



## **TECHNICAL SPECIFICATIONS**

### **ELECTRICAL**

**ACA I, ACA II, BOY'S DORMITORY**

Project : **CONSULTANCY FOR THE REHABILITATION OF SCHOOL BUILDINGS  
(ACA I, ACA II, AND DORMITORY BUILDING I)**

Client : **PHILIPPINE SCIENCE HIGH SCHOOL**

Location : **GOA, CAMARINES SUR**

Prepared By:

Noted By:

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Electrical Engineer

PRC No. :

PTR No. :

Issued at :

Issued on :

## **ELECTRICAL GENERAL PROVISION**

### **PART 1- GENERAL**

#### **1.1 DESCRIPTION**

- A. The general and supplementary Conditions are a part of the requirements for the work under this Division of the Specifications.

#### **1.2 WORK INCLUDED**

- A. Provide labor and materials required to install, test and place into operation the electrical systems as called for in the Contract Documents, and in accordance with applicable codes and regulations.
- B. Provide labor, materials, and accessories required to provide complete, operating electrical systems. Labor, materials or accessories not specifically called for in the Contract documents, but required to provide complete, operating electrical systems shall be provided without additional cost to the owner.

#### **1.3 QUALITY ASSURANCE**

- A. Comply with the current applicable codes, ordinance, and regulations of the authority or authorities having jurisdiction, the rules, regulations and requirements of the utility companies serving the project and the owner's insurance underwriter.
- B. Drawings, specifications, codes and standards are minimum requirements. Where requirements differ the more stringent apply.
- C. Should any change in drawings or specifications be required to comply with the governing regulations, notify the Consultant prior to submitting bid.
- D. All equipment and installations shall meet or exceed minimum requirements of PS, PEC, ANSI, ASTM, IES, ETL, NEC, NEMA, NFPA, SMACNA, UL, ICAO and The Fire Marshal.

- E. Execute work in strict accordance with the best practices of the trade in a thorough, (substantial, workmanlike manner be competent workmen. Provide a competent, experienced, full-time Superintendent who is authorized to make decisions on behalf of the Contractor.)

## **1.4 ABBREVIATIONS AND DEFINITIONS**

### **A. Abbreviations:**

- |     |        |   |
|-----|--------|---|
| 1.  | PS     | Philippines Standard  |
| 2.  | PEC    | Philippines Electrical Code                                       |
| 3.  | ANSI   | American National Standards Institute                             |
| 4.  | ASTM   | American Society for Testing and Materials                        |
| 5.  | ETL    | Electrical Testing Laboratories                                   |
| 6.  | IEC    | International Electro Technical Committee                         |
| 7.  | IEEE   | Institute of Electrical and Electronic Engineers                  |
| 8.  | IES    | Illuminating Engineering Society                                  |
| 9.  | IPCEA  | International Power Cable Engineers Association                   |
| 10. | NEC    | National Electrical Code  |
| 11. | NEMA   | National Electrical Manufacturer's Association                    |
| 12. | NFPA   | National Fire Protection Association                              |
| 13. | SMACNA | Sheet Metal and Air Conditioning Contractors National Association |
| 14. | UL     | Underwriters Laboratory   |

### **B. DEFINITIONS**

1. Where is stated in this specification to submit to Engineer for review, refer to Architectural General and Special Conditions for proper procedures.

2. FURNISH means to supply all materials, labor, equipment, testing apparatus, controls, tests, accessories, and all other items customarily required for the proper and complete application.
3. INSTALL means to join, fasten, link, attach, set up or otherwise connect together before testing and turning over to Owner, complete and ready for regular operation.
4. PROVIDE means to FURNISH and INSTALL.
5. AS DIRECTED means as directed by the architect, or his representative.
6. CONCEALED means embedded in masonry or other construction, installed behind wall furring or within drywall partitions, or installed within hung ceilings.
7. SUBMIT means submit to Consultant for review.

## **1.5 GUARANTEE**

- A. Submit a single guarantee stating that the work is in accordance with the contract documents. Guarantee work against faulty and improper material and workmanship for a period of one year from the date of final acceptance by the owner, except that where guarantees or warranties for longer terms are provided or specified herein, the longer term shall apply. Correct any deficiencies which occur during the guarantee period, within 24 hours of notifications, without additional cost to the Owner, to the satisfaction of the owner. Obtain similar guarantees from subcontractors, manufacturers, suppliers and sub trade specialists.

## **PART 2- PRODUCTS**

### **2.1 MATERIALS**

- A. Provide products and materials that are new, clean, free of defects, and free of damage and corrosion.
- B. Products and materials shall not contain asbestos, PCB, or any other material which is installed considered hazardous by the authority having jurisdiction.
- C. Install materials with qualified trade's people.
- D. Follow manufacturer's instructions for installing, connecting, and adjusting equipment. Provide a copy of such instructions at the equipment during installation.
- E. Energy consuming equipment shall meet local energy ordinances.

## **PART 3- EXECUTION**

### **3.1 SUBMITTALS AND REVIEWS**

- A. Submit shop drawings, manufacturer's product data sheets, samples and test reports as specified.
- B. Submit materials and equipment by manufacturer, trade name, and model number. Include copies of applicable brochure or catalog material. Maintenance and operating manuals are not acceptable substitutes for shop drawings.
- C. Maintain a complete set of reviewed product data and samples on site.

### **3.3 COORDINATION OF WORK**

- A. Contract documents establish scope, materials and quality but are not detailed installation instructions. Drawings are diagrammatic.
- B. Coordinate work with related trades and furnish, in writing, any information necessary to permit the work of related trades to be installed satisfactorily and with the least possible conflict or delay.
- C. The locations of lighting fixtures, outlets, panels and other equipment indicated on the drawings are approximately correct, but they are understood to be subject to such revision as may be found necessary or desirable at the time the work is installed in consequence of increase or reduction of the number of outlets, or in order to meet field conditions, or to coordinate with modular requirements of ceiling, or to simplify the work, or for other legitimate causes.
- D. Verify with the Architect the exact location and mounting height of outlets and equipment not dimensionally located on the drawings.
- E. Circuit tags in the form of numbers are used where shown to indicate the circuit designation numbers in electrical panels. Show the actual circuit numbers on the as built Record Drawings and on the associated typed panel board directory card. Where circuiting is not indicated, provide required

circuiting in accordance with the loading indicated on the drawings and/or as indicated.

- F. Whenever work interconnects with work of other trades, coordinate with other trades to ensure that they have the information necessary so that they may properly install the necessary connections and equipment. Identify items (remote ballast, pull boxes, etc.) requiring access. In order that the ceiling trade will know where to install access doors and panels.
- G. Consult with other trades regarding equipment so that, whenever possible, motor controls and distribution equipment are of the same manufacturer.
- H. Furnish services of an experienced Superintendent, who shall be in constant charge of all work, and who shall coordinate work with the work of other trades. No work shall be installed without coordinating with other trades.

### **3.4 EXMINATION OF SITE**

- A. Prior to the re-submitting of bids, visit the project site and become familiar with all condition affecting the proposed installation and make provisions as to the cost thereof.

### **3.22 FINAL PUNCHLIST**

- A. Prior to the final punch list, certify that systems and materials are complete, operational, and are in compliance with the Contract Documents.
- B. During the final punch list, provide personnel with access keys, hand held radios, and necessary expertise to operate each system and piece of equipment to demonstrate operational compliance with the Contract Documents.
- C. Any deficiencies noted on the final punch list shall be expeditiously corrected and certified in writing.

**End of Specification**

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