TERMS OF REFERENCE

FOR THE PROCUREMENT AND IMPLEMENTATION OF THE COMPLETION OF ELECTRICAL SYSTEM PHILIPPINE SCIENCE HIGH SCHOOL - MIMAROPA REGION CAMPUS BARANGAY RIZAL, ODIONGAN, ROMBLON

I. BACKGROUND

The **PHILIPPINE SCIENCE HIGH SCHOOL-MIMAROPA Region Campus (PSHS-MRC)** through the approved allocation for capital outlays under National Expenditure Program (NEP) 2019 intends to apply the sum of **FIVE MILLION PESOS ONLY (₱ 5,000,000.00)** being the approved budget for the procurement and implementation of the project **COMPLETION OF ELECTRICAL SYSTEM** with the project duration of ONE HUNDRED TWENTY **(120)** calendar days**.**

II. PROJECT DESCRIPTION AND LOCATION

The project will involve the **COMPLETION OF ELECTRICAL SYSTEM** of Philippine Science High School - MIMAROPA Region Campus, Rizal, Odiongan, Romblon pursuant to the technical specifications indicated in this Terms of Reference, and the PSHS System Building Standards and Specifications, enclosed herein.

The project will have an Approved Budget for the Contract (ABC) of **FOUR MILLION NINE HUNDRED TWENTY FIVE THOUSAND PESOS ONLY (₱ 4,925,000.00)** including all taxes and applicable permits, licenses and clearances, for the project mentioned above.

III. Completion of Electrical System

The Construction Project

The project will focus on the completion of the construction of other scope of works that are not included in the Phase 1 of the Electrical Distribution System w/ Genset and 2 Transformers of the campus. The scope of works will be based on the design and approved plan & specification.

Scope of Works

A. Electrical works

1. Supply and installation of Electrical feeder line (Appendix C, C-1 & C-2) for the following Building and Facilities:

    a. Feeder Line for Multipurpose Gymnasium, Oval and outdoor courts (***Common Feeder line***).
    b. Feeder line for Streetlights and Perimeter lights (***Common Feeder line***).
    c. Feeder line for Academic Building 2.
    d. Feeder line for Dormitory Building 1 & 2 (***Common Feeder line***).
    e. Feeder line for Guard House, Admin/Employees Building, and Elevated water tank.

2. Supply and installation of 300 kVA, 3 phase – Generator including the supply and installation of Automatic Transfer Switch.

3. Supply and Installation of additional 3 – 100 or 125 kVA single phase transformer for banking and to increase the load capacity of the campus from 300 kVA, Phase 1 load capacity to 600 or 675 kVA including protection and accessories.

4. Completion of supply and installation of piping's for public address system, CATV, CCTV, and Wlan).

B. Civil & Architectural Works

1. Completion of GENSET Room. (Appendix A)

   a. Structural works
   b. Architectural works
   c. Masonry works
   d. Electrical works
   e. Plumbing works

2. Completion of Electrical/Auxiliary Stub - out. All stubs – out including three (3) stubs – out constructed at Phase 1 shall have sensor type maintenance light. (Appendix B&C)

   a. One (1) Stub - out for Multipurpose Gymnasium, Oval and outdoor courts.
   b. One (1) Stub - out for Streetlights and Perimeter lights.
   c. One (1) Stub - out for Academic Building 2.
   d. One (1) Stub – out for Guard House & Admin/Employees Building
   e. One (1) Stub - out for Elevated water tank.
   f. One (1) Stub - out for Dormitory Building 1&2.

IV. Selection of Contractor

A. Eligibility Requirements

The eligibility requirements for infrastructure projects shall comply with the applicable provisions of Section 23-24 of the IRR of RA 9184.

a. Eligibility Documents

Class "A" Documents

i. PhilGEPS Registration
ii. List of all its on-going government and private contracts within ten (10) years from the submission of bids
   a. CPES rating or

b. Certificate of Completion

iii. PCAB License (Small B, License Category C and D, Registration Particulars – Kinds of Project and Respective Size Ranges should include Electrical Works), Mayor's Permit/Business Permit, SEC Registration/DTI/CDA (whichever is applicable), BIR Registration, Omnibus Sworn Statement.

iv. NFCC computation or CLC.

Class " B " Documents

a. Joint Venture agreement, if applicable.

b. Technical Documents

i. Bid Security (in any form)

ii. Project Requirements

ii1. Organizational Chart

ii2. List of Contractor's Personnel with complete qualification and experience data

ii3. List of Contractor's Equipment units, which are owned, leased, and/or under purchase agreements, supported by certification of availability of equipment from the equipment lessor/vendor for the duration of the project.

ii4. Omnibus Sworn Statement

c. Financial Component

Financial Bid Form

i. Bill of Quantities

ii. Detailed Cost Estimates

iii. Summary Sheet indicating the unit prices of materials, labor rates and equipment rental

iv. Payment schedule

B. Eligibility Criteria

a) The eligibility of contractors shall be based on the legal, technical and financial requirements above-mentioned. In the technical requirements, the contractor (as solo or in joint venture/consortia) should be able to comply with the experience requirements under the IRR of RA 9184, where one of the parties (in a joint venture/consortia) should have at least one similar project in construction, with at least 50% of the cost of the Approved Budget for the Contract (ABC).

b) If the bidder has no experience in construction projects on its own, it may enter into subcontracting, partnerships or joint venture with engineering firms for the portion of the contract.

V. CONSTRUCTION PERSONNEL

The key professionals and the respective qualifications of the **CONSTRUCTION PERSONNEL** shall be as follows:

A. Project Manager

The Project Manager shall be a licensed architect or engineer with at least Five (5) years relevant experience 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 civil engineering works, including projects of a similar magnitude.

B. Project Engineer/ Architect

The Project Engineer/Architect shall be a licensed architect or engineer with at least Five (5) years of experience in similar and comparable projects and shall preferably be knowledgeable in the application of rapid construction technologies.

C. Electrical Engineer

The Electrical Engineer must be a registered Professional Electrical Engineer with at least Five (5) years of experience in the design of lighting, power distribution and preferably knowledgeable in developments in emergent efficient lighting technologies and energy management.

D. Electronics Engineer

The Electronics Engineer must be a registered Professional Electronics Engineer with at least Five (5) years of experience in the related field knowledgeable in communication systems (specifically structured and local area network cabling, PABX), building management systems.

E. Foreman

The Foreman must have at least Five (5) years of experience in similar and comparable projects and shall preferably be knowledgeable in the application of Green Building technologies.

F. Safety Officer

The safety officer must be an accredited safety practitioner by the Department of Labor and Employment (DOLE) and has undergone the prescribed 40 hour Construction Safety and Health Training (COSH).

The above key personnel listed are required. The **CONTRACTOR** may, as needed and at its own expense, add additional professionals and/or support personnel for the optimal performance of all Construction Services, as stipulated in these Terms of Reference, for the PROJECT. Prospective bidders shall attach each individual's resume and PRC license of the (professional) staff, proof of qualifications, and related documents as necessary.

VI. DETAILED ENGINEERING REQUIREMENT

1. Upon award of the contract, the winning bidder shall be responsible for the preparation and submission of all necessary detailed engineering investigations and surveys in accordance with the provisions of Annex "A" of this IRR (with the exception of the Bidding Documents and the ABC).

2. The procuring entity shall ensure that all the necessary schedules with regard to the submission, confirmation and approval of the detailed engineering and the details of the construction methods and procedures shall be included in the contract documents.

3. The procuring entity shall review, order rectification, and approve or disapprove – for implementation only - the submitted plans within these schedules. All instructions for rectification shall be in writing stating the reasons for such rectification. The contractor shall be solely responsible for the integrity of the detailed engineering and the performance of the structure irrespective of the approval/confirmation by the procuring entity.

VII. SCOPE OF WORKS AND PROJECT IMPLEMENTATION

A. Pre-Construction

a) Secures all necessary building permits prior to construction. All incidental fees shall be included in the cost estimate of the building.
b) Prepares the PERT-CPM of the construction phase.
c) Provides all other necessary documents that shall be required by B&D Committee

B. Construction Phase

a) Implements all works indicated in the approved construction drawings and documents. All revisions and deviation from the approved plans, especially if it shall impact the overall cost of the project, shall be subject for approval.
b) Provides soil filling, grading and other soil protection measures of the building and other elements of the site, in response to the results of soil and materials testing.
c) Constructs the buildings and other necessary structures, complete with utilities and finishes, resulting in operable and usable structures.
d) Provides protection or relocation of existing trees indigenous to the area, and proper removal and replacement of all introduced trees and vegetation affected by the construction.
e) Layouts piping, conduits, stub - out, boxes and other lines for utilities including tapping to existing utility lines. Facilitate the connection of all utilities (power, water, sewer, structured cabling and telephone) with their corresponding utility companies. All application fees shall be included in the project cost.
f) Installs fire protection systems and fixtures, fire extinguishers, emergency lights, lighted fire exit signs, safety signages and precautionary measures.
g) Prepares shop-drawings for approval.
h) Coordinates with the D&B Committee regarding scheduling of delivery and installation of all owner-furnished materials and equipment during construction.
i) Conducts all necessary tests (to be required by D&B Committee) and issue reports of results.
j) Rectifies punch-listing works to be inspected and issued by the D&B Committee and/or the End-user.
k) Complies with the DOLE-OSH requirements and submit periodic reports concerning occupational safety and health.

l) Provides all other necessary documents that shall be required by the D&B Committee.

C. Post Construction Phase

a) Prepares of as-built plans
b) Turn-overs of all manuals, certificates and warrantees of installed items.
c) Secures building certificate of occupancy and fire safety inspection certificate

D. Variation Orders

Any errors, omissions, inconsistencies, inadequacies or failure submitted by the contractor that do not comply with the requirements shall be rectified, resubmitted and reviewed at the contractor's cost. If the Contractor wishes to modify any design or document, reviewed and approved, the contractor shall notify the procuring entity within a reasonable period of time and shall shoulder the cost of such changes.

a. As a rule, changes in design and construction requirements shall be limited only to those that have not been anticipated in the contract documents prior to contract signing and approval. The following guidelines shall govern approval for change or variation orders:

   i. Change Orders resulting from design errors, omissions or non-conformance with the performance specifications and parameters and the contract documents by the contractor shall be implemented by the contractor at no additional cost to the procuring entity.
   ii. Provided that the contractor suffers delay and/or incurs costs due to changes or errors in the procuring entity's performance specifications and parameters, he shall be entitled to either one of the following:

      a. an extension of time for any such delays under Section 10 of Annex "E"; or
      b. Payment for such costs as specified in the contract documents, provided, that the cumulative amount of the variation order does not exceed ten percent (10%) of the original contract

F. DEFECTS AND LIABILITY

a. All projects shall have a minimum Defects Liability Period of one (1) year after contract completion or as provided for in the contract documents. This is without prejudice, however, to the liabilities imposed upon the engineer/architect who drew up the plans and specification for a building sanctioned under Section 1723 of the New Civil Code of the Philippines.
b. The contractor shall be held liable for design and structural defects and/or failure of the completed project within the warranty periods specified in Section 62.2.3.217 of the IRR.

VIII. OVERALL PROJECT TIME SCHEDULE

The CONTRACTOR shall propose the most reasonable time schedule for the completion of the project. It is expected that this period will not exceed One Hundred Twenty **(120)** calendar days from the date of the issuance of the Notice to Proceed (NTP): One Hundred Twenty **(120)** calendar days for the Construction Phase.

IX. THE IMPLEMENTING AGENCY'S GENERAL RESPONSIBILITY

The implementing agency for the project is the Campus Director of PSHS-MRC with final approval for all decisions and actions from the PSHS System Office of the Executive Director through the Build and Design Committee. The D&B Committee shall:

a) Prepare the approved design for the project in accordance with PSHS Systems' policies, existing codes, traditions, standards, and the conditions and design criteria enumerated in the Terms of Reference.
b) Coordinate with CONTRACTOR and the Campus Director of PSHS-MRC with regards to implementation of the project.
c) Assist in the coordination of the CONTRACTOR with various utility agencies during implementation phases of the project.
d) Conduct regular coordination meetings between the CONTRACTOR and PSHS-MRC to facilitate the implementation of the project.

X. PROJECTED SUBMITTALS DURING THE PROJECT

The following submittals and accomplished documents shall be duly completed and Turned-over by the CONTRACTOR for the project:

A. Drawings and reports that the D&B Committee may require for the periodic update concerning the status of the design phase **FOR THE CONSTRUCTION PHASE (7 copies each)**
   a) Shop drawings (hard copy and soft copy)
   b) PERT-CPM
   c) Concrete Test results
   d) Guarantees, warrantees and other certificates
   e) Fire and Life Safety Assessment Report 2 and 3 (FALAR 2 and 3)

B. **FOR THE POST-CONSTRUCTION PHASE (7 copies each)**
   a) As-built plans (hard copy and soft copy)
   b) Certificate of Occupancy
   c) Fire Safety Inspection Certificate (if applicable)
   d) All other necessary documents to be required by D&B Committee

XIV. CODES AND STANDARDS

The project shall be designed, engineered, installed, tested, commissioned and handed over in conformity with the Building and Design Standards of the PSHS System and with the latest editions of the National Building Code of the Philippines, the National

Structural Code of the Philippines, the Philippine Electrical Code, Philippine Mechanical Code, the National Plumbing Code of the Philippines, National Fire Code of the Philippines and other relevant codes and standards.

xv. INSTALLATION AND WORKMANSHIP

Personnel of the CONTRACTOR should be specialists highly skilled in their respective trades, performing all labor according to first-class standards. A full time Project Engineer/Architect and Construction Safety Engineer shall be assigned by the CONTRACTOR at the job site during the construction of the project.

Tapping for utilities such as power supply, water supply and sewage drainage shall be coordinated with their respective utilities/ service provider/ companies, and all works involved, including access to utilities tapping point, excavation, removal of obstructions, concrete breaking, backfilling and restoration of affected areas, shall be coordinated and included in the scope of work and cost of the project.

Any errors, omissions, inconsistencies, inadequacies or failure submitted by the CONTRACTOR that do not comply with the requirements shall be rectified, resubmitted and reviewed at the CONTRACTOR'S cost. If the CONTRACTOR wishes to modify any design or document, reviewed and approved, the CONTRACTOR shall notify the procuring entity within a reasonable period of time and shall shoulder the cost of such changes.

xvi. MATERIALS

All materials and equipment shall be standard products of manufacturers engaged in the production of such materials and equipment and shall be the manufacturer's latest standard design.

The materials and workmanship supplied shall be of the best grade and constructed and/ or installed in a practical and first class manner. It will be completed in operation, nothing being omitted in the way of labor and materials required and it will be delivered and turned over in good condition, complete and perfect in every respect.

Materials and systems for structured cabling shall be in accordance with standards set by the PSHS System.

All materials shall be in conformance with the latest standards and with inspection and approval from D&B Committee.

xvii. MODE OF PAYMENT

a) The PSHS-MRC shall pay the winning CONTRACTOR progress payments based on billings for actual works accomplished, as certified by D&B Committee of the PSHS System. In no case shall progress billing be made more than once every thirty (30) calendar days. Materials or equipment delivered on the site but not completely put in place or used in the project shall be included for payment.

b) All progress payment shall be subject to retention of ten percent (10%) based on the amount due to the winning CONTRACTOR prior to any deduction. The total retention money shall be released only upon Final Acceptance of the Project.

The winning CONTRACTOR may, however, request for its release prior to Final Acceptance subject to the guidelines set forth in R.A. 9184 and its Implementing Rules and Regulations.

c) The CONTRACTOR may request in writing which must be submitted to form part of the Contract Documents, for an advanced payment equivalent to fifteen percent (15%) of the total Contract Price. The advance payment shall be made once the CONTRACTOR issues its irrevocable standby letter of credit from a reputable bank acceptable to the PSHS System, or GSIS Surety Bond of equivalent value, within fifteen (15) days from the signing of the Contract Agreement to cover said advanced payment.

d) First Payment/Billing shall have an accomplishment of at least 20% of the construction phase.

e) The following documents must be submitted to the D&B Committee before processing of payments to the CONTRACTOR can be made:

i. Progress Billing
ii. Detailed Statement of Work Accomplished (SWA)
iii. Request for payment by the CONTRACTOR
iv. Pictures/photographs of original site conditions (for First Billing only)
v. Pictures/photographs of work accomplished
vi. Payment of utilities (power and water consumption)
vii. CONTRACTOR's affidavit (if accomplishment is more than 60%)

Note: The CONTRACTOR can bill the PSHS-MRC of up to a maximum of 90% accomplishment.

Prepared by:

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