCTION FEE |  |  | 25,000,000 | JULIUS BERGER NIGERIA PLC |
| 5 | MISCELLANEOUS |  |  | 10,000,000 |  |
| 6 | FINISHING WORKS | PAINTINGTILES LAYINGPLUMBINGELECTRICAL WIRING |  | 13,000,000 | HABLUX GLOBAL RESOURCES LTDSAMABOND GLOBAL COMPANY LTDMP ENGINEERING FACILITY MANAGEMENT SERVICESELECKTRINT NIGERIA LIMITED |
| 7 | PROFIT |  |  | 20,000,000 |  |

PAYMENT SCHEDULE for the project is given by;

Total estimated cost: N100m (100 million naira)

|  |  |  |
| --- | --- | --- |
| S/N | REMARKS | COST |
| 1 | MOBILISATION | 30,000,000 |
| 2 | 50% COMPLETION OF THE PROJECT | 30,000,000 |
| 3 | FINAL PAYMENT AFTER COMPLETION AND HAND OVER\*RETAINMENT OF 10% OF TEC FOR A 6 MONTHS DEFECT LIABILITY PERIOD | 30,000,000 |

**BILL OF ENGINEERING MEASUREMENT AND EVALUATION (BEME)**: It is a tool used before, during and post-construction to assess and value the cost of construction works. This includes the cost of materials, labour, equipment and all/any other resource(s) required for the success of any construction endeavour based on a pre-determined scope and specification.

**Defect Liability Period**: It is a period of time following practical completion during which a contractor during which a contractor remains liable under the building contract for dealing with any defects which become apparent. It is usually a period of around six or twelve months but it can vary depending on the contract used.

**Lead Consultant**: This is a professional typically appointed by the client to perform expert tasks on a project such as contract administration, inspecting the work of contractors, developing and co-ordinating the design, preparing production information and tender documentation and providing advice on setting up defining the project.

**Project Life Cycle**: It is the sequence of phases that a project goes through from its initiation to its closure. It includes;

* The Initiation Phase: Starting of the project
* The Planning Phase: Organizing and Preparing
* The Execution Phase: Carrying out the project
* The Termination Phase: Closing the project

**Environmental Impact of Assessment (EIA)**: It can be defined as the systematic examination of unintended consequences of a development project or program, with the view to reduce or mitigate negative impacts and maximize on positive ones.