

## **PROJECT MANAGEMENT SERVICES for the Design and Construction of the UP Mindanao CSM Research Development and Extension (CSM RDE) Building**

### **I. INTRODUCTION**

The proposed UP Mindanao College of Science and Mathematics Research Development and Extension (CSM RDE) Building, herein referred to as the CSM RDE Building, is the research arm of the College of Science and Mathematics. It is envisioned to produce quality research outputs but not limited to publications but also for patent products/technology for commercial applications. Moreover, the focus of research interest is interdisciplinary but not limited to the college itself but to involve the College of Humanities and Social Sciences (CHSS) and the School of Management (SOM) depending on the nature of the research activity. Such study is already on-going but in a small scale. The state of the art facility of the RDE building can also promote collaborative type of research activities within the South East Asian region. There is already some on-going efforts with the Southern Taiwan Universities such as Sun Yat-Sen and in Thailand, School of Bioresources Technology, King Mongkut University Technology Thonburi (KMUTT), Bangkok.

The PROJECT shall cover the Design and Construction of the UP Mindanao CSM Research Development and Extension Building. The PROJECT SITE is located along the Maguindanaoan Road and is within the identified Academic Support (Acad-2) Zone in the ExeCom-approved UP Mindanao Campus Land Use Plan of 2016.

### **II. PROJECT DESCRIPTION**

The University of the Philippines Mindanao requires the services of a PROJECT MANAGEMENT CONSULTANT whose on-site presence shall ensure the effective and efficient day-to-day implementation of the PROJECT under the guidance and direct supervision of THE IMPLEMENTING AGENCY. It shall ensure that all project constraints, including scope, quality, schedule, budget, resources, and risks, are properly managed and balanced from the pre-design stages up to the project completion and turnover of the UP Mindanao CSM Research Development and Extension Building. Additional description of the project are as follows:

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| A. Location                    | : | Maguindanaoan Road, UP Mindanao Campus, Mintal, Tugbok, Davao City   |
| B. Description of the Building | : | A two-storey research and laboratory building that shall serve as the research arm of the College of Science and Mathematics. Horizontal expansion of the building shall be anticipated to accommodate the growth and addition of other departments. |
| C. Total Floor Area            | : | Approximately 1,800 square meters  |
| D. End-User                    | : | UP Mindanao College of Science and Mathematics (CSM)   |
| E. Implementing Agency         | : | University of the Philippines Mindanao through its Campus Planning and Development Office (CPDO) under the Office of the Chancellor  |

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- F. Design-and-Build Contract Duration : 720 calendar days
- G. Project Management Contract Duration : 840 calendar days

### **III. DEFINITION OF TERMS**

- A. UNIVERSITY shall mean the University of the Philippines Mindanao.
- B. END-USER shall mean the UP Mindanao College of Science and Mathematics (CSM).
- C. IMPLEMENTING AGENCY shall mean the University of the Philippines Mindanao through its Campus Planning and Development Office or CPDO.
- D. PROJECT MANAGEMENT CONSULTANT shall mean the firm/company providing project management services, duly registered with the Security and Exchange Commission (SEC) or the Department of Trade and Industry (DTI), owned and managed by professionals qualified to undertake work in project management. The PROJECT MANAGEMENT CONSULTANT shall be duly engaged by the UNIVERSITY for the PROJECT.
- E. PROJECT MANAGEMENT TEAM shall mean the group of architects and engineers of the PROJECT MANAGEMENT CONSULTANT assigned to be responsible for the project management of the PROJECT.
- F. PROJECT MANAGEMENT CONTRACT or CONTRACT shall mean the written agreement entered into between the UNIVERSITY and the PROJECT MANAGEMENT CONSULTANT for the project management of the PROJECT.
- G. PROJECT MANAGEMENT CONTRACT DOCUMENTS shall mean the agreements, including General Conditions and Special Conditions and this Terms of Reference, as well as any and all documents which are referred to in the CONTRACT as CONTRACT DOCUMENTS, or any modifications, revisions or alterations authorized by the UNIVERSITY and agreed to by the PROJECT MANAGEMENT CONSULTANT during negotiation.
- H. DESIGN-AND-BUILD CONTRACTOR shall mean the architectural and engineering design and construction firm/company or the architectural design firm with an affiliated engineering design and construction firm/company duly registered with the Securities and Exchange Commission (SEC) or the Department of Trade and Industry (DTI), owned and managed by professionals qualified to undertake work in the fields of architecture, engineering, construction and allied services, duly engaged by the UNIVERSITY to "design-and-build" the UP Mindanao CSM Research Development and Extension (CSM RDE) Building.
- I. DESIGN-AND-BUILD CONTRACT shall mean the written agreement entered into between the UNIVERSITY and the DESIGN-AND-BUILD CONTRACTOR engaged to design and build the PROJECT.
- J. DESIGN-AND-BUILD CONTRACT DOCUMENTS shall mean the Philippine Bidding Documents and the Terms of Reference as prepared by the IMPLEMENTING AGENCY; and the duly-approved plans, specifications, estimates, bill of quantities and other documents that define the technical requirements of the PROJECT, as prepared by the DESIGN-AND-BUILD CONTRACTOR and duly approved by the IMPLEMENTING AGENCY.

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- K. DESIGN TEAM shall mean the complete architectural and engineering team of the winning DESIGN-AND-BUILD CONTRACTOR that will handle the design component of the PROJECT. The DESIGN TEAM shall be led and supervised by the architect or architectural team of the DESIGN-AND-BUILD CONTRACTOR and shall be composed of registered and licensed engineers and other manpower as required.
- L. PROJECT or WORK shall mean the Design and Construction of the UP Mindanao CSM Research Development and Extension (CSM RDE) Building and all the works/activities and/or scope of works to be performed and completed, as well as any revisions, alterations and any extra work ordered to be done by the UNIVERSITY under the CONTRACT.
- M. PROJECT SITE shall mean the place or area where the WORK is or will be carried out.
- N. CONTRACTOR QUALITY CONTROL (CQC) shall pertain to the process wherein the DESIGN-AND-BUILD CONTRACTOR manages his own, his suppliers' and his subcontractors' activities to comply with contract requirements.
- O. CONTRACTOR QUALITY CONTROL PLAN (CQCP) shall be the documentation of the process of Contractor Quality Control, an outline of the procedures and personnel to be employed by the DESIGN-AND-BUILD CONTRACTOR to ensure that completed work complies with the DESIGN-AND-BUILD CONTRACT DOCUMENTS. The CQCP includes, but is not limited to, process control testing, inspection/control procedures, quality records and personnel qualifications. The CQCP shall be coordinated with jobsite safety and health requirements to effect zero defects and zero accidents. During construction, the PROJECT MANAGEMENT TEAM shall guide and assist the DESIGN-AND-BUILD CONTRACTOR in developing and executing the CQCP.
- P. PROGRAM shall be the set of documents submitted by the DESIGN-AND-BUILD CONTRACTOR for review of the PROJECT MANAGEMENT CONSULTANT and recommendation for approval by the IMPLEMENTING AGENCY which includes, but is not limited to, the schedule of architectural and engineering design as well as design and construction activities, the resources schedule (i.e. equipment utilization schedule, financial program, construction safety and health program and manpower schedule) and the CONTRACTOR QUALITY CONTROL PLAN.
- Q. PROJECT MANAGEMENT PLAN shall be the key document prepared by the PROJECT MANAGEMENT CONSULTANT that defines the basis of all project work. It shall be composed of the following: Scope Management Plan, Time Management Plan, Cost Management Plan, Quality Management Plan, Communications Management Plan, Human Resource Management Plan, Risk Management Plan, Procurement Management Plan, and Stakeholder Management Plan. It shall be constantly updated by the PROJECT MANAGEMENT CONSULTANT throughout the project cycle to provide greater precision in all aspects in order to meet the defined scope of the PROJECT.
- R. WORK BREAKDOWN STRUCTURE (WBS) shall be a document prepared by the PROJECT MANAGEMENT CONSULTANT showing the hierarchical decomposition of the total scope of work to be carried out by the UNIVERSITY and the DESIGN-AND-BUILD CONTRACTOR to accomplish the objectives of the PROJECT. This document shall organize and define the total scope of the PROJECT, and represent the work specified in the Terms of Reference for the DESIGN-AND-BUILD CONTRACT.
- S. MASTER PROJECT TIME SCHEDULE shall be a schedule prepared by the PROJECT MANAGEMENT CONSULTANT which incorporates all activities related to the PROJECT including the activities of the DESIGN-AND-BUILD CONTRACTOR, including other trades and suppliers, the IMPLEMENTING AGENCY, the END-USER and other stakeholders.

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#### **IV. DUTIES AND RESPONSIBILITIES OF THE PROJECT MANAGEMENT CONSULTANT**

- A. The PROJECT MANAGEMENT CONSULTANT shall proactively ensure that all activities are aligned with the University's overall goals and objectives for the PROJECT by planning, managing, overseeing, and fine-tuning all of the details before, during, and after the execution of the DESIGN-AND-BUILD CONTRACT. The PROJECT MANAGEMENT CONSULTANT shall act as advocate and representative of the UNIVERSITY throughout the PROJECT so that all of the goals from beginning to end are satisfactorily met and accomplished.
- B. For the proper execution of each Phase of the PROJECT, the PROJECT MANAGEMENT CONSULTANT shall:
1. Establish and apply project management concepts, policies, systems, techniques and procedures, for the review and approval of the IMPLEMENTING AGENCY prior to implementation.
  2. Review and assess the identified project scope, objectives, parameters (including schedule and cost), and course of action required to attain the objectives as prepared by the IMPLEMENTING AGENCY and recommend improvements and/or changes to the same.
  3. Help integrate all stakeholders, elements and phases of the PROJECT from start to finish by addressing the various needs, concerns, and expectations as the PROJECT is planned and carried out.
  4. Balance the competing project constraints, which include, but are not limited to scope, quality, schedule, budget, resources, and risks to satisfy the PROJECT requirements.
  5. Prepare a comprehensive PROJECT MANAGEMENT PLAN that identifies and sequences the activities needed to successfully complete the PROJECT and satisfy its specifications.
  6. Develop the MASTER PROJECT TIME SCHEDULE for project completion that effectively allocates the established resources (time, money, equipment, etc.) to the activities.
  7. Develop the WORK BREAKDOWN STRUCTURE (WBS) for project completion that clearly identifies the work that has to be done at each stage of the PROJECT and their sequence.
  8. Assist in the review of the procurement documents prepared by the IMPLEMENTING AGENCY and in the evaluation of submitted bids for the DESIGN-AND-BUILD CONTRACT.
  9. Act as liaison between the UNIVERSITY and the DESIGN-AND-BUILD CONTRACTOR and other external entities to ensure smooth, constant communication among the stakeholders.
  10. Track, review and regulate the progress of the design development in relation to the project objectives and parameters, identify any areas in which changes to the submitted and approved DESIGN-AND-BUILD CONTRACT DOCUMENTS are required, and initiate the corresponding changes as necessary.
  11. Review and have working knowledge of all DESIGN-AND-BUILD CONTRACT DOCUMENTS as well as all pertinent codes and policies, including the 2016 Revised IRR of R.A. 9184, and

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design and construction requirements for research laboratory buildings for the proper and timely implementation of the PROJECT.

12. Evaluate the plans, specifications, estimates, bill of quantities and other DESIGN-AND-BUILD CONTRACT DOCUMENTS that define the technical requirements of the PROJECT, as prepared by the DESIGN-AND-BUILD CONTRACTOR, to ensure that these documents comply with all the provisions as prescribed in the Philippine Bidding Documents and the Terms of Reference.
13. Call and preside over the initial, regular and special coordination meetings among the DESIGN-AND-BUILD CONTRACTOR, IMPLEMENTING AGENCY, END-USER, and other stakeholders directly or indirectly involved in the PROJECT, and record the minutes thereof for dissemination and documentation.
14. Oversee the quality of work of the DESIGN-AND-BUILD CONTRACTOR through regular site visits, punch-list walkthroughs, reports at weekly project meetings, tracking and reviewing change orders, making sure all activities are according to the schedule, and challenging lead times for products and delays.
15. Provide professional advice and technical assistance and recommendations, including recommendations on Owner-Supplied Materials and the value engineering evaluation of the PROJECT. Value engineering analysis of the design may be performed after the submission and opening of bids, upon the request or direction and approval of the IMPLEMENTING AGENCY.
16. Provide all supplies and equipment for the performance of its duties and responsibilities, as outlined in this Terms of Reference, for the project management of the PROJECT.
17. Prepare weekly and monthly progress reports before, during, and after the execution of the DESIGN-AND-BUILD CONTRACT. Such reports shall include, among others, summaries, letters, reports, photos, minutes of meetings, and other documents related to the PROJECT. The weekly and monthly reports shall be submitted on the schedule agreed upon by the PROJECT MANAGEMENT CONSULTANT and the IMPLEMENTING AGENCY.
18. Render full quantity surveying services, in time for the conduct of a JOINT SURVEY of the site and the joint preparation of the Bill of Quantities between the PROJECT MANAGEMENT TEAM and the DESIGN-AND-BUILD CONTRACTOR, as required by the General Conditions of the Contract. Should there be any discrepancies between Bill of Quantities submitted by the DESIGN-AND-BUILD CONTRACTOR and the Bill of Quantities after the joint quantification, the differences shall not be considered as variations.
19. Review, monitor and report deviations on the PROJECT MANAGEMENT PLAN, WORK BREAKDOWN STRUCTURE, MASTER PROJECT TIME SCHEDULE, DESIGN-AND-BUILD CONTRACT DOCUMENTS, and other pertinent documents to the IMPLEMENTING AGENCY and END-USER, and recommend remedial measures.
20. Ensure establishment and maintenance of a proper electronic and paper Project Management Information System that all appropriately documents and secures all information related to the PROJECT.
21. Finalize all activities to formally close the PROJECT, including the transfer of all project deliverables, documents, files, equipment, and materials to the IMPLEMENTING AGENCY, END-USER, and UNIVERSITY.

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- C. In case the DESIGN-AND-BUILD CONTRACTOR shall have an early start in design or in construction, the PROJECT MANAGEMENT CONSULTANT shall perform all its duties and responsibilities as stipulated in this Terms of Reference at no extra cost to the UNIVERSITY.
- D. In case of gross negligence or willful misconduct on the part of the PROJECT MANAGEMENT CONSULTANT, or on the part of any person or firm acting in behalf of the PROJECT MANAGEMENT CONSULTANT, in carrying out the Project Management Services, the PROJECT MANAGEMENT CONSULTANT shall be liable for any direct and/or indirect loss or damage to the UNIVERSITY.

## **V. SCOPE OF SERVICES BY PHASE**

### **A. Project Analysis Phase**

- 1. Organizational Review
  - a. Determine and assess the operations and procedures of the IMPLEMENTING AGENCY, END-USER, and UNIVERSITY to establish the required monitoring and reporting criteria. This may involve a determination of the following:
    - i. Project stakeholders and organizational structure
    - ii. Working procedures including for reporting and documents approval, budget allocation and billing requests, etc.
    - iii. Meeting schedules/types of the meetings required/attendance at meetings
    - iv. Communication channels and methods of coordinating design with operating requirements, furniture, fixtures and equipment (FF&E)/operating supplies & equipment (OS&E) purchasing, University's equipment installation, construction, and project completion and turn-over
    - v. Assess the needs related to the project's logistics during construction. This may include site security, construction parking and access requirements (which could be phased depending upon the stages of the construction)
    - vi. Assess the project impacts to any adjoining property for construction
- 2. Review of Design-and-Build Procurement Documents
  - a. Access the PROJECT SITE and familiarize with the terrain, climatic conditions, required easements, availability and location of tapping points, and other conditions that have direction bearing on the PROJECT.
  - b. Evaluate and refine the prepared project scope, objectives, parameters (including schedule and cost), and course of action required to attain the objectives.
  - c. Evaluate and ensure that all procurement documents, including the conceptual design and plans, prepared by the UNIVERSITY are clear, coordinated, and encapsulate the requirements and expectations of the END-USER and UNIVERSITY.
  - d. Submit and discuss with the END-USER and IMPLEMENTING AGENCY any recommendations for the improvement of the Design-and-Build procurement documents, including those that may affect the project scope and deliverables.
  - e. Submit and discuss with the IMPLEMENTING AGENCY any recommendations for the improvement of the Selection Criteria for the DESIGN-AND-BUILD CONTRACTOR and

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DESIGN TEAM, including that of the required Laboratory Planner/Specialist, for approval of the UNIVERSITY.

- f. Prepare bid bulletins for inclusion in the bidding process for the DESIGN-AND-BUILD CONTRACTOR.
3. Assess the status of the PROJECT SITE and coordinate with the IMPLEMENTING AGENCY to ensure that the necessary right-of-way is secured and that the DESIGN-AND-BUILD CONTRACTOR is granted possession of site upon issuance of the Permit to Construct.
4. Develop the PROJECT MANAGEMENT PLAN needed for the successful management of the PROJECT.
5. Develop the MASTER PROJECT TIME SCHEDULE and WORK BREAKDOWN STRUCTURE for the entire project.

## **B. ProcurementPhase**

1. Bidding
  - a. Represent the UNIVERSITY in bidding activities as required.
  - b. Arrange a PROJECT SITE walk-through as part of the bidders' pre-bid requirements and prepare and issue the Certificate of Site Inspection.
  - c. Evaluate the bids and prepare a comparison matrix of the bids.
  - d. Ensure that eligibility/qualification and competency requirements of the Winning Bidder's DESIGN TEAM are met, including that of the required Laboratory Planner/Specialist.
  - e. Finalize contract amendment requirements, if any, for inclusion in the bid process.
  - f. Record the design and construction details included in the bidders' walkthrough presentations for inclusion in the DESIGN-AND-BUILD CONTRACT as necessary.
  - g. Upon request or direction and approval of the UNIVERSITY, assess value engineering opportunities solicited from bidders, if any.
  - h. Solicit comments from all bidders regarding areas of concern, omission, or ambiguity in the bid documents identified during bidding and submit a comprehensive report to the IMPLEMENTING AGENCY.
2. Post-Qualification and Award
  - a. Prior to awarding of the DESIGN-AND-BUILD CONTRACT, initiate the completion of lacking documents and/or rectification of errors in the Winning Bidder's interpretation of the project requirements, including any error or misinterpretation in the design development of the Conceptual Design and Plans.
  - b. Finalize the review of value engineering solutions.
  - c. Initiate the development of a detailed progress schedule with the DESIGN-AND-BUILD CONTRACTOR.

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- d. Define the Pay Application process for the DESIGN-AND-BUILD CONTRACTOR.
  - e. Define the project administration procedures for the DESIGN-AND-BUILD CONTRACTOR.
  - f. Define the Change Order substantiation procedures as stipulated in the contract.
  - g. Refine and submit the project budget and the project's cash flow projections.
3. Refine and submit the PROJECT MANAGEMENT PLAN, MASTER PROJECT TIME SCHEDULE, WORK BREAKDOWN STRUCTURE, and other Project Documents based on developments and updates throughout the procurement phase.

### **C. Planning Phase**

1. Monitor and manage all planning activities to ensure their timely conduct.
2. Review and have working knowledge of all DESIGN-AND-BUILD CONTRACT DOCUMENTS as well as all pertinent codes and policies, including the 2016 Revised IRR of R.A. 9184 for the proper and timely implementation of the PROJECT.
3. Review and have working knowledge of research laboratory design and construction guidelines and standards for the proper planning and execution of the END-USER requirements and expectations.
4. Review and recommend improvements or approval of all submittals required from the DESIGN-AND-BUILD CONTRACTOR prior to the scheduled Pre-Design Conference.
5. Facilitate the re-orientation of the DESIGN-AND-BUILD CONTRACTOR on the project scope, objectives, parameters (including schedule and cost), and course of action required to attain the objectives.
6. Set-up the DESIGN TEAM organization, lines of authority, lines of communication and procedural forms and data sheets among the members comprising the DESIGN TEAM, to efficiently and effectively apply design standards, concepts, policies, systems, techniques and procedures, as approved by the IMPLEMENTING AGENCY.
7. Confirm the validity of the DESIGN-AND-BUILD CONTRACTOR Requests for Payment through detailed evaluation of submittals and documents versus the required output.
8. Project Documentation
  - a. Prepare and submit monthly progress reports through the course of the design duration of the PROJECT. The report shall be in accordance with the format approved by the IMPLEMENTING AGENCY. Oral reports may be given when required, followed by a written letter and/or report.
  - b. Maintain records of all submittals, plans, communication letters, material samples, applicable codes, permits, deliveries and other pertinent documents.



9. Refine and submit the PROJECT MANAGEMENT PLAN, MASTER PROJECT TIME SCHEDULE, WORK BREAKDOWN STRUCTURE, and other Project Documents based on developments and updates throughout the planning phase.

#### **D. Design Phase**

1. Monitor and manage all design activities and outputs to ensure that the project requirements are met and are according to budget, schedule, function, aesthetics, and low maintenance and running costs.
2. Conduct the Pre-Design Conference and subsequent Design Coordination meetings/consultations among the END-USER, IMPLEMENTING AGENCY, DESIGN-AND-BUILD CONTRACTOR and other entities directly or indirectly involved in the PROJECT to ascertain project requirements and to further develop and finalize all plans and document requirements, and record the minutes thereof.
3. Coordinate, evaluate, and recommend for approval the results of the DESIGN-AND-BUILD CONTRACTOR's Preliminary Survey and Mapping, Preliminary Investigations, and other due diligence investigations.
4. Immediately upon mobilization, conduct a joint Bill of Quantities (BOQ) Review with the DESIGN-AND-BUILD CONTRACTOR.
5. Review of Design Development and Contract Documents
  - a. Evaluate and ensure that all plans, specifications, bill of quantities, design reports, construction schedule, and other documents submitted by the DESIGN TEAM:
    - i. are clear, coordinated and complete;
    - ii. can be executed within quality, cost and time parameters;
    - iii. can be successfully constructed, operated and maintained.
  - b. Evaluate the construction schedule required at various phases by CPM analysis of the project activities in order to make it more time and cost efficient. Comments and changes in the submitted CPM schedule by the DESIGN-AND-BUILD CONTRACTOR shall be allowed provided that the proposed changes do not cause the overall construction schedule to exceed or be longer than the project duration specified in the Terms of Reference.
  - c. Recommend and discuss with the IMPLEMENTING AGENCY and END-USER the findings and any comments/recommendations resulting from the evaluation of the various documents, procedures, and other details that may contribute to the proper IMPLEMENTATION of the PROJECT.
  - d. Issue Design Review documents to ensure that the DESIGN-AND-BUILD CONTRACT requirements and the END-USER and UNIVERSITY expectations are met.
6. Render Quantity Surveying Services, more specifically:
  - a. Undertake a Quantity Take-Off to verify the Bill of Quantities prepared by the DESIGN-AND-BUILD CONTRACTOR.

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- b. Cost Planning and Control
    - i. Prepare detailed cost plan to verify cost estimates prepared by the DESIGN-AND-BUILD CONTRACTOR.
    - ii. Analyze detailed cost plan into elements, based upon approximate quantities and priced at composite rates.
    - iii. Prepare cash flow forecasts based on the cost estimate and project PROGRAM, including regular updating and preparation of a schedule of progress milestone events.
  - c. Recommend and discuss with the IMPLEMENTING AGENCY and END-USER the findings and any comments/recommendations resulting from the quantity survey of the PROJECT.
7. Set-up the lines of communication between the PROJECT MANAGEMENT TEAM, the DESIGN TEAM, the END-USER and the IMPLEMENTING AGENCY insofar as the design process PROJECT is concerned.
  8. Monitor design standards and guidelines, rules and regulations, local, national or as stipulated by the UNIVERSITY through the IMPLEMENTING AGENCY in so far as research laboratory design is concerned.
  9. Clarify design problems, including those caused by unforeseen contingencies and expediencies, coordinating their resolution with the END-USER, IMPLEMENTING AGENCY, and DESIGN TEAM as required, such that the implementation of the design phase and of the PROJECT shall not be delayed.
  10. Evaluate, in consultation with the DESIGN TEAM, the latter's claims, recommendations for design revisions and suggested substitutions, and accordingly recommend approval or disapproval to the IMPLEMENTING AGENCY, such that the implementation of the design phase and the PROJECT shall not be delayed.
  11. Review, evaluate and process all applications for billing or payments of the DESIGN-AND-BUILD CONTRACTOR per approved procedures of the IMPLEMENTING AGENCY.
  12. Confirm the validity of the DESIGN-AND-BUILD CONTRACTOR Requests for Payment through detailed evaluation of design plans and documents versus the required output per stage of the design phase.
  13. Monitor all design development and changes that may have building estimate and delivery time impacts, regularly reporting changes and making projections that may affect the design phase completion.
  14. Ensure that the END-USER Operation Equipment Requirements are integrated into the design.
  15. Select a Furniture, Fixtures and Equipment (FF&E)/ Operating Supplies and Equipment (OS&E) University Purchasing if appropriate and necessary.
  16. Develop a tight and clearly understandable Construction Contract to minimize Change Orders.
  17. Schedule Control

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- a. Prepare a Detailed Design Schedule based on the MASTER PROJECT TIME SCHEDULE for all activities of the PROJECT and ensure, through regular updating, that the DESIGN-AND-BUILD CONTRACTOR, IMPLEMENTING AGENCY, END-USER and other entities directly or indirectly involved in the design phase are fully and regularly informed of the status of the time schedule of the PROJECT.
  - b. Monitor the respective time schedules of the DESIGN-AND-BUILD CONTRACTOR and other entities directly or indirectly involved in the PROJECT in accordance with a MASTER PROJECT TIME SCHEDULE, recommending and taking corrective actions when deviations occur.
18. Project Documentation
- a. Prepare and submit monthly progress reports through the course of the design duration of the PROJECT. The report shall be in accordance with the format approved by the IMPLEMENTING AGENCY. Oral reports may be given when required, followed by a written letter and/or report.
  - b. Maintain records of all submittals, plans, communication letters, material samples, applicable codes, permits, deliveries and other pertinent documents.
  - c. Develop and maintain an electronic design phase information system that details schedules, submittals, design standards, design reviews, cost controls, quality controls, and other information related to the PROJECT.
  - d. Assist in the preparation and filing of the required documents to secure approval of the required permits.
10. Refine and submit the PROJECT MANAGEMENT PLAN, MASTER PROJECT TIME SCHEDULE, WORK BREAKDOWN STRUCTURE, and other Project Documents based on developments and updates throughout the design phase.

#### **E. Construction Phase**

1. Monitor and manage all construction activities to ensure that the PROJECT requirements are met and are according to quality, budget, and schedule.
2. Evaluate all issues and concerns that may arise during construction and recommend solutions to the IMPLEMENTING AGENCY for approval prior to implementation.
3. Evaluate and resolve any Change Order applications for the approval of the UNIVERSITY.
4. Review of Construction Drawings and Specifications
  - a. Review all DESIGN-AND-BUILD CONTRACT DOCUMENTS (drawings, specifications, design reports, etc.) that are submitted for construction, including those released by the IMPLEMENTING AGENCY, for the proper and timely implementation of the PROJECT.
  - b. Review the PROGRAM submitted by the DESIGN-AND-BUILD CONTRACTOR, and if found acceptable, recommend for approval to the IMPLEMENTING AGENCY.

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- c. Monitor, oversee and supervise the execution of the PROJECT at all times for compliance with plans, specifications and other DESIGN-AND-BUILD CONTRACT DOCUMENTS.
5. Set-up the on-site organization, lines of authority, lines of communication and procedural forms and data sheets among the members comprising the Construction Management Team, to efficiently and effectively apply construction management concepts, policies, systems, techniques and procedures, as approved by the IMPLEMENTING AGENCY.
6. Set-up the lines of communication between the PROJECT MANAGEMENT TEAM, the DESIGN-AND-BUILD CONTRACTOR, the END-USER and the IMPLEMENTING AGENCY insofar as the implementation of the PROJECT is concerned.
7. Conduct the initial and regular coordination meetings among the DESIGN-AND-BUILD CONTRACTOR, IMPLEMENTING AGENCY, END-USER, and other stakeholders directly or indirectly involved in the PROJECT, and record the minutes thereof for dissemination and documentation.
8. Monitor rules and regulations, local, national or as stipulated by the UNIVERSITY through the IMPLEMENTING AGENCY, at the PROJECT SITE, in so far as construction activities are concerned.
9. Monitor safety programs developed by the DESIGN-AND-BUILD CONTRACTOR, especially those safety provisions for the overall works as provided by the General Conditions of the DESIGN-AND-BUILD CONTRACT, which also include on-site security, first aid, fire protection and other safety programs as approved by the IMPLEMENTING AGENCY, including protection of END-USER-furnished materials and equipment. The DESIGN-AND-BUILD CONTRACTOR shall be made aware that safety provisions do not relieve them of the responsibilities and liabilities for safety and/or property damages.
10. Clarify technical problems, including those caused by unforeseen contingencies and expedencies, coordinating their resolution with the DESIGN-AND-BUILD CONTRACTOR, IMPLEMENTING AGENCY, END-USER, and as required, such that the implementation of the PROJECT shall not be delayed.
11. Evaluate, in consultation with the DESIGN-AND-BUILD CONTRACTOR, the latter's claims, recommendations for field revisions, suggested substitutions and requests for variation order, and accordingly recommend approval or disapproval to the IMPLEMENTING AGENCY, such that the implementation of the PROJECT shall not be delayed.
12. Through project visits, field tests and analysis of project schedule of values, confirm the validity of DESIGN-AND-BUILD CONTRACTOR Requests for Payment through detailed evaluation of construction plans versus completed work and actual deliveries of equipment to the site.
13. Monitor all costs for budget impacts, regularly reporting changes and making projections of cost and time to complete.
14. Conduct regular acceptance inspections of the PROJECT based on the approved Phasing Plan or as approved by the IMPLEMENTING AGENCY. Prepare a list of variances from the approved construction contract documents and defects (punch lists) and follow-up on the completion of approved corrective works.

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15. Monitor Start-Up and Testing of Building System, execute Building Commissioning, and complete CONTRACT close-out with the DESIGN-AND-BUILD CONTRACTOR.
16. Monitor the DESIGN-AND-BUILD CONTRACTOR's production of as-built drawings on printed plans during construction through daily mark-ups and in electronic files of computer aided design document formats.
17. Review, evaluate and process all applications for billing or payments of the DESIGN-AND-BUILD CONTRACTOR per approved procedures of the IMPLEMENTING AGENCY.
18. Recommend and discuss with the IMPLEMENTING AGENCY and END-USER the findings and any comments/recommendations that may contribute to the proper IMPLEMENTATION of the PROJECT.
19. Quality Control during Construction
  - a. Coordinate with the DESIGN-AND-BUILD CONTRACTOR in developing and executing the CQCP to ensure compliance by the DESIGN-AND-BUILD CONTRACTOR with plans, specifications, bill of quantities and other DESIGN-AND-BUILD CONTRACT DOCUMENTS.
  - b. Guide and assist the IMPLEMENTING AGENCY and the DESIGN-AND-BUILD CONTRACTOR in the implementation of the PROJECT in accordance with the DESIGN-AND-BUILD CONTRACT DOCUMENTS.
  - c. Check the materials used and workmanship employed in the execution of the PROJECT for compliance with plans, specifications and other DESIGN-AND-BUILD CONTRACT DOCUMENTS, in the process protecting the interests of the UNIVERSITY in terms of quality, economy and time per requirements of the DESIGN-AND-BUILD CONTRACT.
  - d. Supervise and monitor the inspection, testing and acceptance of all materials (including University-furnished materials) before the materials are utilized in the PROJECT. Evaluation reports and recommendations of the test results shall be submitted to the IMPLEMENTING AGENCY for review.
  - e. Physically inspect the execution of the PROJECT, including the installation of equipment and materials by the DESIGN-AND-BUILD CONTRACTOR, in accordance with the DESIGN-AND-BUILD CONTRACT DOCUMENTS.
  - f. Conduct factory and plant inspections when required, and report findings and prepare recommendations to the IMPLEMENTING AGENCY.
  - g. Inspect and audit the DESIGN-AND-BUILD CONTRACTOR'S execution of the PROJECT at the PROJECT SITE, reporting and initiating rectification of any deviation from the DESIGN-AND-BUILD CONTRACT DOCUMENTS.
  - h. Recommend suspension of work, in whole or in part (per the procedures of the IMPLEMENTING AGENCY), if the work is deemed non-complying with the DESIGN-AND-BUILD CONTRACT DOCUMENTS, or against accepted construction and/or engineering standards and practices.
  - i. Set-up regular on-site inspection visits of the PROJECT with the DESIGN-AND-BUILD CONTRACTOR and the IMPLEMENTING AGENCY.

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- j. Prepare a punch list of all items of the PROJECT which require correction after the PROJECT is substantially completed and before the final joint inspection is conducted.
- k. Ensure that each item in the punch list is corrected before PROJECT completion is recommended to the IMPLEMENTING AGENCY.
- l. Set-up a final on-site inspection visit of the PROJECT with the DESIGN-AND-BUILD CONTRACTOR, IMPLEMENTING AGENCY, and the END-USER at the completion of the PROJECT.

20. Cost Control

- a. Advise and assist the IMPLEMENTING AGENCY in maintaining control of costs from the start of the PROJECT up to its completion and close-out.
- b. Periodically review and prepare estimates as needed, for the approval of the IMPLEMENTING AGENCY, such that neither the MASTER PROJECT TIME SCHEDULE nor the DESIGN-AND-BUILD CONTRACT amount is exceeded unless necessary, in which case, a variation order shall be recommended.
- c. Review, evaluate and process all applications for progress billing or payments of the DESIGN-AND-BUILD CONTRACTOR per approved procedures of the IMPLEMENTING AGENCY.
- d. Prepare monthly cash flow forecasts based on the cost estimate and project PROGRAM submitted by the DESIGN-AND-BUILD CONTRACTOR upon receipt of Notice of Award.

21. Schedule Control

- a. Review the DESIGN-AND-BUILD CONTRACTOR'S construction schedule by Critical Path Method (CPM) analysis, prepare a Project Time Schedule for all activities of the PROJECT and ensure, through regular updating of the CPM analysis, that the DESIGN-AND-BUILD CONTRACTOR, IMPLEMENTING AGENCY, END-USER and other stakeholders directly or indirectly involved in the execution of the PROJECT are fully and regularly informed of the status of the time schedule of the PROJECT.
- b. Ensure, through adherence of the DESIGN-AND-BUILD CONTRACTOR to its approved CQCP, that time, labor, materials, and equipment of the DESIGN-AND-BUILD CONTRACTOR are adequate and available before each construction activity, for timely performance and prevention of delays.
- c. Monitor the respective time schedules of the DESIGN-AND-BUILD CONTRACTOR and other stakeholders directly or indirectly involved in the PROJECT in accordance with a MASTER PROJECT TIME SCHEDULE, recommending and taking corrective actions when deviations occur.

22. Project Documentation

- a. Prepare and submit weekly and monthly progress reports through the course of the DESIGN-AND-BUILD CONTRACT duration of the PROJECT. The report shall be in accordance with the format approved by the IMPLEMENTING AGENCY. Oral reports may be given when required, followed by a written letter and/or report.

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- b. Develop and maintain an electronic construction management information system that details schedules, cost controls, quality controls, safety programs, site conditions, warehousing management of Owner-Supplied Materials and other information related to the PROJECT.
  - c. Develop and maintain an electronic document control and project records system, consisting of all commercial, contractual, construction inspection, testing reports, shop drawings, samples of materials and other documents and records related to the PROJECT.
  - d. Maintain records of all visits, contracts, shop drawings, samples, purchase documents, materials, equipment, applicable codes, permits, deliveries and other pertinent documents.
  - e. Ensure that the DESIGN-AND-BUILD CONTRACTOR maintains a current set of records, construction drawings and specifications and any other required PROJECT documents at the PROJECT SITE.
  - f. Monitor the DESIGN-AND-BUILD CONTRACTOR'S production of as-built drawings.
23. Refine and submit the PROJECT MANAGEMENT PLAN, MASTER PROJECT TIME SCHEDULE, WORK BREAKDOWN STRUCTURE, and other Project Documents based on developments and updates throughout the construction phase.

#### **F. Post-Construction Phase**

1. Completion and Final Acceptance
  - a. Assist in application for Certificate of Occupancy and other government/regulatory agency approvals from their respective Authorities.
  - b. Settle any outstanding claims on the project, Construction and FF&E and other sources.
  - c. Certify that the PROJECT is completed in compliance with the provisions stipulated in the DESIGN-AND-BUILD CONTRACT DOCUMENTS.
  - d. Issuance of the Certificate of Completion to be concurred by the IMPLEMENTING AGENCY.
  - e. A Certificate of Final Acceptance of the PROJECT may be issued by the IMPLEMENTING AGENCY one (1) year after the completion date of the PROJECT if requested by the DESIGN-AND-BUILD CONTRACTOR.
2. Close-out
  - a. Coordinate the partial or complete turn-over of the PROJECT to the END-USER.
  - b. Review all documentation and test records of the DESIGN-AND-BUILD CONTRACTOR at the time of turn-over.
  - c. Accept and review for completeness and turn-over to the END-USER, through the IMPLEMENTING AGENCY, all operations and maintenance manuals.

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- d. Assist the END-USER and IMPLEMENTING AGENCY with the provided warehousing management of surplus stock items, as required.
  - e. Coordinate all activities and documentation leading to the final acceptance of the PROJECT by the IMPLEMENTING AGENCY and END-USER.
  - f. Debrief with the IMPLEMENTING AGENCY at completion to ensure that all outstanding problems are solved and a smooth operations start-up is achieved.
3. Inventory List Preparation and Turn-Over
    - a. Determine and prepare the list of scrap and surplus materials of the PROJECT, including those materials supplied by the END-USER, but excluding all materials covered by the guaranteed quantities of the DESIGN-AND-BUILD CONTRACTOR.
    - b. Submit status, utilization report, and inventory list of all properties of the END-USER and UNIVERSITY on the PROJECT SITE.
    - c. Report and turn-over materials, equipment and tools, in excess and owned by the END-USER and UNIVERSITY to the IMPLEMENTING AGENCY.
    - d. Prepare inventory list of excess supplies and equipment used for the performance of its duties and responsibilities as the PROJECT MANAGEMENT TEAM of the PROJECT, and turn-over all such excess supplies and equipment to the IMPLEMENTING AGENCY.
  4. Final Review of As-built Plans
    - a. Review and record all approved deviations of the as-built plans prepared by the DESIGN-AND-BUILD CONTRACTOR prior to finalization for submission to the IMPLEMENTING AGENCY. Review of electronic files shall also be included.
  5. Closing of DESIGN-AND-BUILD CONTRACTOR'S Account
    - a. Assist in the settlement of claims between the UNIVERSITY and DESIGN-AND-BUILD CONTRACTOR, in consultation with the IMPLEMENTING AGENCY.
    - b. Assist the IMPLEMENTING AGENCY in closing the accounts of the DESIGN-AND-BUILD CONTRACTOR in relation to the PROJECT.
  6. Preparation of the Final PROJECT MANAGEMENT PLAN
    - a. Prepare the final PROJECT MANAGEMENT PLAN and other Project Documents which will be submitted to the IMPLEMENTING AGENCY, with observations and recommendations on the contractual, technical and DESIGN-AND-BUILD CONTRACT time performance of the DESIGN-AND-BUILD CONTRACTOR. The Final Project Report should include, among others, logbooks, test results and the history of the PROJECT.

## **VI. SCOPE OF SERVICES BY CATEGORY**

### **A. Program Documentation**

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1. Identify and review program, space, and scope with the END-USER and IMPLEMENTING AGENCY for approval.
2. Communicate budget, schedule, program assumptions, and constraints to the END-USER and IMPLEMENTING AGENCY.
3. Ensure END-USER program needs and requirements are being met.
4. Ensure the CSM Research Development and Extension Building facilities requirements and the University of the Philippines Master Development Plan Development Principles and Design Guidelines (UP MDP DPDG) are being met.

**B. Contracting and Purchasing**

1. Review bid documents and assist in the DESIGN-AND-BUILD CONTRACT selection process.
2. Monitor contract performance, and ensure delivery of services.
3. Monitor purchase orders and provide all supporting documents required. Track phasing of the produced items.
4. Managing project scope and change control and escalates issues to IMPLEMENTING AGENCY.
5. Lead in the preparation of change proposal, Change Orders, and requests. Formulate strategy in dealing with all the change submitted by the implementing contractors.
6. Make and prepare trend report to forecast final cost at completion.

**C. Project Team Leadership**

1. Determine project process, establish project team, and ensure understanding of roles and responsibilities.
2. Oversee agenda of project team meetings and folder and back-up all pertaining documents for proper documentation.
3. Set-up and lead a series of meetings to review design drawings with END-USERS and interface agencies as necessary for approvals for Schematic Design Phase, Design Development Phase, And Construction Documents Phase, and coordinate any response back to the IMPLEMENTING AGENCY.
4. Monitor team performance and intervene when necessary to ensure successful delivery of projects.
5. Provide a "single point of contact" for the IMPLEMENTING AGENCY to the contractors, consultants, and vendors.
6. Coordinate submission of drawings and file appropriate forms and documents for other governing agencies requirements.

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7. Managing project training if needed and ensure cost incurred are within the defined budget.
8. Review and endorse Contractor's personnel to be deployed at the Project site. Submit and endorse to IMPLEMENTING AGENCY for approval.

**D. Financial Management**

1. Create project budget and track project cost noting any variations that arise.
2. Lead re-scoping/value engineering option efforts and develop recommendation for budget mitigation.
3. Review and approve project invoices and ensure timely payment. Submit all documents for approval of the UNIVERSITY.
4. Review and monitor the DESIGN-AND-BUILD CONTRACTOR's Cash flow and evaluate EPC if deliverables are achievable or not.
5. Prepare weekly, mid-month, and monthly report for review, evaluation, and information.
6. Prepare Monthly Progress Update (MPU) to be presented to the IMPLEMENTING AGENCY and executive department as to the status of the project undertaken.

**E. Schedule Management**

1. Establish and monitor project schedule and ensure routine updates and reporting.
2. Lead mitigation planning efforts under project critical path analysis and understand timelines and milestones as per initial plan and find out the gaps.
3. Develop recommendations for schedule mitigations.
4. Monitoring project progress and performance.
5. Review construction methodology to be implemented and the sequencing of work.

**F. Decision Supports**

1. Direct the DESIGN TEAM's and DESIGN-AND-BUILD CONTRACTOR's efforts as needed for project analysis.
2. Prepare and present project information for the IMPLEMENTING AGENCY's and/or END-USER's decisions.

**G. Construction Administration and Quality Assurance**

1. Direct the DESIGN TEAM's and DESIGN-AND-BUILD CONTRACTOR's efforts as needed for project analysis.
2. Prepare and present project information for the IMPLEMENTING AGENCY's and/or END-USER's decisions.

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## **H. Project Coordination**

1. Manage stakeholders, vendors, and other government agencies for coordination of interface issues and concern that affects project schedule.
2. Initiate the set-up for the University's Maintenance Department for any new location address policy, shared spaces, equipment, supplies, and other resources
3. Intervene and take urgent decision or an emergency meeting with the DESIGN-AND-BUILD CONTRACTOR, IMPLEMENTING AGENCY, END-USER, UNIVERSITY, and other stakeholders.

## **I. Health and Safety**

1. Promote a systematic approach to the management of health and safety in construction site.
2. Instigate Project Tool Box Talk and submit weekly report for the UNIVERSITY records and information purposes.
3. Evaluate work and the associated risks of DESIGN-AND-BUILD CONTRACTOR's performed work in their management of health and safety at site.

## **VII. PROJECT MANAGEMENT PERSONNEL**

For the delivery of Project Management Services, the PROJECT MANAGEMENT CONSULTANT shall organize and prepare a manning schedule of personnel for the PROJECT MANAGEMENT TEAM, and its support staff.

The professionals listed are the minimum required members of the PROJECT MANAGEMENT TEAM. The PROJECT MANAGEMENT CONSULTANT may, as needed and at its own expense, deploy additional professionals to the PROJECT MANAGEMENT TEAM for the optimal performance of all Project Management Services, as stipulated in these Terms of Reference, for the PROJECT.

### **A. PROJECT MANAGER / TEAM LEADER**

The Project Manager shall be a senior architect or engineer with at least 8 years professional experience, including assignments in various locations, with at least 5 years of relevant experience in the proposed position on similar and comparable projects in different locations. The Project Manager should have a proven record of managerial capability through the directing/managing of major design and construction works, including projects of a similar cost, scale and magnitude. The Project Manager will coordinate the efforts of the PROJECT MANAGEMENT TEAM, to ensure that management and technical policies are correctly and consistently implemented in all aspects of the PROJECT.

### **B. RESIDENT ENGINEER (RE)**

The Resident Engineer shall be a senior civil engineer having at least 5 years of professional engineering experience with at least 3 years experience as a Resident Engineer, Assistant Resident Engineer or equivalent on similar and comparable construction works, including assignments in different locations. A thorough understanding and experience with international design and construction "best practices", modern design and construction technology and contractual arrangements used for the PROJECT is important.

The Resident Engineer shall render full-time services for this PROJECT until its completion and

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turn-over.

C. QUALITY CONTROL / MATERIALS ENGINEER

The Quality Control/Materials Engineer shall have at least 5 years of professional engineering experience with at least 3 years supervising the testing and evaluation of construction materials used in modern construction techniques on projects of a similar and comparable nature.

D. QUANTITY SURVEYOR (QS)

The Quantity Surveyor shall have at least 5 years of professional engineering experience. This should include quantity surveying supervising experience for at least 2 years on projects of similar and comparable nature.

E. PROJECT ARCHITECT

The Project Architect shall have at least 5 years of professional architectural experience with at least 3 years experience supervising design and construction projects of a similar and comparable nature. A thorough understanding and experience with international design and construction "best practices", modern design and construction technology and contractual arrangements used for the PROJECT is important.

F. CIVIL ENGINEER or STRUCTURAL ENGINEER

The Civil or Structural Engineer shall have at least 5 years of professional engineering experience with at least 3 years supervising the evaluation and testing of structural systems on projects of a similar and comparable nature.

G. ELECTRICAL ENGINEER

The Electrical Engineer shall have at least 5 years of professional engineering experience with at least 3 years supervising the evaluation and testing of electrical systems on projects of a similar and comparable nature.

H. PLUMBING / SANITARY ENGINEER

The Plumbing/Sanitary Engineer shall have at least 5 years of professional engineering experience with at least 3 years supervising the evaluation and testing of plumbing and sanitary systems on projects of a similar and comparable nature.

I. MECHANICAL ENGINEER

The Mechanical Engineer shall have at least 5 years of professional engineering experience with at least 3 years supervising the evaluation and testing of mechanical systems on projects of a similar and comparable nature.

J. GEOTECHNICAL ENGINEER

The Geotechnical Engineer shall have at least 5 years of professional engineering experience with at least 3 years supervising the evaluation and review of the soil investigation report and the most suitable foundation system.

K. ENVIRONMENTAL HEALTH AND SAFETY ENGINEER

The Environmental Health and Safety Engineer shall have at least 5 years of professional engineering experience with at least 3 years managing the environmental, health and safety systems on projects of a similar and comparable nature.

L. LABORATORY PLANNER/SPECIALIST

The Laboratory Planner/Specialist shall be an architect or engineer having professional experience in laboratory programming, design and technical planning for laboratory facilities in areas of

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programming and design; fit-out planning, equipment planning, MEP systems integration, casework specifications, and construction administration.

The Laboratory Planner/Specialist shall have advanced knowledge and experience in laboratory design process, construction documentation, construction administration, materials and methods of construction, model building codes, and accessibility guidelines. He/she shall have advanced understanding of laboratory structural, mechanical and electrical systems and their relationships.

M. COMMISSIONING AGENT (CxA)

The Commissioning Agent shall have at least 5 years of experience as a certified commissioning professional in addition to professional experience with research laboratory buildings. The Commissioning Agent (CxA) shall have technical background and in depth expertise with the commissioning process including verification techniques, functional performance testing, system equipment and Operations and Maintenance (O&M) knowledge. During the preparation of the Schematic Design, Design Development, Contract Documents, and For Construction contract documents, the Commissioning Agent will submit specification sections to ensure completed construction will perform as expected for the END-USER's research work.

N. SUPPORT STAFF

Each member of the PROJECT MANAGEMENT TEAM may each head their respective support personnel for the efficient conduct of project management service for the PROJECT. The support personnel shall undertake the required day-to-day site or office-related activities of Project Management Services.

The following is an indicative list of technical support personnel with their qualifications that may be assigned by the PROJECT MANAGEMENT CONSULTANT. The PROJECT MANAGEMENT CONSULTANT may assign other support personnel from those listed, for the optimal performance of all Project Management Services:

A. SITE CIVIL ENGINEER AND/OR STRUCTURAL ENGINEER

The Site Civil Engineer and/or Structural Engineer shall be a licensed professional with at least 2 years of experience supervising the evaluation and testing of structural systems on research laboratory projects of a comparable nature.

B. SITE QUALITY CONTROL / MATERIALS ENGINEER

The Site Quality Control/Materials Engineer shall be a licensed professional with at least 2 years experience supervising the testing and evaluation of construction materials on research laboratory projects of a comparable nature.

C. SITE QUANTITY SURVEYOR

The Site Quantity Surveyor shall be a licensed professional with at least 2 years experience in cost estimating and quantity surveying on projects of a comparable nature.

D. SITE ARCHITECT

The Site Architect shall be a licensed professional with at least 2 years experience supervising research laboratory construction projects.

E. SITE ELECTRICAL ENGINEER

The Site Electrical Engineer shall be a licensed professional with at least 2 years experience supervising the evaluation and testing of electrical systems on research laboratory projects of a comparable nature.

F. SITE PLUMBING / SANITARY ENGINEER

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The Site Plumbing/Sanitary Engineer shall be a licensed professional with at least 2 years experience supervising the evaluation and testing of plumbing and sanitary systems on research laboratory projects of a comparable nature.

**G. SITE MECHANICAL ENGINEER**

The Site Mechanical Engineer shall be a licensed professional with at least 2 years supervising the evaluation and testing of mechanical systems on research laboratory projects of a comparable nature.

**VIII. FEES AND EXPENSES**

The PROJECT MANAGEMENT CONSULTANT is expected to provide a summary of their fixed fees and expenses, including taxes and other duties, for providing project management services (the "Contract Price"). The maximum cost of this service contract is for FOUR MILLION, SEVEN HUNDRED SIXTY-NINE THOUSAND, SEVEN HUNDRED FIFTY-THREE PESOS (Php 4,769,753.00).

The UNIVERSITY shall pay the PROJECT MANAGEMENT CONSULTANT based on the following payment schedule:

PHASE		REQUIREMENTS	PORTION OF THE CONTRACT PRICE PER PHASE
A	Pre-Design Phases: Project Analysis, Procurement, and Planning	Billing and completion, submission and acceptance of all requirements	15%
B	Design and Construction Phases	Billing and completion, submission and acceptance of all requirements. If the design and construction contract duration is modified, the remaining balance of the fees due to the PROJECT MANAGEMENT CONSULTANT shall be adjusted accordingly.	75%
C	Post-Construction Phase	Billing and completion, submission and acceptance of all requirements.	10%
		TOTAL	100%

Any extension of contract time involving all phases shall not involve any additional cost on the part of the UNIVERSITY.

**IX. TIME FRAME**

The period for the PROJECT MANAGEMENT CONSULTANT's services is expected to be 840 Calendar Days divided in three major phases as shown below:

	PHASE	CALENDAR DAYS
A	Pre-Design Phases: Project Analysis, Procurement, and Planning The Pre-Design Phases shall commence on the date indicated in the Notice to Proceed for the Project Management Services. The actual Procurement and Planning phases may increase or decrease the planned dates and shall not result in a fee increase.	60
B	Design and Construction Phases	720

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(Des: 180, Con: 540)

The Design and Construction phases shall commence on the date indicated in the Notice to Proceed of the DESIGN-AND-BUILD CONTRACTOR for the DESIGN-AND-BUILD CONTRACT and ends on the date indicated in the Certificate of Completion issued to the IMPLEMENTING AGENCY.

This duration includes the period prior to the Notice to Proceed of the DESIGN-AND-BUILD CONTRACTOR if the same decides to do an early start. The duration shall also include commissioning when the DESIGN-AND-BUILD CONTRACTOR notifies the PROJECT MANAGEMENT CONSULTANT that certain building systems are ready for inspection and commissioning.

- C Post-Construction Phase 60  
The Post-Construction Phase shall commence on the date indicated in the Certificate of Completion issued to the IMPLEMENTING AGENCY.

Pre-Design Phases	60 C.D.	
Design and Construction Phases	720 C.D.	
Post-Construction Phase		60 C.D.

The UNIVERSITY reserves the right to determine the timing of the award in order that both this CONTRACT and that of the DESIGN-AND-BUILD CONTRACT coincide in order for the UNIVERSITY to optimize the schedule and the resources for the UP Mindanao CSM Research Development and Extension Building.

#### **X. SELECTION OF PROJECT MANAGEMENT SERVICES CONSULTANT**

The selection of the PROJECT MANAGEMENT CONSULTANT for the Design and Construction of the UP Mindanao CSM Research Development and Extension Buildings shall be through public/competitive bidding to be conducted, in accordance with the pertinent provisions of the 2016 Revised IRR of R.A. 9184, by the Bids and Awards Committee.

The Bids and Awards Committee shall conduct a detailed evaluation of bids using the Quality-Cost Based Evaluation Procedure.

#### **XI. DISCLOSURE OF RELATIONS**

All bidding documents shall be accompanied by a sworn affidavit of the bidder that it, or any officer of its corporation, is not related to the Head of the Procuring Entity, members of the BAC, the TWG, and the BAC Secretariat, the head of the SPMO or the End-User Unit, and the Project consultants, by consanguinity or affinity up to the third civil degree. Failure to comply with the aforementioned provisions shall be a ground for the automatic disqualification of the bid in consonance with Section 30 of the 2016 Revised IRR of R.A. 9184.

In no case shall the winning bidder or any officer of their corporation be related by consanguinity or affinity up to third civil degree, to the winning bidder of the Design-and-Build Project.

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**XII. RESERVATION CLAUSE**

The Head of the Agency reserves the right to reject any and all Bids, declare a failure of bidding, or not award a contract in the following situations:

- a. If there is *prima facie* evidence of collusion between appropriate public officers or employees of the procuring entity, or between the BAC and any of the bidders, or if the collusion is between or among the bidders themselves, or between a bidder and a third party, including any act which restricts, suppresses or nullifies, or tends to restrict, suppress or nullify competition;
- b. If the BAC is found to have failed in following the prescribed bidding procedures; or
- c. For any justifiable and reasonable grounds where the award of the contract will not redound to the benefits of the government as defined in the 2016 Revised IRR of R.A. 9184.

*END OF DOCUMENT*

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