|  |
| --- |
| Engineers in the society |
| Name: Sarah Odekwo  Mat. No.: 18/ENG02/066  Dept.: Computer Engineering |
|  |
|  |
|  |
|  |

|  |
| --- |
|  |

Scope of Work for the Alfa Belgore Rehabilitation Project

* The rehabilitation project is first originated by the management of the University and the design of the new structure is created.
* A trusted renovation company is then employed to carry out the project.
* The duration of the project, payment, workforce and other conditions for the project are agreed upon between the management and the renovation company.
* The requirements needed for the project are considered.
* A survey of the site is carried out by a team of professionals to determine the possible landmarks and estimated deadline for the project.
* The work on the project commences with the removal of valuable items within the structure, starting with the unfixed items like; furniture, sound systems, decor. Then the equipments that are fixed are removed next.
* The area around the structure is then barricaded with aluminium sheets to restrict movements.
* The roofing sheets of the structure are then dismantled.
* The civil engineers and the labourers employed then begin to work where additional constructions and renovations need to be made. Meanwhile the electrical engineers survey the structure for areas where more wiring would be required. Also the plumbers find out the plumbing and piping layout specification.
* Then the structures’ painting and tiling work is carried out simultaneously.
* The debris produced from the rehabilitation process around the site is removed and disposed.
* The structure is then installed with equipments- both old and new, at their assumed locations.
* The structure is then cleaned to remove possible dirt or dust that could have been caused by the construction process.
* The aluminium sheets that were used to barricade the area are then removed.
* The structure is then ready to be commissioned and set for use.

Gantt chart

A Gantt chart is a type of bar chart that illustrates a project schedule. This chart illustrates the breakdown structure of the project by showing the start and finish dates as well as various relationships between project activities, and in this way helps to track the tasks against their scheduled time or predefined milestones.

Human Resources needed:

* Construction Manager: the construction manager is responsible for overseeing the entirety of the project from start to finish.
* Quantity Surveyor: a quantity surveyor is a construction industry professional who specialises in estimating the value of construction works.
* Architect: an architect is a licensed professional trained in the art and science of building design, develop the concepts for structures and turn those concepts into images and plans.
* Builder: the builder studies the production information that is the drawings, schedules and specification and they analyse the build ability and maintainability of buildings.
* Building Service Engineers: building service engineering is an aspect that is handled by mechanical and electrical engineers. This involves the production and maintenance of a stable internal environment that has the correct temperature, air quality and lighting levels.
* Artisans: they are technicians that have acquired various skills either on the job or in various skill acquisition institutes. They work with the various professionals carrying out their duties based on instructions though imputing their skills. Artisans include: masons, carpenters, electricians, iron fixers, tillers and plumbers.

Project Team

The project team constitutes of construction professionals that are brought together for a specific construction project and then disbanded once the construction is complete.

The project team consists of:

* The construction client: this is the person/company that the building is being built for. In this case the construction client being Afe Babalola University, Ado-Ekiti.
* Construction Consultant: the construction consultant is responsible for selecting construction professionals and contractors and also reviewing plans and budgets.
* Specialist Consultant: they are responsible for making sure that the structure meets performance and safety requirements.
* Architect: the architect develops the building’s design, taking the client’s brief and combining it with the advice of the specialist consultants.
* Engineer: these professionals are responsible for the structural, mechanical and electrical design of the building.
* Contractor: the contractor oversees and manages the construction of the building for the client, following the architect and engineers’ designs.

This Project Team is led by the **Construction Consultant**.

Bill of Engineering Measurement and Evaluation (BEME)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S/N** | **TASK** | **MODULES** | **PERCENTAGE** | **AMOUNT(N)** |
| 1 | Miscellaneous | * Bonus time * Feeding * Extra materials | 10% | 5 000 000 |
| 2 | Consultancy Fee | * Doctors * Architect * Consultant | 15% | 7 500 000 |
| 3 | Site Preparation | * Clearing of debris * Barricading | 5% | 2 500 000 |
| 4 | Transport cost | * Bringing of items to the site * Mobilization and Demobilization * Importation of materials | 12% | 6 000 000 |
| 5 | Profit |  | 20% | 10 000 000 |
| 6 | Other expenses | * Final inspection * Final testing * Cost of material and equipment | 38% | 19 000 000 |
|  |  |  |  | 50 000 000 |

Payment Schedule

|  |  |  |  |
| --- | --- | --- | --- |
| **S/N** | **Active Description** | **PERCENTAGE** | **AMOUNT (N)** |
| 1 | Mobilization: Personnel/Equipment   * Civil Supervisor * Elect Supervisor * Architect | 30% | 15 000 000 |
| 2 | 30% of 50% completion:   * Decommissioning of electric system * Decommissioning of security provisions | 20% | 10 000 000 |
| 3 | Complete/Commissioning:   * Finishing of civil work * Finishing of electrical work * Finishing and commissioning * Final commissioning | 40% | 20 000 000 |
| 4 | Retain 10% for 6 months:   * All electric connection working perfectly well * Plumbing and other facilities are working well   \*\*This is to ensure that structure is still fully functional after 6 months. | 10% | 5 000 000 |
|  |  |  | 50 000 000 |

* BILL OF ENGINEERING MEASUREMENT AND EVALAUTION (BEME)

This is a description and evaluation of evidence pertinent to a clearly formulated topic/ question that uses explicit scientific methodologies and methods to systematically identify information relevant OR it’s a tool used before, during and after construction to assess and value the cost of construction work. This includes the cost of materials, labor, equipment, and all/any other resource(s) required for the success of any construction endeavor based on pre-determined scope and specification.

* DEFECT LIABILITY PERIOD

This is a period of time following practical completion during which a contractor remains liable under the building contract for dealing with any defects, which becomes apparent. This period is between six months to twelve months varying depending on the contracts used.

* LEAD CONSULTANT

A lead consultant is a consultant that directs the work of a consultant team and is the main point of contact for communication between the client and the consultant team, except for on significant design issues where the lead designer may become the main point of contact.

* PROJECT LIFE CYCLE

A project life cycle is a sequence of phases that a project goes through from initiation, planning, implementation down to the closure. A project life cycle can range from predictive or plan-driven approaches to adaptive or change-driven approaches.

* ENVIRONMENT IMPACT ASSESSMENT (EIA)

This is an assessment of the environmental consequences of a plan, policy, program, or actual project prior to the decision to move forward with the proposed action OR This is a process of evaluating the likely environmental impact of a proposed project or development, taking into account inter-related socio-economic, cultural and human-health impacts, both beneficial and adverse.