



## **TERMS OF REFERENCE**

Consulting Services for the Installation of Power Distribution Line & Communication Systems of Philippine Science High School – SOCCSKSARGEN Region Campus  
(located at Brgy. Brgy. Paraiso, Koronadal City, South Cotabato.)

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### **I. BACKGROUND**

Steady supply of Electricity and a stable communication system will play a vital role in every daily life of the school operations. It will provide a convenient and productive working environment and create an environment where every information can be reach within. Because of the increasing demand of electricity in the campus, an overhead three-phase power distribution line will be installed to compensate the power requirements including the communication systems. Also, the entire campus will be interconnected with a communication cable that can support a higher bandwidth and support longer endpoint of connectivity. This communication cable will serve as a medium of communication to all ICT support services such as video data streaming of CCTV, VoiP (telephony), internet connectivity, and paging system.

Each building is installed with Wireless Access Point (Open WiFi Connection manage with captive portal) and telephone stations in required area. Paging System is also installed in hallway, lobby and closed classrooms wherein ring chimes might not be heard. Copper Cables are installed in areas required such as offices and cubicles. All ICT devices specified in the building are connected into an intermediate distribution frame, thus present in every building.

Data Center is setup in a control room with appliance such as Intermediate and Main Data Frames. Entrance Facility of external subscriptions like conduits are setup with data cabinet rack. Mainframes and Network Facilities are supported with Battery backup power supply for uninterrupted services. Telephone systems are interpolated with a GSM module which used for incoming / outgoing mobile phone calls.

### **II. OBJECTIVES**

One of the priority infrastructure projects of PSHS-SRC for calendar year 2017 is the Power Distribution Lines and Communications Systems which aims to provide steady supply of electricity and ICT support services such as telephony and internet connectivity in order to foster the integration of technologies in teaching and learning. Serves as a foundation to a greater world of opportunity that innovates and inspire the scholars to do more with ease.

### **III. SCOPE OF SERVICES**

#### **1. PRE-INSTALLATION PHASE**

- a. Detailed planning of the transmission route that will cater all power requirements of the entire campus.
- b. Detailed design and execution drawings and plans.
- c. Calculation of power load, size of wires, transformers, number of transmission poles, switches and control system.
- d. Preparation of Technical Specification for all the installation materials used based on the approved plans.
- e. Preparation of Scope of Works of the project.
- f. Identify a subscription plan from data providers that can be serve in the premises.
- g. Identify ICT equipment that suits campus operations, its capabilities and requirements.
- h. Preparation of Detailed Internet Management Plans, Voice IP Telephony, Paging System, Equipment Maintenance and Upgrade Plans; and other plans necessary to the project.
- i. Preparation of Bill of Quantities, Agency Cost Estimates & Detailed Cost Estimates based on the approved installation plans.
- j. Assistance and advice in securing bids, tabulation and analysis of bid results, and making recommendations on the award of contracts and in preparing formal contract documents.

k. Preparation of supplementary drawings required to suit actual field conditions.

## 2. INSTALLATION PHASE

- a. Making periodic visits to check on the general progress of work, correct installation based on approved plans and quality of workmanship.
- b. Observing performance tests and start-up and making report.
- c. Conduct inspection and making of punch list.
- d. Making a final inspection and reporting of completed projects.
- e. Checking shop drawings submitted by contractors.

## 3. POST-INSTALLATION PHASE

- a. Certify the conduct of testing and commissioning.
- b. Certify the conduct short circuit test.
- c. Conduct an inspection on the recorded punch list.
- d. Certify completion of works in accordance with the approved plans, specification and scope of works and recommend the issuance of certificate of completion after final inspection and acceptance.
- e. Assist PSHS-SRC and the contractor on the preparation and submission of all forms and supporting documents required by the concerned government agencies.
- f. Additional items during the post construction phase will be on final contract agreement.
- g. Checking as-built plans

## IV. REPORTS AND TIME SCHEDULE

The Consultancy Firm shall prepare and submit the following reports:


1. Monthly Progress Reports
2. Monthly Updated Construction Schedules
3. Contract Time Extension Endorsement
4. Variation Order Endorsement
5. Updated Labor and Equipment Schedule
6. Updated PERT-CPM
7. Acceptance Documentary Requirements

## V. DATA, LOCAL SERVICES, PERSONNEL AND FACILITIES (Provided by PSHS-SRC)

1. Preliminary drawings of the area (Site Development Plans)

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