



CAMPUS PLANNING, DEVELOPMENT & MAINTENANCE OFFICE
UNIVERSITY OF THE PHILIPPINES MANILA

The Health Sciences Center
P. Faura Street, Ermita, Manila Tel. No. 525-2233 Telefax No. 526-8420



RE. No. : **WD214NPG08042016**

PROJECT TITLE : **COMPREHENSIVE EVALUATION OF EXISTING ELECTRICAL LOAD AND SYSTEM, Rizal Hall and Gusaling Andres Bonifacio Building College of Arts and Sciences University of the Philippines, Manila**

SUBJECT : **GENERAL SCOPE OF WORKS**

Division 1 - General

01000 General Requirements

1. The Consultant work covered by this items shall consist of furnishing all labor, materials, supervision, equipment and other necessary incidentals required for the satisfactory completion of the subject project.
2. All Consultant submitting proposal for this project shall first examine the site. All proposals shall take into consideration all such conditions that may affect the work under this contract.
3. The Consultant shall coordinate his work with all parties to ensure proper phasing or schedule of works. The Contractor/Consultant Professional Electrical Engineer or Registered Engineer shall remain at all times in the work site.
4. A logbook shall be available at the site. It shall contain the daily activities in the site, including weather condition, delivery, manpower and other matter pertaining to the condition of the project. It will also serve as data for Consultant and the Project Inspector.
5. Identification Card of construction workers and engineer/representative shall be supplied by CPDMO with corresponding fees; it should be worn at all times while inside the building/campus premises. Those without IDs shall not be allowed to enter the premises for security purposes.
6. No alteration or additional work that will result in an additive or deductive cost change from the Contract shall be allowed without the approval of the Chancellor.
7. Regular coordination meeting shall be conducted with CPDMO, Consultant and End-user for proper project monitoring.
8. Existing condition of the work site shall be documented by the contractor and photos shall be taken before commence of work to ensure such status. Any damage on the areas due to the contractors on going work shall be refurbished at his expense.
9. Prospective Consultant qualification must be in accordance with the RA7920 Sec. 35 *Practice Not Allowed for Firms and Corporations* – The practice of electrical engineering is a professional service admission to which is based on individual and personal

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is a professional service admission to which is based on individual and personal qualifications. Hence, no firm or corporations may be registered or licensed as such for the practice of electrical engineering.

However, persons properly qualified and licensed as professional electrical engineers may, among themselves, form a partnership or association and collectively render electrical engineering service. Individual members of such partnerships or associations shall be responsible for their own respective acts.

02200 Site Preparation

Mobilization / Demobilization

- This work includes mobilization process, provision for warning signs, including barricades, temporary facilities, temporary fences, warning lights and similar safeguards shall be provided by the Contractor/Consultant as they are required for protection of his manpower and others during the construction life of this project.
- Demobilization procedure shall include clearing of the affected areas from all rubbish, trash, debris, and all superfluous building materials and restore all areas that were damaged as affected by the works and leave the site clean to the satisfaction of the Project Inspector or his representative and End-user.

02230 Site Clearing

- Clear the area from all obstructions or as affected due to the implementation of the works required.

02290 Site Monitoring

- Site monitoring shall be a must to the contractor/consultant for the effective implementation of the project. Any question on the actual site conditions shall be properly coordinated with the Project Architect/Engineer concerned for verification.
- Regular coordination meeting shall be done between the Contractor/Consultant or its representative and the Project Architect/Engineer concerned at CPDMO.

Division 16 - Electrical

Workmanship and Materials

- All works shall be done in accordance with the requirements of the latest edition of the Philippine Electrical Code and National Safety Code. Nothing contained in these specifications or shown on the plan shall conflict with the requirements of these Codes, any discrepancies should be consulted to the Project Inspector / Electrical Engineer.

16050 Electrical Works and Methods

Scope of Works

Comprehensive Technical Evaluation of the Existing Electrical Loads and System of College of Arts and Sciences Buildings, Rizal Hall and Gusaling Andres Bonifacio.

- The work covered by this item shall consist of furnishing of all labor and materials, supervision equipment and other necessary incidentals required for the aboved projects.

- The ELECTRICAL CONSULTANT services to be rendered for the College of Arts and Sciences Buildings shall include the following but not limited to the items of works:
 - a. Gathering and validation of pertinent data and information on the existing electrical loads and systems
 - b. Analysis of existing load connections and configuration
 - c. Review of the existing electrical wiring design and schedule of loads.

- Load and Power Quality Audit on College of Arts and Sciences Buildings connected to the existing switchgear using the following equipment:
 - d. Monitoring using Data Loggers
 - e. Power Quality Equipment
 - f. Test Instruments
 - g. Insulation Testing

- Perform Power Quality Analysis and Monitoring of the ff:
 - h. Root Mean Square (RMS) values of AC Current
 - i. Root Mean Square (RMS) values of AC Voltage
 - j. Harmonic measurements
 - k. Power Factor
 - l. Active, Reactive and Apparent Power
 - m. Frequency measurement

- Load Balancing of existing electrical load of College of Arts and Sciences Buildings, Rizal Hall and Gusaling Andres Bonifacio from smallest panel boards, distribution panel up to Low Voltage Switchgear.
 - a. Tracing of power and lighting panel
 - b. Perform the following test:
 - c. Insulating Resistance Test for power cable. The test shall be conducted in the old and newly installed power cables with respect to ground and adjacent cables.
 - d. Contact Resistance test for power breakers.
 - e. Functional Test

- **Documentation Phase;**
 - a. Preparation of as-built plan drawings, load schedule, single line diagram, lighting and power and telecommunications plans
 - b. Submission of data records before and during balancing testing works
 - c. Tagging of switches, convenience outlets and enclosed circuit breakers (ECB) using tagging machines as per panel board directory label of the panel boards, distribution panels and Low Voltage Switchgear (LVSG)

- **Preventive Maintenance**
 - a. Re-tightening of bolts, cleaning (using vacuum) and calibration of existing distribution panel, panel boards and Low Voltage Switchgear
 - b. Clearing of obstruction and stored worn out machines and equipment located at the electrical rooms.
 - c. Provide covers on uncovered panel boards, distribution panel and low voltage switchgear.

- **Restoration Works**

Restoration works such as painting of panel boards, pipes, wire gutter, existing electrical rooms (color for approval) and provide warning signs/stickers on doors of electrical rooms.

- Submission of executive summary of Power Quality Audit in the College of Arts and Sciences Buildings, Rizal Hall and Gusaling Andres Bonifacio findings and recommendations.

NOTE

The foregoing list of item of works does not in anyway limit the responsibility of the Consultant to perform all other works necessary for the completion of the project.

COMPLETION PERIOD

The Contractor is given Seventy Five (75) **calendar days** to execute the required works and all system requirements.

FEES AND EXPENSES

The Electrical Consultant is expected to provide a fixed summary of tier fixed fees and expenses for providing consultancy services [the "Contract Price"]. The maximum cost of this service contract is for **PESOS: ONE MILLION [PhP1,000,000.00]**.

The University shall pay the Electrical Consultant based on the following payment schedule:

	PHASE	REQUIREMENTS	PORTION OF THE CONTRACT PRICE PER PHASE
A	Mobilization	Billing, submission and acceptance of all requirements	15% (PhP150,000.00)
B	I,II,III,IV and V	Billing and completion, submission and acceptance of all requirements (Monthly Progress Report, etc.). If the contract duration is modified, the remaining balance of the fees due to the Electrical Consultant shall be adjusted accordingly.	75% (PhP750,000.00)
C	VI,VII and VIII	Billing and completion, submission and acceptance of all requirements (Final Project Report, turn-over of all documents, etc.).	10% (PhP100,000.00)

CRITERIA FOR EVALUATION OF TECHNICAL PROPOSAL

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ITEM		WEIGHT	RATING
1.	EXPERIENCE IN THE FIELD (MIN. 10 YEARS) The Electrical Consultant must have min of 10 years experience in the industry 10 - 15 Years - 5 pts (15%) 15 years and above - 10 pts (30%)	30.00 %	40.00 %
2.	LIST OF CREDIBLE PERSONNEL A complete team shall be composed of the following: Professional Electrical Engineer, Registered Electrical Engineers and Electrical Technicians Incomplete - 5 pts (20%) Complete - 10 pts (50%)	50.00 %	30.00 %
3.	LIST OF SIMILAR/COMPARABLE PROJECTS (minimum - PhP 1M) As to cost Php.5M - 2M = 5pts (5%) Php2.1M - above = 10 pts (10%)	20.00 %	30.00 %
TOTAL		100.00%	100.00%
MINIMUM SCORE REQUIRED			
			75%

CRITERIA FOR RANKING (QUALITY-COST BASED EVALUATION)


EVALUATION OF TECHNICAL PROPOSAL (80%)					30.00
ITEM		RANGE	SCORE	WEIGHT	RATING
1.	EXPERIENCE IN THE FIELD				
a.	Min. of 10 yrs. In the industry (As per PRC License No.)	5 - 9 yrs = 5 pts (5%) 10 yrs. Above = 10 pts (10%)		15%	0.00
b.	Member of Institute of Integrated Electrical Engineers	5 pts (5%)			
2.	KEY PERSONNEL				
a.	Professional Electrical Engr.	10 pts (15%)			
b.	Registered Electrical Engineer	10 pts (5%)		30%	0.00
c.	Electricians (at least 2)	1-2 staff = 5 pts (5%) 3-5 staff = 10 pts (10%)			
4.	LIST OF SIMILAR/COMPARABLE PROJECTS (with photos)	As to Cost Php.5M - 2M = 5pts (5%) Php2.1M - above = 10pts (10%)		20.00%	0.00

	a. The ability of the consultant to gather and validate of pertinent data and information on the existing electrical loads and systems.	Best – 15 pts (15%)			
	b. Analysis of existing load connections and configuration	Better – 10 pts (10%)			
	c. Review of the existing electrical wiring design and schedule of loads.	Good – 5 pts (5%)			
SUB-TOTAL					
EVALUATION OF FINANCIAL PROPOSAL (20%)					30.00
	ITEM	FORMULA	SCORE	WEIGHT	RATING
	BID AMOUNT	Score = $\frac{100 \times \text{Bid under evaluation}}{\text{Lowest bid}}$		20%	0.00
SUB-TOTAL					


Prepared by:


RENATO B. REMORQUE

Certified Correct:

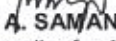

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Recommending Approval:


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 Dean, College of Arts and Sciences


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Approved:


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 18 MAY 2017