



**Bureau of Soils and Water Management  
PHILIPPINE BIDDING DOCUMENTS**

**Supply, Delivery and Installation of  
Electrical Power Distribution System for  
Satellite Laboratory at NSWRRDC, San  
Ildefonso, Bulacan**

**IB NO: BSWM-2022-10-0023**

**Date issued**

**October 2022**

**PHILIPPINE BIDDING DOCUMENTS**  
(As Harmonized with Development Partners)

**Procurement of  
INFRASTRUCTURE  
PROJECTS**

Government of the Republic of the Philippines

**Sixth Edition**  
**July 2020**

# Preface

These Philippine Bidding Documents (PBDs) for the procurement of Infrastructure Projects (hereinafter referred to also as the “Works”) through Competitive Bidding have been prepared by the Government of the Philippines for use by all branches, agencies, departments, bureaus, offices, or instrumentalities of the government, including government-owned and/or -controlled corporations, government financial institutions, state universities and colleges, local government units, and autonomous regional government. The procedures and practices presented in this document have been developed through broad experience, and are for mandatory use in projects that are financed in whole or in part by the Government of the Philippines or any foreign government/foreign or international financing institution in accordance with the provisions of the 2016 revised Implementing Rules and Regulations (IRR) of Republic Act (RA) No. 9184.

The PBDs are intended as a model for admeasurements (unit prices or unit rates in a bill of quantities) types of contract, which are the most common in Works contracting.

The Bidding Documents shall clearly and adequately define, among others: (i) the objectives, scope, and expected outputs and/or results of the proposed contract; (ii) the eligibility requirements of Bidders; (iii) the expected contract duration; and (iv) the obligations, duties, and/or functions of the winning Bidder.

Care should be taken to check the relevance of the provisions of the PBDs against the requirements of the specific Works to be procured. If duplication of a subject is inevitable in other sections of the document prepared by the Procuring Entity, care must be exercised to avoid contradictions between clauses dealing with the same matter.

Moreover, each section is prepared with notes intended only as information for the Procuring Entity or the person drafting the Bidding Documents. They shall not be included in the final documents. The following general directions should be observed when using the documents:

- a. All the documents listed in the Table of Contents are normally required for the procurement of Infrastructure Projects. However, they should be adapted as necessary to the circumstances of the particular Project.
- b. Specific details, such as the “*name of the Procuring Entity*” and “*address for bid submission*,” should be furnished in the Instructions to Bidders, Bid Data Sheet, and Special Conditions of Contract. The final documents should contain neither blank spaces nor options.
- c. This Preface and the footnotes or notes in italics included in the Invitation to Bid, BDS, General Conditions of Contract, Special Conditions of Contract, Specifications, Drawings, and Bill of Quantities are not part of the text of the final document, although they contain instructions that the Procuring Entity should strictly follow.
- d. The cover should be modified as required to identify the Bidding Documents as to the names of the Project, Contract, and Procuring Entity, in addition to date of issue.

- e. Modifications for specific Procurement Project details should be provided in the Special Conditions of Contract as amendments to the Conditions of Contract. For easy completion, whenever reference has to be made to specific clauses in the Bid Data Sheet or Special Conditions of Contract, these terms shall be printed in bold typeface on Sections I (Instructions to Bidders) and III (General Conditions of Contract), respectively.
- f. For guidelines on the use of Bidding Forms and the procurement of Foreign-Assisted Projects, these will be covered by a separate issuance of the Government Procurement Policy Board.

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# *Glossary of Terms, Abbreviations, and Acronyms*

**ABC** – Approved Budget for the Contract.

**ARCC** – Allowable Range of Contract Cost.

**BAC** – Bids and Awards Committee.

**Bid** – A signed offer or proposal to undertake a contract submitted by a bidder in response to and in consonance with the requirements of the bidding documents. Also referred to as *Proposal* and *Tender*. (2016 revised IRR, Section 5[c])

**Bidder** – Refers to a contractor, manufacturer, supplier, distributor and/or consultant who submits a bid in response to the requirements of the Bidding Documents. (2016 revised IRR, Section 5[d])

**Bidding Documents** – The documents issued by the Procuring Entity as the bases for bids, furnishing all information necessary for a prospective bidder to prepare a bid for the Goods, Infrastructure Projects, and/or Consulting Services required by the Procuring Entity. (2016 revised IRR, Section 5[e])

**BIR** – Bureau of Internal Revenue.

**BSP** – Bangko Sentral ng Pilipinas.

**CDA** – Cooperative Development Authority.

**Consulting Services** – Refer to services for Infrastructure Projects and other types of projects or activities of the GOP requiring adequate external technical and professional expertise that are beyond the capability and/or capacity of the GOP to undertake such as, but not limited to: (i) advisory and review services; (ii) pre-investment or feasibility studies; (iii) design; (iv) construction supervision; (v) management and related services; and (vi) other technical services or special studies. (2016 revised IRR, Section 5[i])

**Contract** – Refers to the agreement entered into between the Procuring Entity and the Supplier or Manufacturer or Distributor or Service Provider for procurement of Goods and Services; Contractor for Procurement of Infrastructure Projects; or Consultant or Consulting Firm for Procurement of Consulting Services; as the case may be, as recorded in the Contract Form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.

**Contractor** – is a natural or juridical entity whose proposal was accepted by the Procuring Entity and to whom the Contract to execute the Work was awarded. Contractor as used in these Bidding Documents may likewise refer to a supplier, distributor, manufacturer, or consultant.

**CPI** – Consumer Price Index.

**DOLE** – Department of Labor and Employment.

**DTI** – Department of Trade and Industry.

**Foreign-funded Procurement or Foreign-Assisted Project** – Refers to procurement whose funding source is from a foreign government, foreign or international financing institution as specified in the Treaty or International or Executive Agreement. (2016 revised IRR, Section 5[b]).

**GFI** – Government Financial Institution.

**GOCC** – Government-owned and/or –controlled corporation.

**Goods** – Refer to all items, supplies, materials and general support services, except Consulting Services and Infrastructure Projects, which may be needed in the transaction of public businesses or in the pursuit of any government undertaking, project or activity, whether in the nature of equipment, furniture, stationery, materials for construction, or personal property of any kind, including non-personal or contractual services such as the repair and maintenance of equipment and furniture, as well as trucking, hauling, janitorial, security, and related or analogous services, as well as procurement of materials and supplies provided by the Procuring Entity for such services. The term “related” or “analogous services” shall include, but is not limited to, lease or purchase of office space, media advertisements, health maintenance services, and other services essential to the operation of the Procuring Entity. (2016 revised IRR, Section 5[r])

**GOP** – Government of the Philippines.

**Infrastructure Projects** – Include the construction, improvement, rehabilitation, demolition, repair, restoration or maintenance of roads and bridges, railways, airports, seaports, communication facilities, civil works components of information technology projects, irrigation, flood control and drainage, water supply, sanitation, sewerage and solid waste management systems, shore protection, energy/power and electrification facilities, national buildings, school buildings, hospital buildings, and other related construction projects of the government. Also referred to as *civil works or works*. (2016 revised IRR, Section 5[u])

**LGUs** – Local Government Units.

**NFCC** – Net Financial Contracting Capacity.

**NGA** – National Government Agency.

**PCAB** – Philippine Contractors Accreditation Board.

**PhilGEPS** - Philippine Government Electronic Procurement System.

**Procurement Project** – refers to a specific or identified procurement covering goods, infrastructure project or consulting services. A Procurement Project shall be described, detailed, and scheduled in the Project Procurement Management Plan prepared by the agency which shall be consolidated in the procuring entity's Annual Procurement Plan. (GPPB Circular No. 06-2019 dated 17 July 2019)

**PSA** – Philippine Statistics Authority.

**SEC** – Securities and Exchange Commission.

**SLCC** – Single Largest Completed Contract.

**UN** – United Nations.

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## ***Section I. Invitation to Bid***

### **Notes on the Invitation to Bid**

The Invitation to Bid (IB) provides information that enables potential Bidders to decide whether to participate in the procurement at hand. The IB shall be posted in accordance with Section 21.2 of the 2016 revised IRR of RA No. 9184.

Apart from the essential items listed in the Bidding Documents, the IB should also indicate the following:

- a. The date of availability of the Bidding Documents, which shall be from the time the IB is first advertised/posted until the deadline for the submission and receipt of bids;
- b. The place where the Bidding Documents may be acquired or the website where it may be downloaded;
- c. The deadline for the submission and receipt of bids; and
- d. Any important bid evaluation criteria.

The IB should be incorporated into the Bidding Documents. The information contained in the IB must conform to the Bidding Documents and in particular to the relevant information in the Bid Data Sheet.



Republic of the Philippines  
Department of Agriculture  
**BUREAU OF SOILS AND WATER MANAGEMENT**  
SRDC Bldg., Elliptical Road corner Visayas Avenue,  
Diliman, Quezon City

## **Invitation to Bid for Supply, Delivery and Installation of Electrical Power Distribution System for Satellite Laboratory at NSWRRDC, San Ildefonso, Bulacan- IB NO: BSWM- 2022-10-0023**

1. The *Bureau of Soils and Water Management*, through the General Appropriations Act of 2022 intends to apply the sum of **Two Million Three Hundred Eight-Five Thousand Pesos (Php 2,385,000.00)** being the Approved Budget for the Contract (ABC) to payments under the contract for **Supply, Delivery and Installation of Electrical Power Distribution System for Satellite Laboratory at NSWRRDC, San Ildefonso, Bulacan- IB NO: BSWM-2022-10-0023**. Bids received in excess of the ABC shall be automatically rejected at bid opening.
2. The *Bureau of Soils and Water Management* now invites bids for the above Procurement Project. Completion of the Works is required **within 3 months upon the receipt of NTP**. Bidders should have completed a contract similar to the Project. The description of an eligible bidder is contained in the Bidding Documents, particularly, in Section II (Instructions to Bidders).
3. Bidding will be conducted through open competitive bidding procedures using non-discretionary “*pass/fail*” criterion as specified in the 2016 revised Implementing Rules and Regulations (IRR) of Republic Act (RA) No. 9184.
4. Interested bidders may obtain further information from [*insert name of the Procuring Entity*] and inspect the Bidding Documents at the address given below from [*insert office hours*].
5. A complete set of Bidding Documents may be acquired by interested bidders on **October 8- November 3, 2022** from given address and website/s below and upon payment of the applicable fee for the Bidding Documents, pursuant to the latest Guidelines issued by the GPPB, in the amount of **Php. 2,000.00**. The Procuring Entity shall allow the bidder to present its proof of payment for the fees to BAC Secretariat on or before the deadline of Submission and Opening of Bids.
6. The *Bureau of Soils and Water Management* will hold a Pre-Bid Conference<sup>1</sup> on **October 18, 2022, 9:30AM** at *BSWM Convention Hall*. Pre-Bid Conference will be available “live” thru *BSWM Procurement Service FB Page* (**<https://www.facebook.com/bswmpms>**), which shall be open to prospective bidders.

Furthermore, all interested bidders can participate through **videoconferencing**. Please coordinate with BAC Secretariat at least a day before the meeting at **[bac@bswm.da.gov.ph](mailto:bac@bswm.da.gov.ph)**.

7. Bids must be duly received by the BAC Secretariat through manual submission at the office address indicated below on or before **November 3, 2022, 9:00AM**. Late bids shall not be accepted.
8. All bids must be accompanied by a bid security in any of the acceptable forms and in the amount stated in **ITB** Clause 16.
9. Bid opening shall be on **November 3, 2022, 9:30AM** at the given address below and through videoconferencing/webcasting via ZOOM and streamed live through BSWM Procurement Service Facebook Page. Bids will be opened in the presence of the bidders' representatives who choose to attend the activity.

During the opening of bids, Bidder's representative must present his/her Company Identification Card and Authorization Letter from the Head of the Company.

10. Schedules of the above-mentioned bidding is subject to change due to the Community Quarantine enforced by the government in line with the COVID-19 pandemic. Please refer to the BSWM PhilGEPS posting for updates (<https://www.philgeps.gov.ph/>) and BSWM Procurement Service FB Page (**<https://www.facebook.com/bswmpms>**).
11. The *Bureau of Soils and Water Management* reserves the right to reject any and all bids, declare a failure of bidding, or not award the contract at any time prior to contract award in accordance with Sections 35.6 and 41 of the 2016 revised Implementing Rules and Regulations (IRR) of RA No. 9184, without thereby incurring any liability to the affected bidder or bidders.
12. For further information, please refer to:  
DENISE A. SOLANO  
BIDS AND AWARDS COMMITTEE SECRETARIAT'S OFFICE  
2ND FLOOR, SRDC BLDG.,  
VISAYAS AVE. COR. ELLIPTICAL ROAD, DILIMAN, QUEZON CITY  
TELEFAX NUMBER: +63-2-8273-2474 Loc 3218  
EMAIL ADDRESS: [bac@bswm.da.gov.ph](mailto:bac@bswm.da.gov.ph) WEBSITE: [www.bswm.gov.ph](http://www.bswm.gov.ph)  
FB Page: <https://www.facebook.com/bswmpms>
13. You may visit the following websites: For downloading of Bidding Documents:  
PhilGEPS- <https://notices.philgeps.gov.ph/>, BSWM Website- [www.bswm.gov.ph](http://www.bswm.gov.ph) or  
BSWM Procurement Service Facebook Page- <https://www.facebook.com/bswmpms>

October 4, 2022

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**ENGR. EDUARDO V. ALBERTO**

BAC Chairperson

## ***Section II. Instructions to Bidders***

### **Notes on the Instructions to Bidders**

This Section on the Instruction to Bidders (ITB) provides the information necessary for bidders to prepare responsive bids, in accordance with the requirements of the Procuring Entity. It also provides information on bid submission, eligibility check, opening and evaluation of bids, post-qualification, and on the award of contract.

## **1. Scope of Bid**

The Procuring Entity, *Bureau of Soils and Water Management* invites Bids for the **Supply, Delivery and Installation of Electrical Power Distribution System for Satellite Laboratory at NSWRRDC, San Ildefonso, Bulacan- IB NO: BSWM-2022-10-0023.**

The Procurement Project (referred to herein as “Project”) is for the construction of Works, as described in Section VI (Specifications).

## **2. Funding Information**

2.1. The GOP through the source of funding as indicated for *Two Million Three Hundred Eight-Five Thousand Pesos (Php 2,385,000.00).*

2.2. The source of funding is:

NGA, the General Appropriations Act or Special Appropriations.  
**GAA 2022.**

## **3. Bidding Requirements**

The Bidding for the Project shall be governed by all the provisions of RA No. 9184 and its 2016 revised IRR, including its Generic Procurement Manual and associated policies, rules and regulations as the primary source thereof, while the herein clauses shall serve as the secondary source thereof.

Any amendments made to the IRR and other GPPB issuances shall be applicable only to the ongoing posting, advertisement, or invitation to bid by the BAC through the issuance of a supplemental or bid bulletin.

The Bidder, by the act of submitting its Bid, shall be deemed to have inspected the site, determined the general characteristics of the contracted Works and the conditions for this Project, such as the location and the nature of the work; (b) climatic conditions; (c) transportation facilities; (c) nature and condition of the terrain, geological conditions at the site communication facilities, requirements, location and availability of construction aggregates and other materials, labor, water, electric power and access roads; and (d) other factors that may affect the cost, duration and execution or implementation of the contract, project, or work and examine all instructions, forms, terms, and project requirements in the Bidding Documents.

## **4. Corrupt, Fraudulent, Collusive, Coercive, and Obstructive Practices**

The Procuring Entity, as well as the Bidders and Contractors, shall observe the highest standard of ethics during the procurement and execution of the contract. They or through an agent shall not engage in corrupt, fraudulent, collusive, coercive, and

obstructive practices defined under Annex “I” of the 2016 revised IRR of RA No. 9184 or other integrity violations in competing for the Project.

## 5. Eligible Bidders

5.1. Only Bids of Bidders found to be legally, technically, and financially capable will be evaluated.

5.2. **The Bidder must have an experience of having completed a Single Largest Completed Contract (SLCC) that is similar to this Project, equivalent to at least fifty percent (50%) of the ABC** adjusted, if necessary, by the Bidder to current prices using the PSA’s CPI, except under conditions provided for in Section 23.4.2.4 of the 2016 revised IRR of RA No. 9184.

A contract is considered to be “similar” to the contract to be bid if it has the major categories of work stated in the **BDS**.

5.3. For Foreign-funded Procurement, the Procuring Entity and the foreign government/foreign or international financing institution may agree on another track record requirement, as specified in the Bidding Document prepared for this purpose.

5.4. The Bidders shall comply with the eligibility criteria under Section 23.4.2 of the 2016 IRR of RA No. 9184.

## 6. Origin of Associated Goods

There is no restriction on the origin of Goods other than those prohibited by a decision of the UN Security Council taken under Chapter VII of the Charter of the UN.

## 7. Subcontracts

7.1. The Bidder may subcontract portions of the Project to the extent allowed by the Procuring Entity as stated herein, but in no case more than fifty percent (50%) of the Project.

The Procuring Entity has prescribed that:

~~a. Subcontracting is allowed. The portions of Project and the maximum percentage allowed to be subcontracted are indicated in the **BDS**, which shall not exceed fifty percent (50%) of the contracted Works.~~

b. Subcontracting is not allowed.

7.1. *[If Procuring Entity has determined that subcontracting is allowed during the bidding, state:]* ~~The Bidder must submit together with its Bid the documentary requirements of the subcontractor(s) complying with the eligibility criteria stated in **ITB** Clause 5 in accordance with Section 23.4 of the 2016 revised IRR of RA No. 9184 pursuant to Section 23.1 thereof.~~

- 7.2. *[If subcontracting is allowed during the contract implementation stage, state:]* ~~The Supplier may identify its subcontractor during the contract implementation stage. Subcontractors identified during the bidding may be changed during the implementation of this Contract. Subcontractors must submit the documentary requirements under Section 23.1 of the 2016 revised IRR of RA No. 9184 and comply with the eligibility criteria specified in **ITB** Clause 5 to the implementing or end-user unit.~~
- 7.3. ~~Subcontracting of any portion of the Project does not relieve the Contractor of any liability or obligation under the Contract. The Supplier will be responsible for the acts, defaults, and negligence of any subcontractor, its agents, servants, or workmen as fully as if these were the Contractor's own acts, defaults, or negligence, or those of its agents, servants, or workmen.~~

## **8. Pre-Bid Conference**

The Procuring Entity will hold a pre-bid conference for this Project on the specified date and time and either at its physical address and through videoconferencing/webcasting} as indicated in paragraph 6 of the **IB**.

## **9. Clarification and Amendment of Bidding Documents**

Prospective bidders may request for clarification on and/or interpretation of any part of the Bidding Documents. Such requests must be in writing and received by the Procuring Entity, either at its given address or through electronic mail indicated in the **IB**, at least ten (10) calendar days before the deadline set for the submission and receipt of Bids.

## **10. Documents Comprising the Bid: Eligibility and Technical Components**

- 10.1. The first envelope shall contain the eligibility and technical documents of the Bid as specified in **Section IX. Checklist of Technical and Financial Documents**.
- 10.2. If the eligibility requirements or statements, the bids, and all other documents for submission to the BAC are in foreign language other than English, it must be accompanied by a translation in English, which shall be authenticated by the appropriate Philippine foreign service establishment, post, or the equivalent office having jurisdiction over the foreign bidder's affairs in the Philippines. For Contracting Parties to the Apostille Convention, only the translated documents shall be authenticated through an apostille pursuant to GPPB Resolution No. 13-2019 dated 23 May 2019. The English translation shall govern, for purposes of interpretation of the bid.
- 10.3. A valid PCAB License is required, and in case of joint ventures, a valid special PCAB License, and registration for the type and cost of the contract for this Project. Any additional type of Contractor license or permit shall be indicated in the **BDS**.

- 10.4. A List of Contractor's key personnel (e.g., Project Manager, Project Engineers, Materials Engineers, and Foremen) assigned to the contract to be bid, with their complete qualification and experience data shall be provided. These key personnel must meet the required minimum years of experience set in the **BDS**.
- 10.5. A List of Contractor's major equipment units, which are owned, leased, and/or under purchase agreements, supported by proof of ownership, certification of availability of equipment from the equipment lessor/vendor for the duration of the project, as the case may be, must meet the minimum requirements for the contract set in the **BDS**.

## **11. Documents Comprising the Bid: Financial Component**

- 11.1. The second bid envelope shall contain the financial documents for the Bid as specified in **Section IX. Checklist of Technical and Financial Documents**.
- 11.2. Any bid exceeding the ABC indicated in paragraph 1 of the **IB** shall not be accepted.
- 11.3. For Foreign-funded procurement, a ceiling may be applied to bid prices provided the conditions are met under Section 31.2 of the 2016 revised IRR of RA No. 9184.

## **12. Alternative Bids**

Bidders shall submit offers that comply with the requirements of the Bidding Documents, including the basic technical design as indicated in the drawings and specifications. Unless there is a value engineering clause in the **BDS**, alternative Bids shall not be accepted.

## **13. Bid Prices**

All bid prices for the given scope of work in the Project as awarded shall be considered as fixed prices, and therefore not subject to price escalation during contract implementation, except under extraordinary circumstances as determined by the NEDA and approved by the GPPB pursuant to the revised Guidelines for Contract Price Escalation guidelines.

## **14. Bid and Payment Currencies**

- 14.1. Bid prices may be quoted in the local currency or tradeable currency accepted by the BSP at the discretion of the Bidder. However, for purposes of bid evaluation, Bids denominated in foreign currencies shall be converted to Philippine currency based on the exchange rate as published in the BSP reference rate bulletin on the day of the bid opening.
- 14.2. *Payment of the contract price shall be made in:*

- a. Philippine Pesos.

## **15. Bid Security**

- 15.1. The Bidder shall submit a Bid Securing Declaration or any form of Bid Security in the amount indicated in the **BDS**, which shall be not less than the percentage of the ABC in accordance with the schedule in the **BDS**.
- 15.2. The Bid and bid security shall be valid until *120 Calendar Days from Opening of Bids*. Any bid not accompanied by an acceptable bid security shall be rejected by the Procuring Entity as non-responsive.

## **16. Sealing and Marking of Bids**

Each Bidder shall submit one copy of the first and second components of its Bid.

The Procuring Entity may request additional hard copies and/or electronic copies of the Bid. However, failure of the Bidders to comply with the said request shall not be a ground for disqualification.

If the Procuring Entity allows the submission of bids through online submission to the given website or any other electronic means, the Bidder shall submit an electronic copy of its Bid, which must be digitally signed. An electronic copy that cannot be opened or is corrupted shall be considered non-responsive and, thus, automatically disqualified.

## **17. Deadline for Submission of Bids**

The Bidders shall submit on the specified date and time and either at its physical address or through online submission as indicated in paragraph 7 of the **IB**.

## **18. Opening and Preliminary Examination of Bids**

- 18.1. The BAC shall open the Bids in public at the time, on the date, and at the place specified in paragraph 9 of the **IB**. The Bidders' representatives who are present shall sign a register evidencing their attendance. In case videoconferencing, webcasting or other similar technologies will be used, attendance of participants shall likewise be recorded by the BAC Secretariat.

In case the Bids cannot be opened as scheduled due to justifiable reasons, the rescheduling requirements under Section 29 of the 2016 revised IRR of RA No. 9184 shall prevail.

- 18.2. The preliminary examination of Bids shall be governed by Section 30 of the 2016 revised IRR of RA No. 9184.

## **19. Detailed Evaluation and Comparison of Bids**

- 19.1. The Procuring Entity's BAC shall immediately conduct a detailed evaluation of all Bids rated "*passed*" using non-discretionary pass/fail criteria. The BAC shall consider the conditions in the evaluation of Bids under Section 32.2 of 2016 revised IRR of RA No. 9184.
- 19.2. If the Project allows partial bids, all Bids and combinations of Bids as indicated in the **BDS** shall be received by the same deadline and opened and evaluated simultaneously so as to determine the Bid or combination of Bids offering the lowest calculated cost to the Procuring Entity. Bid Security as required by **ITB** Clause 16 shall be submitted for each contract (lot) separately.
- 19.3. In all cases, the NFCC computation pursuant to Section 23.4.2.6 of the 2016 revised IRR of RA No. 9184 must be sufficient for the total of the ABCs for all the lots participated in by the prospective Bidder.

## **20. Post Qualification**

Within a non-extendible period of five (5) calendar days from receipt by the Bidder of the notice from the BAC that it submitted the Lowest Calculated Bid, the Bidder shall submit its latest income and business tax returns filed and paid through the BIR Electronic Filing and Payment System (eFPS), and other appropriate licenses and permits required by law and stated in the **BDS**.

## **21. Signing of the Contract**

The documents required in Section 37.2 of the 2016 revised IRR of RA No. 9184 shall form part of the Contract. Additional Contract documents are indicated in the **BDS**.

## ***Section III. Bid Data Sheet***

### **Notes on the Bid Data Sheet (BDS)**

The Bid Data Sheet (BDS) consists of provisions that supplement, amend, or specify in detail, information, or requirements included in the ITB found in Section II, which are specific to each procurement.

This Section is intended to assist the Procuring Entity in providing the specific information in relation to corresponding clauses in the ITB and has to be prepared for each specific procurement.

The Procuring Entity should specify in the BDS information and requirements specific to the circumstances of the Procuring Entity, the processing of the procurement, and the bid evaluation criteria that will apply to the Bids. In preparing the BDS, the following aspects should be checked:

- a. Information that specifies and complements provisions of the ITB must be incorporated.
- b. Amendments and/or supplements, if any, to provisions of the ITB as necessitated by the circumstances of the specific procurement, must also be incorporated.

# Bid Data Sheet

ITB Clause										
5.2	For this purpose, contracts similar to the Project refer to contracts which have the same major categories of work, which shall be <b>Supply, Delivery and Installation of Electrical Power Distribution System or its equivalent.</b>									
7.1	Subcontracting is not allowed.									
10.3	<b>Valid PCAB License:</b> <i>Classification: SP-EE (Electrical Work)</i> <i>Category: minimum D</i>									
10.1	<b>Additional requirement under Section VII. Technical Specification</b>  <ol style="list-style-type: none"> <li>1. <b>Certificate of Site Inspection</b></li> <li>2. Detailed Design drawings</li> <li>3. A detailed installation Schedule</li> <li>4. A manpower schedule indicating the number of personnel and qualification in relation to the work schedule.</li> <li>5. An organizational chart.</li> <li>6. Cash flow/billing schedule</li> <li>7. Updated Bill of Quantities</li> <li>8. Unit Price Breakdown of Major and Lump sum/Lot Items</li> <li>9. Day work Rates for labor and equipment</li> <li>10. Health, Safety, Security and Environment Plan</li> </ol>									
10.4	A List of Contractor's key personnel (e.g., Project Manager, Project Engineers, Materials Engineers, and Foremen) assigned to the contract to be bid, with their complete qualification and experience data shall be provided.  The key personnel must meet the required minimum years of experience set below:									
	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>Key Personnel</u></th> <th style="text-align: left;"><u>General Experience</u></th> <th style="text-align: left;"><u>Relevant Experience</u></th> </tr> </thead> <tbody> <tr> <td>Professional Electrical Engr</td> <td></td> <td></td> </tr> <tr> <td>Registered Electrical Engr</td> <td></td> <td></td> </tr> </tbody> </table>	<u>Key Personnel</u>	<u>General Experience</u>	<u>Relevant Experience</u>	Professional Electrical Engr			Registered Electrical Engr		
<u>Key Personnel</u>	<u>General Experience</u>	<u>Relevant Experience</u>								
Professional Electrical Engr										
Registered Electrical Engr										
10.5	A List of Contractor's major equipment units, which are owned, leased, and/or under purchase agreements, supported by proof of ownership, certification of availability of equipment from the equipment lessor/vendor for the duration of the project  The minimum major equipment requirements are the following:									
	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>Equipment</u></th> <th style="text-align: left;"><u>Capacity</u></th> <th style="text-align: left;"><u>Number of Units</u></th> </tr> </thead> <tbody> <tr> <td><u>Generator</u></td> <td></td> <td></td> </tr> <tr> <td colspan="3"><u>TOOLS And equipment - Tools for electrical installation, cutting tools etc.</u></td> </tr> </tbody> </table>	<u>Equipment</u>	<u>Capacity</u>	<u>Number of Units</u>	<u>Generator</u>			<u>TOOLS And equipment - Tools for electrical installation, cutting tools etc.</u>		
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<u>Generator</u>										
<u>TOOLS And equipment - Tools for electrical installation, cutting tools etc.</u>										
12	[Insert Value Engineering clause if allowed.]									
15.1	The bid security shall be in the form of a <b>Bid Securing Declaration</b> <u>or</u> any of the following forms and amounts:									

	<p>a. The amount of not less than <b>Php 40,000.00</b> (2%) of ABC, if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit;</p> <p>b. The amount of not less than <b>Php 100,000.00</b> (5%) of ABC if bid security is in Surety Bond.</p>
19.2	Partial bids are not allowed.
20	<p>Required Drawings and Documents:  Preparation of necessary Drawings and documents for the processing of Government permits needed for operation of the Equipment/Process and/or use of the Work are for the account of the CONTRACTOR.  Processing of Government permits such as BLS, DOLE, LGU and DENR are for the account of the CONTRACTOR.  As- Built Drawings shall be in Auto CADD and shall be copied in a USB Storage Stick.</p>
21	Additional contract documents relevant to the Project that may be required by existing laws and/or the Procuring Entity, such as construction schedule and S-curve, manpower schedule, construction methods, equipment utilization schedule, construction safety and health program approved by the DOLE, and other acceptable tools of project scheduling.

## ***Section IV. General Conditions of Contract***

### **Notes on the General Conditions of Contract**

The General Conditions of Contract (GCC) in this Section, read in conjunction with the Special Conditions of Contract in Section V and other documents listed therein, should be a complete document expressing all the rights and obligations of the parties.

Matters governing performance of the Contractor, payments under the contract, or matters affecting the risks, rights, and obligations of the parties under the contract are included in the GCC and Special Conditions of Contract.

Any complementary information, which may be needed, shall be introduced only through the Special Conditions of Contract.

## 1. **Scope of Contract**

This Contract shall include all such items, although not specifically mentioned, that can be reasonably inferred as being required for its completion as if such items were expressly mentioned herein. All the provisions of RA No. 9184 and its 2016 revised IRR, including the Generic Procurement Manual, and associated issuances, constitute the primary source for the terms and conditions of the Contract, and thus, applicable in contract implementation. Herein clauses shall serve as the secondary source for the terms and conditions of the Contract.

This is without prejudice to Sections 74.1 and 74.2 of the 2016 revised IRR of RA No. 9184 allowing the GPPB to amend the IRR, which shall be applied to all procurement activities, the advertisement, posting, or invitation of which were issued after the effectivity of the said amendment.

## 2. **Sectional Completion of Works**

If sectional completion is specified in the **Special Conditions of Contract (SCC)**, references in the Conditions of Contract to the Works, the Completion Date, and the Intended Completion Date shall apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).

## 3. **Possession of Site**

4.1. The Procuring Entity shall give possession of all or parts of the Site to the Contractor based on the schedule of delivery indicated in the **SCC**, which corresponds to the execution of the Works. If the Contractor suffers delay or incurs cost from failure on the part of the Procuring Entity to give possession in accordance with the terms of this clause, the Procuring Entity's Representative shall give the Contractor a Contract Time Extension and certify such sum as fair to cover the cost incurred, which sum shall be paid by Procuring Entity.

4.2. If possession of a portion is not given by the above date, the Procuring Entity will be deemed to have delayed the start of the relevant activities. The resulting adjustments in contract time to address such delay may be addressed through contract extension provided under Annex "E" of the 2016 revised IRR of RA No. 9184.

## 4. **The Contractor's Obligations**

The Contractor shall employ the key personnel named in the Schedule of Key Personnel indicating their designation, in accordance with **ITB** Clause 10.3 and specified in the **BDS**, to carry out the supervision of the Works.

The Procuring Entity will approve any proposed replacement of key personnel only if their relevant qualifications and abilities are equal to or better than those of the personnel listed in the Schedule.

## 5. **Performance Security**

- 5.1. Within ten (10) calendar days from receipt of the Notice of Award from the Procuring Entity but in no case later than the signing of the contract by both parties, the successful Bidder shall furnish the performance security in any of the forms prescribed in Section 39 of the 2016 revised IRR.
- 5.2. The Contractor, by entering into the Contract with the Procuring Entity, acknowledges the right of the Procuring Entity to institute action pursuant to RA No. 3688 against any subcontractor be they an individual, firm, partnership, corporation, or association supplying the Contractor with labor, materials and/or equipment for the performance of this Contract.

## **6. Site Investigation Reports**

The Contractor, in preparing the Bid, shall rely on any Site Investigation Reports referred to in the SCC supplemented by any information obtained by the Contractor.

## **7. Warranty**

- 7.1. In case the Contractor fails to undertake the repair works under Section 62.2.2 of the 2016 revised IRR, the Procuring Entity shall forfeit its performance security, subject its property(ies) to attachment or garnishment proceedings, and perpetually disqualify it from participating in any public bidding. All payables of the GOP in his favor shall be offset to recover the costs.
- 7.2. The warranty against Structural Defects/Failures, except that occasioned-on force majeure, shall cover the period from the date of issuance of the Certificate of Final Acceptance by the Procuring Entity. Specific duration of the warranty is found in the SCC.

## **8. Liability of the Contractor**

Subject to additional provisions, if any, set forth in the SCC, the Contractor's liability under this Contract shall be as provided by the laws of the Republic of the Philippines.

If the Contractor is a joint venture, all partners to the joint venture shall be jointly and severally liable to the Procuring Entity.

## **9. Termination for Other Causes**

Contract termination shall be initiated in case it is determined *prima facie* by the Procuring Entity that the Contractor has engaged, before, or during the implementation of the contract, in unlawful deeds and behaviors relative to contract acquisition and implementation, such as, but not limited to corrupt, fraudulent, collusive, coercive, and obstructive practices as stated in ITB Clause 4.

## **10. Dayworks**

Subject to the guidelines on Variation Order in Annex “E” of the 2016 revised IRR of RA No. 9184, and if applicable as indicated in the **SCC**, the Dayworks rates in the Contractor’s Bid shall be used for small additional amounts of work only when the Procuring Entity’s Representative has given written instructions in advance for additional work to be paid for in that way.

## **11. Program of Work**

11.1. The Contractor shall submit to the Procuring Entity’s Representative for approval the said Program of Work showing the general methods, arrangements, order, and timing for all the activities in the Works. The submissions of the Program of Work are indicated in the **SCC**.

11.2. The Contractor shall submit to the Procuring Entity’s Representative for approval an updated Program of Work at intervals no longer than the period stated in the **SCC**. If the Contractor does not submit an updated Program of Work within this period, the Procuring Entity’s Representative may withhold the amount stated in the **SCC** from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Program of Work has been submitted.

## **12. Instructions, Inspections and Audits**

The Contractor shall permit the GOP or the Procuring Entity to inspect the Contractor’s accounts and records relating to the performance of the Contractor and to have them audited by auditors of the GOP or the Procuring Entity, as may be required.

## **13. Advance Payment**

The Procuring Entity shall, upon a written request of the Contractor which shall be submitted as a Contract document, make an advance payment to the Contractor in an amount not exceeding fifteen percent (15%) of the total contract price, to be made in lump sum, or at the most two installments according to a schedule specified in the **SCC**, subject to the requirements in Annex “E” of the 2016 revised IRR of RA No. 9184.

## **14. Progress Payments**

The Contractor may submit a request for payment for Work accomplished. Such requests for payment shall be verified and certified by the Procuring Entity’s Representative/Project Engineer. Except as otherwise stipulated in the **SCC**, materials and equipment delivered on the site but not completely put in place shall not be included for payment.

## **15. Operating and Maintenance Manuals**

15.1. If required, the Contractor will provide “as built” Drawings and/or operating and maintenance manuals as specified in the **SCC**.

- 15.2. If the Contractor does not provide the Drawings and/or manuals by the dates stated above, or they do not receive the Procuring Entity's Representative's approval, the Procuring Entity's Representative may withhold the amount stated in the SCC from payments due to the Contractor.

## ***Section V. Special Conditions of Contract***

### **Notes on the Special Conditions of Contract**

Similar to the BDS, the clauses in this Section are intended to assist the Procuring Entity in providing contract-specific information in relation to corresponding clauses in the GCC found in Section IV.

The Special Conditions of Contract (SCC) complement the GCC, specifying contractual requirements linked to the special circumstances of the Procuring Entity, the Procuring Entity's country, the sector, and the Works procured. In preparing this Section, the following aspects should be checked:

- a. Information that complements provisions of the GCC must be incorporated.
- b. Amendments and/or supplements to provisions of the GCC as necessitated by the circumstances of the specific purchase, must also be incorporated.

However, no special condition which defeats or negates the general intent and purpose of the provisions of the GCC should be incorporated herein.

# Special Conditions of Contract

GCC Clause	
2	<i>[If different dates are specified for completion of the Works by section, i.e. “sectional completion,” these dates should be listed here.]</i>
4.1	<i>[Specify the schedule of delivery of the possession of the site to the Contractor, whether full or in part.]</i>
6	The site investigation reports are: <i>[list here the required site investigation reports.]</i>
7.2	<i>[In case of other structures, such as bailey and wooden bridges, shallow wells, spring developments, and other similar structures:]</i> <b>Two (2) years.</b>
10	a. Dayworks are applicable at the rate shown in the Contractor’s original Bid.
11.1	<b>The Contractor shall submit the Program of Work and detailed Drawings for Approval of the Procuring Entity’s Representative within Ten (10) days of delivery of the Notice of Award.</b>
11.2	The amount to be withheld for late submission of an updated Program of Work is <i>1% of contract amount.</i>
13	<b>The amount of the advance payment is (15% of the total Contract price)</b>
14	<i>[If allowed by the Procuring Entity, state:]</i> Materials and equipment delivered on the site but not completely put in place shall be included for payment.
15.1	The date by which operating and maintenance manuals are required is <i>[date]</i> .  The date by which “as built” drawings are required is <i>[date]</i> .
15.2	The amount to be withheld for failing to produce “as built” drawings and/or operating and maintenance manuals by the date required is <i>[amount in local currency]</i> .

## *Section VI. Specifications*

### **Notes on Specifications**

A set of precise and clear specifications is a prerequisite for Bidders to respond realistically and competitively to the requirements of the Procuring Entity without qualifying or conditioning their Bids. In the context of international competitive bidding, the specifications must be drafted to permit the widest possible competition and, at the same time, present a clear statement of the required standards of workmanship, materials, and performance of the goods and services to be procured. Only if this is done will the objectives of economy, efficiency, and fairness in procurement be realized, responsiveness of Bids be ensured, and the subsequent task of bid evaluation facilitated. The specifications should require that all goods and materials to be incorporated in the Works be new, unused, of the most recent or current models, and incorporate all recent improvements in design and materials unless provided otherwise in the Contract.

Samples of specifications from previous similar projects are useful in this respect. The use of metric units is mandatory. Most specifications are normally written specially by the Procuring Entity or its representative to suit the Works at hand. There is no standard set of Specifications for universal application in all sectors in all regions, but there are established principles and practices, which are reflected in these PBDs.

There are considerable advantages in standardizing General Specifications for repetitive Works in recognized public sectors, such as highways, ports, railways, urban housing, irrigation, and water supply, in the same country or region where similar conditions prevail. The General Specifications should cover all classes of workmanship, materials, and equipment commonly involved in construction, although not necessarily to be used in a particular Works Contract. Deletions or addenda should then adapt the General Specifications to the particular Works.

Care must be taken in drafting specifications to ensure that they are not restrictive. In the specification of standards for goods, materials, and workmanship, recognized international standards should be used as much as possible. Where other particular standards are used, whether national standards or other standards, the specifications should state that goods, materials, and workmanship that meet other authoritative standards, and which ensure substantially equal or higher quality than the standards mentioned, will also be acceptable. The following clause may be inserted in the SCC.

#### **Sample Clause: Equivalency of Standards and Codes**

Wherever reference is made in the Contract to specific standards and codes to be met by the goods and materials to be furnished, and work performed or tested, the provisions of the latest current edition or revision of the relevant standards and codes in effect shall apply, unless otherwise expressly stated in the Contract. Where such standards and codes are national, or relate to a particular country or region, other authoritative standards that ensure a substantially equal or higher quality than the standards and codes specified will be accepted

subject to the Procuring Entity's Representative's prior review and written consent. Differences between the standards specified and the proposed alternative standards shall be fully described in writing by the Contractor and submitted to the Procuring Entity's Representative at least twenty-eight (28) days prior to the date when the Contractor desires the Procuring Entity's Representative's consent. In the event the Procuring Entity's Representative determines that such proposed deviations do not ensure substantially equal or higher quality, the Contractor shall comply with the standards specified in the documents.

These notes are intended only as information for the Procuring Entity or the person drafting the Bidding Documents. They should not be included in the final Bidding Documents.

## **ELECTRICAL GENERAL SPECIFICATION**

### **PART 1.00 – GENERAL**

#### **1.1 GENERAL DESCRIPTION**

A. The work to be done under this Division of the Specifications consists of the fabrication, furnishing, delivery and installation, complete in all details of the Electrical System, at the project premises and all work materials incidental to the proper completion of the installation, except those portions of the work which are expressly stated to be done by others. All works shall be in accordance with the governing Codes and regulations and with the specifications, except those where same conflict with such Codes, etc., where the latter shall then govern. The requirements with regards to materials and workmanship specify the required standards for the finishing of all labor, materials, and appliances necessary for complete installation of the work specified herein and indicated in the drawings. The Specifications are intended to provide a broad outline of the required equipment, and are not intended to include all details of design and construction.

#### **B. SITE OF WORK**

Bureau of Soil and Water Management, San Ildefonso Bulacan

#### **C. SCOPE OF WORK**

Under this section of the specification, provide all labor, materials and equipment and perform all the work necessary for the complete execution of all Electrical System as shown on Electrical Drawings. Scope of Work shall include but not be limited to the following principal items of work:

1. Furnish and install all conduits for power and lightings.

2. Furnish and install all feeder and distribution wires and conduit for power, and auxiliary system as required on the plans.
3. Furnish and Feeder line, support and fittings as required on the plans.
4. Furnish and install main circuit breaker, switchboard, manual transfer switch, distribution and lighting panel board, circuit breaker and disconnect switches, meter center and other protective devices as required on the plans.
5. Furnish and install complete distribution for lighting, power to include conduits, wiring devices, boxes and pull boxes as required on the plans.
6. Furnish and install a complete wiring system include conduits, wires and fittings up to circuit breaker protection. Circuit breaker protection shall be included as indicated in the plan.
7. Furnish and install complete system to include conduit, cable, terminal block, wooden backboard, house wiring and other related accessories as indicated in the plan.
8. Furnish and install all feeder wires and conduit complete with support and other related accessories as indicated in the plan.
9. Application of electric power ~~and telephone~~ connection including preparation of all necessary plans, forms and related documents, payments of all required fees and charges and coordination with other authorities or person involved in the procedure.
10. Perform all terminations to include testing.
11. Preparation of as-built plans and drawing.
12. All work materials, equipment, fittings, support, etc. that are indicated in the plans but are necessary for the completion of the works must be included in this division of work.

## QUALIFICATIONS

### A. Sleeves, Chases and Openings

1. Furnish templates, sleeves or details for chases and openings to be left in the floors and walls to accommodate the work. Layout the work in accordance with accepted shop drawing. Furnish and set in place in advance of pouring of slabs or construction of walls, all inserts and sleeves necessary to complete the work.
2. Pipe sleeves for all electrical conduits passing through walls, partitions, ceiling, floors, etc. shall be of sufficient length to extend through the full thickness of the construction, with ends flush with the finish on each side, unless noted otherwise.
3. Chases, sleeves and openings in fire rated walls and floors (electrical room, etc.) shall be “fire stooped” with acceptable fire safe insulation. Fire safe details shall be based on UL listed assemblies “Hilti”, “Specsael” or approves equal.

### B. Access Panels (By Main Contractor – For Reference Only)

1. Coordinate size and location of access panels as required for access to pull boxes and electrical equipment. Where, in the opinion on the Contractor, access panels are required, but are not shown on the drawings, the omission shall be brought to the attention of the Architect before installation of equipment, all access panels and their sizes shall be noted on shop drawings.

#### **1.8 CODES, INSPECTIONS, PERMITS AND FEES**

- A. The work under this Contract is to be installed according to the requirements of the latest edition of the Philippine Electrical Code, the rules and regulations of the local authorities.
- B. All permits and fees required for this work shall be obtained by and at the expense of the Contract. The Contract shall furnish the Engineers and the Owner final certificates of electrical inspection and approval from the proper government authorities after completion of the work. The Contractor shall prepare all as built and all forms and documents required by the approving authorities.

#### **1.14 CONTRACT DRAWINGS**

- A. The location of outlets, apparatus and equipment indicated on the drawing are shown as accurately as possible, that the small scale drawings are necessary diagrammatic and that such location, as shown, are subject to slight revisions, as the work is installed which may be necessary to fit construction conditions. No major changes shall be made, however without the approval in writing of the Engineers.
- B. The Contractor shall examine and study the architectural scale drawings, large scale and full size details. The approved shop drawing of other parties and he shall frequently consult with them to ascertain any changes that may have been made and he shall be guided accordingly before establishing the precise location of conduits runs, pull and junction boxes and devices. All outlets covered or partially covered by ducts, piping, etc., shall be extended laterally or to underside of same so that the equipment may be properly installed.
- C. The Contractor shall effectively protect his own work from damage during, and as may be necessary after installation, and he shall likewise protect adjoining work of other parties from damaged resulting from his installation.

## **1.15 LOCATION OF WIRING AND EQUIPMENT**

- A. The Contractor shall coordinate his work with all parties involved so that exact locations may be obtained for all apparatus, appliances and wiring.
- B. The location of equipment shown on diagrammatical wiring plans shall be considered as approximate and it shall be incumbent upon the Contractor before installation. To study all pertinent drawings and obtain precise information from the architectural schedules, scale drawings, large scale and full size details of finished rooms, approved shop drawings of other parties involved or from the Engineer.

## **1.17 MATERIALS PROPOSED**

The Contractor is required to state in his bid the manufacturer and type proposed for all materials to be used for the works. Any alternative offer shall be submitted at the time of bidding.

Samples of the materials to be used shall be submitted to the End-User for approval before procurement and/or installation.

# **ELECTRICAL INTERIOR WIRING SYSTEM**

## **1.2 GENERAL REQUIREMENTS**

Section 16000, "Electrical General Requirements", applies this section with additions and modification specified herein. In the standards referred to herein, consider the advisory provision to be mandatory, as though the word "shall" wherever it appears. Interpret reference in these standards to the "authority having jurisdiction", or words of similar meaning, to mean the Engineer.

## **1.3 SUBMITTALS**

### **D. MANUFACTURER'S DATA**

- 1. Wiring Devices (each type)

2. Conduit and Fittings (each type)
3. Insulated Conductors
4. Junction and utility Boxes
5. Panel board Circuit Breakers
6. Others as required

**E. SHOP DRAWINGS**

1. Panel board (lighting and distribution panels)
2. Support details including hangers, brackets and clamps.
3. Others as required.

**A. CONDUIT AND FITTINGS**

1. Conduit in general shall be Electrical Metal Tubing (EMT) with an interior coating as manufactured by “Panasonic”, “Arrow”, “McGill”, nikkon or approved equal.
2. Poly-vinyl-chloride (PVC) conduit shall be heavy wall, schedule 40, with factory made bends, couplings and fittings “Neltex”, “Moldex” or “Emerald” or approved equal.
3. No conduits shall be used in any system smaller than 15 mm ( $1/2$ inch) diameter electric trade size, nor shall have more than four (4) 90 degree bends in any one run and where necessary, pull boxes shall be provided as directed.
4. No wire shall be pulled into conduit until the conduit system is completed in all details, in the case of concealed work until all rough plastering masonry has been completed, and in the case of exposed work until the conduit work has been completed in every detail.
5. The ends of all conduits shall be tightly plugged to exclude plaster, dust and moisture while the construction of building is in progress. All conduits shall be reamed to remove all burns.
6. All pipes and fittings on exposed work shall be IMC and be secured by means of metal clips, which shall be held in place by means of machine

screws. When running over concrete surface, the screws shall be held in place by means of expansion sleeves. All pipes on exposed work shall be allowed and all bends and offsets shall be avoided as much as possible. Where necessary, conduit fittings shall be used. Conduits in all cases shall be run perfectly straight and true, satisfactory to the Engineer. Conduits shall be supported at 1.50 meter interval maximum.

## **B. OUTLETS, BOXES AND FITTINGS**

1. At all outlets of whatever kind, for all system, there shall be provided a suitable fitting, which shall be either a box or other device especially designed to receive the type of fitting to be mounted thereon.
2. The Contractor shall consult with the Engineer as to the nature of the various fittings to be used before installing his outlet fittings and shall conform strictly in the use of fittings to the nature of the appliance to be mounted on them so that the work, when completed, will be a finished design.
3. At all outlets on concealed conduit work provide galvanized pressed steel outlet boxes of standard make. These boxes shall be in all cases standard and where such boxes are not available on the market, fabricated boxes shall be provided by the Contractor at his own expense. In general
4. All utility boxes intended for outlet devices shall be especially designed to receive the particular type of device to be mounted and should be deep enough to accept and fit the total number of conductors and device required.
5. In case of lighting fixtures, their outlet fittings shall be provided with suitable supports of size and kind required by the lighting fixture to be hung. Fixture studs shall be 9 mm dia.

## **C. JUNCTION BOXES AND PULL BOXES**

1. Junction boxes, square boxes and other pull boxes, of code gauge steel, galvanized shall be provided as indicated or as required for facilitating the pulling of wires and cables. Pull boxes in finished places shall be located

and installed with the permission and to the satisfaction of the Architect and Engineers

2. All junction and pull boxes on exposed conduit work shall be provided with hubs for threaded pipe entry and covers provided with hinged and provision for padlocking.

#### **D. WIRES AND CABLES**

1. All wires shall be copper, soft-drawn and annealed, 98% conductivity, smooth and true of a cylindrical form and variation shall be within 1% of the actual size called for.
2. All wires and cable shall be as manufactures by “Philflex, Duraflex, and Phelps Dodge” or approved equal.
3. Wires and cables for power and lighting system shall be plastic insulated for 600 volts working pressure type: THHN/THWN”.
4. THHN/THWN wires can be used for the same size of wires provided the allowable current does not exceed that of TW/THW wires.
5. All wires 3.5 mm<sup>2</sup> or larger shall be stranded copper.
6. Control leads for motors or lighting shall be or type “THHN/THWN”.
7. For lighting and power system no wire smaller than 3.5 mm<sup>2</sup> shall be used unless otherwise indicated in the plan.
8. Color Coding: Provide all service, feeder, branch, control and signaling circuit conductors. Color shall be green for grounding conductors, and white for neutrals. The color of the ungrounded conductors in different voltage system shall be as follows: Phase A - Red; Phase B - Yellow; Phase C - Blue.
9. Splices and Termination Components Connectors for wires o. 10 AWG and smaller shall be insulated pressure-type or twist-on splicing connector (wire nut). Provide solder less terminal lugs on stranded conductors.

#### **E. WALL SWITCHES AND PLATES**

1. Wall switches shall be rated with ampere and voltage ratings required. Switches shall be for flush mounting type and of the quite type, spring operated. The type of switches shall be tumbler operation and the color, plating and appearance of wall plates shall be as selected by the End-User. Appropriate samples shall be submitted prior to the purchase of wall switches and faceplates. Switches and plates shall be as manufactured by “National”, “Toshiba”, “Clipsal”, “Legrand” or “Bticino” and Panasonic.
2. Provide weather proof metal switch plate covers where indicated on plans.
3. All utility boxes intended for switch devices shall be specially designed to receive the particular type of switch device to be mounted and should be deep enough to accept and fit the total number of conductors required as per drawings.

## **F. WALL RECEPTACLES AND PLATES**

1. Receptacle outlets shall be 15 Ampere, 250V, 3 prong and parallel grounded type. Locking type and other special purposes receptacle outlets shall be as indicated in the drawings. Wall receptacles and plates shall be as manufactured by “National”, “Toshiba”, “Clipsal”, “Legrand” or “Bticino” and panasonic.
2. Appropriate weather proof fitting metal cast alloy boxes shall be provided for convenience outlet where indicated to be weather proof.
3. Provide weather proof metal receptacle plate cover for each convenience receptacle outlet indicated as weather proof.
4. Type and color of receptacle outlet and plates shall be as selected by the Architect. Appropriate samples of outlet and plates shall be submitted prior to purchase of devices.
5. All utility boxes intended for receptacle outlet devices shall be as specially designed to receive the particular type of receptacle outlet device to be mounted and should be deep enough to accept and fit the total number of conductors required as per drawings.
6. Receptacle with Ground Fault Circuit Interruption (GFCI) shall be rated 10A, 2P, 3 wire grounding type, 220V parallel slot with 15milliampere current sensitivity.

## **G. PANELS AND CABINETS**

1. Standard panels and cabinets, as much as possible shall be used and assembled on job. All panels shall be dead front construction, furnished with trims for flush or surface mounting as required. Cabinets shall be of code gauge steel with gutters as least 100 mm wide and wider if necessary, and with door provided with concealed hinges and cylinder type lock and catch. Two keys per panel shall be furnished. The trim for all panels shall be finished in industrial grey over a coat of rust inhibitor.
2. Panels and cabinets shall be as manufactured by “AsiaPhil”, “LJ”, “Fuji-Haya” or “System Powermark” or approved equal. Manufacturer’s shop drawings shall be submitted before manufacturing.
3. Lighting panels shall be equipped with branch air circuit breakers as required and mains as noted on plans or panel schedule. All circuit breakers shall be “Square D”.
4. Panelboard main bus work shall be ampacity rated to equal or exceed overcurrent protective device immediately ahead of it. All buswork shall be properly secure to withstand available short circuit forces at the location.
5. Distribution panels shall be of the same type as lighting panels except equipped with three poles industrial branch circuit breakers of sizes, voltage ratings and interrupting capacity as called for on plans. All circuit breakers for distribution and power panel shall be industrial type model case circuit breakers.

6. All distribution and lighting panels shall be provided with permanent panel designation and directory. Submit sample for approval of Engineer/Architect prior to fabrication. Panel designation shall be similar to panelboard schedule and panel directory shall be provided with circuit number, breaker rating, size of wire and conduit.

#### **H. INDIVIDUAL BREAKERS AND SWITCHES**

1. Provide individual circuit breakers, safety switches and disconnect switches where indicated on plans. Voltage ratings shall be suitable in each case of service application. Enclosures shall be General Purpose, NEMA Type 1, except where specifically noted on plans assembled on panel cabinets.

All protective devices shall meet NEMA and Underwriters Laboratories, Inc. specifications.

2. Circuit breakers shall consist of a quick-make, quick break type entirely trip-free operating mechanism with contacts, arc-interruption, and thermal-magnetic unit for each pole, all closed in a molded-phenolic case. The thermal-magnetic trip unit shall provide time-delayed overload protection, and in case of overload or short circuit current in any one pole. Circuit breaker shall be trip indicating, with the tripped position of breaker handle midway between "ON" and "OFF" positions.
3. Circuit breaker with ground fault circuit interruption shall be provided with "push to test" button, visible indication of tripped condition and ability to detect a current imbalance of approximately 5 milliamperes.
4. Current limiting type circuit breaker shall be no fuse type with minimum interrupting rating as indicated in the drawings.
5. All circuit breaker shall be bolt-on type. Plug-in circuit breakers are not acceptable.
6. Circuit breakers shall be as manufactured by "GE", "Square D" or "ABB" and Schneider. All circuit breakers rated above 250 amperes shall have interchangeable trip units. Unless otherwise specified, minimum interrupting level for 380 volts circuit breakers shall be 5,000 amperes.

7. All single pole (1P0) circuit breaker shall be rated at 220 volts or 400/230 volts, 240/120 volts is not acceptable and 400 volts for three pole (3P) circuit breaker.

## **I. PANELBOARD BUSES**

Support copper bus bars on bases independent of the circuit breakers. Main buses and back pans shall be designed so that the breakers may be changed without machining, drilling or tapping. Provide a separate ground bus marked with a green stripe along its front and bonded to the steel cabinet for connecting grounding conductors.

### **INSTALLATION**

#### **A. GENERAL REQUIREMENTS**

Electrical installations shall conform to the requirements of the Code and to the requirements specified herein.

#### **B. WIRING METHODS**

Wiring method shall be insulated conductors installed in conduit, except where specifically indicated or specified otherwise, or required by the code to be installed otherwise. An insulated equipments grounding conductor shall be provided in all branch circuits, including lighting circuits.

#### **C. CONDUIT INSTALLATION**

Unless indicated otherwise, conceal, conduit within finished walls and floor. Install conduit panel parallel with or at right angles to ceiling, walls and structural members where located above accessible ceiling and where conduit will be visible after completion of project.

1. Where conduits rise through floor slabs the curved portion of bends shall not be visible above the finished slab.
2. Conduit Support

Support conduit by pipe straps wall bracket, hangers, ceiling trapeze. Fasten by machine screws, welded threaded studs, or spring-tension clamps on steelwork. Do not weld conduits or pipe straps to steel structures. The load applied to fasteners shall not exceed one-fourth of the proof test load. In partition of light steel construction, use sheet-metal screws.

3. Make changes in direction of runs with symmetrical bends or cast-metal fittings. Make field-made bends and offsets with a hickey or conduit-bending machine. Do not install crushed or deform conduits. Avoid trapped conduits. Prevent plaster, dirt, or trash from lodging in conduits, boxes, fittings, and equipment during construction. Free clogged conduits of all obstruction.
4. Install pull wires in empty conduits in which wire is to be installed. The pull wire shall be 2 mm<sup>2</sup> (No. 14AWG) zinc-coated steel or plastic having not less than 90 kilogram (200 pound) tensile strength. Leave not less than 300 mm of slack at each end of the pull wire.
5. Conduit Installed in Concrete Floor Slabs:

Locate so as not to adversely affect the structural strength of the slabs. Install conduit within the middle one-third of the concrete slab. Space conduits horizontally shall not closer than three diameters except at cabinet locations. Curved portions of bends shall not be visible above the finish slab. Where embedded conduits cross expansion joints, provide suitable watertight expansion fittings and bonding jumpers. Conduit larger than 25 mm trade size shall be parallel with or at right angles to the main reinforcement; when at right angles to the reinforcement, the conduit shall be close to one of the supports of the slab.

6. Fasten conduits to sheet metal boxes and cabinets with two locknuts where required by the Code, where insulated bushings are used, and where bushings cannot be brought into firm contact with the box; otherwise, use at least a single locknut and bushing. Locknuts shall be the type with sharp edges of digging into the wall of metal enclosures. Install bushings on the ends of conduits and provide insulating type where required by Code.
7. Flexible connection of short length (maximum of 1.828 m) shall be provided for lighting fixtures. Liquid-tight flexible conduit shall be used in wet location. A separate ground conductors shall be provided across flexible connections.

#### **D. BOXES, OUTLETS AND SUPPORT**

Provide boxes in the wiring or raceway systems wherever required for pulling of wires making connections and mounting of devices or fixtures.

Boxes for metallic raceway shall be of the cast-metal hub type when located in normally wet locations, when surface mounted on outside of exterior surfaces, when installed exposed up to 2 m above interior floors and walkways, and when installed in hazardous areas. Boxes in other locations shall be sheet steel. Each box shall have the volume required by Code for the number of conductors enclosed in the box. Boxes for mounting lighting fixtures shall be not less than 100 mm square (or octagonal), except that smaller boxes may be installed as required by fixture configurations, as approved. Provide gaskets for cast-metal boxes installed in wet locations and boxes installed flush with the outside of exterior surfaces. Fasten boxes and support: support sheet boxes directly from the building structure or by bar hangers. Where bar hangers are used, attach the bar to raceways on opposite sides of the box and support the raceway with an approved type fastener not more than 600 mm from the box.

1. Boxes for use with raceway system shall not be less than the minimum size required by Code of code-gage aluminum or galvanized sheet steel, except where cast-metal boxes are required in locations specified above. Furnish boxes with common pull box; tag the feeders to indicate clearly the electrical characteristics, circuit number and panel designation.

#### **E. MOUNTING HEIGHTS**

Mount panel board, circuit breakers and disconnecting switches so that the height of the operating handle at its highest position will not exceed 2 m from the floor. Mounted lighting switches 1.37 m above finished floor, receptacles 0.30 m above finished floor, wall switches 1.4 m above finished floor, intercom 1.4 m above finished floor. Measure mounting heights of wiring devices and outlets to the center of device or outlet.

#### **F. CONDUCTOR IDENTIFICATION**

Provide conductor identification or tagging indicating its load or panel serve within each enclosure or pull boxes where a tap, splice or termination or cable pulling is made.

**G. SPLICES**

Make splices in accessible locations Make splices in conductors 5.5 mm<sup>2</sup> and smaller with an insulated pressure type connector (wire nut). Make splices in conductors 8mm<sup>2</sup> and larger, with a solderless connector and cover with an insulation material equivalent to the conductor insulation or as indicated in the plan.

**H. COVER AND DEVICE PLATES**

Install with all four edges in continuous contact with finished wall surfaces without the use of mats or similar devices. Plaster fillings will not be permitted. Plates shall be installed with an alignment tolerance Of 1.5 mm. The use of sectional type device plates will not be permitted. Plates installed or as indicated shall in the plan.

**I. GROUNDING AND BONDING**

Ground all exposed non-current-carrying metallic parts of electrical equipment, metallic raceway system and neutral conductor of wiring systems. Make ground connection at the main service equipment or grounding grid. Make ground connection to buried ground rods on the exterior of the building or as shown in the plan.

1. Grounding Conductor:

Provide an insulated, green-colored equipment grounding conductor in all feeder and branch circuits.

2. Resistance:

The maximum resistance to ground of the grounding system shall not exceed 25 ohms under normally dry conditions. Where the resistance obtained exceeds 25 ohms, contact the Engineer for further instructions.

## J. **FIELD TEST**

The Contractors shall provide all test equipment and personnel and submit written copies of all test results. As an exception to requirements that may be stated elsewhere in the Contract, the Engineer shall be given 5 working days notice prior to each test.

### 1. Devices Subject to Manual Operation:

Each device subject to manual operation shall be operated at least five times, demonstrating satisfactory operation each time.

### 2. Test on 600-Volt Wiring

Test all 600-volt wiring to verify that no short circuits or accidental ground exist. Perform insulation resistance tests on all wiring 14 mm<sup>2</sup> and larger using an instrument which applies a voltage of approximately 500 volts to provide a direct reading of resistance; minimum resistance shall be 250,000 ohms.

### 3. Grounding System Test:

Test the grounding system to assure continuity and the resistance to ground is not excessive. Test ground wire for resistance to ground. Make resistance measurements in normally dry weather, not less than 48 hours rainfall. Submit written results of each test to the Engineer and indicate the resistance and soil conditions at the time the measurements were made.

**\*\*\* End of Section \*\*\***

## **GROUNDING SYSTEM**

- A. The Contractor shall furnish and install complete grounding system as shown in the drawings.
- B. Grounding system shall include ground wires, ground rods, and clamps, connectors, grounding buses, ground wells and auxiliary ground wire taps as shown in the drawings.
- C. Equipment Grounding:

The grounded neutrals of the secondary distribution system shall be supplemented by an equipment grounding system to properly safeguard the equipment and personnel. The equipment grounding system shall be installed so that all metallic structures , enclosures, raceways, junction boxes, outlet boxes, cabinets, machine frames, portable equipment and other conductive items in close proximity with electrical circuits operate continuously at ground potential and provide a low impedance path for possible ground fault currents. The systems shall comply with the Philippine Electrical Code, modified as indicated on the drawings and/or as specified.

### **1.1. SUBMITTALS**

#### **A. MANUFACTURER'S DATA**

- 1. Ground Rods
- 2. Ground Clamps
- 3. Ground Wires
- 4. Connectors

### **2.1. GROUND WIRE**

Shall be bare copper stranded, with sizes as shown in the drawings and shall be of cylindrical form and variation shall be within 1% of the actual size called for:

### **2.2. GROUND BUS**

Ground bus shall be solid copper with size as indicated in the drawing.

### **2.3. GROUND RODS**

Shall be copper clad steel with a diameter of 20 mm by 3000 mm long unless otherwise specified.

#### 2.4. GROUND CLAMPS AND CONNECTORS

Shall be solder less compression or bolted type and shall be bronze.

### EXECUTION

- A. Locations of ground rods and ground wells are shown on the plans.
- B. The main transformer, generator set and switchboard shall be connected to the grounding system as shown on the plans.
- C. Test the grounding system to assure continuity and the resistance to ground is not excessive. Make resistance measurement in normally dry weather, not less than 48 hours after rainfall. Submit written results of each test to the Engineer for approval.

**\*\*\*End of Section\*\*\***

### PART 3.00 – EXECUTION

#### 3.1 INSTALLATION

- A. Installation shall be in accordance with the Code and requirements specified or indicated in the drawings.
- B. Maintain horizontal or vertical runs of ground wires and ensures that all bends have at least 200 mm radius and an angle of any bend shall not less than 90 degrees.
- C. Lightning carrier cable and down conductor shall be supported every 1.50 meters on center using fabricated copper clamps, bolted to roof slab with plastic expansion sleeves.

#### 3.2 FIELD TEST

- A. Test the grounding system to assure the continuity and that the resistance to ground is not excessive.

**\*\*\* End of Section \*\***

# Section VII. Drawings

### GENERAL NOTES

- ALL ELECTRICAL WORKS HEREIN SHALL BE DONE IN ACCORDANCE WITH THE PROVISIONS OF THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE, THE BUREAU ORDINANCE OF THE LOCAL CODE, ENFORCING AUTHORITIES AND THE REQUIREMENTS OF THE LOCAL POWER AND TELEPHONE COMPANY.
- ALL ELECTRICAL WORKS HEREIN SHALL BE DONE UNDER THE DIRECT SUPERVISION OF A QUALIFIED LICENSED ELECTRICAL ENGINEER WHO SHALL BE RESPONSIBLE IN THE INTERPRETATION OF THE DESIGN INTENT, PLANS, SPECIFICATIONS, AND THE REQUIRED STANDARD OF THE ELECTRICAL CODE.
- THE ELECTRICAL CONTRACTOR SHALL SECURE ALL NECESSARY PERMITS AND ALL FEES REQUIRED FOR THE WORK AND SHALL FURNISH THE OWNER THROUGH THE ENGINEER'S FINAL CERTIFICATES OF ELECTRICAL INSPECTION AND FROM PROPER GOVERNMENT AGENCIES FOR COMPLETE WORK.
- POWER SERVICE ENTRANCE SHALL BE THREE PHASE, 230/400V, 60HZ WITH GROUND.
- THE ELECTRICAL CONTRACTOR SHALL VERIFY AND ORIENT THE ACTUAL LOCATION OF SERVICE ENTRANCE FOR CONNECTION TO POWER SUPPLY OF THE PROJECT.
- ALL MATERIALS TO BE USED AND EQUIPMENT TO BE INSTALLED SHALL BE BRAND NEW AND MUST BE OF THE APPROVED TYPE FOR THE PARTICULAR LOCATION AND PURPOSE INTENDED UNLESS OTHERWISE NOTED.
- THE WIRING METHOD FOR POWER, LIGHTING, TELEPHONE AND CITY, CABLE AND BROADCASTING SYSTEM SHALL BE DONE IN FOLD BACK, CHLORIDE (PVC) PIPE FOR ALL EXPOSED AND CONCEALED IN CONCRETE, SLAB OR WALL PARTITION, IN TRENCHES IN METAL CONDUIT THROUGHOUT THE PROJECT EXCEPT FROM CONDUIT, EXPOSED AND CONCEALED IN LOCALS, SERVICE, TELEPHONE DISTRIBUTION AND WASTE POWER CONDUIT SYSTEMS.
- SMALLEST BRANDED CIRCUIT WIRE SHALL BE 1.5mm<sup>2</sup> THICK FOR POWER AND LIGHTING SYSTEM IN RACKWAY (DIN) RACKS AND FOR THE CONDUIT WIRE SHALL BE 1.5mm<sup>2</sup> THICK FOR CONDUIT.
- ALL BRANDED CIRCUIT WIRE SHALL BE INSTALLED AS INDICATED IN THE PLAN, EXPOSED CIRCUIT RUN SHALL BE METICULOUSLY PARALLEL TO OR PERPENDICULAR WITH THE BUILDING LINE AND SUPPORTED BY CONDUIT CLAMP EVERY 1.5 METERS. DIAGONAL CIRCUIT RUN SHALL NOT BE ACCEPTED.
- PULLBOARDS SHALL BE PROVIDED BY THE CONTRACTOR UNLESS NECESSARY TO FACILITATE WIRE PULLING (EVEN IF THESE ARE NOT PROVIDED IN THE PLANS) SHALL BE USED IN ACCORDANCE ON THE CODE REQUIREMENTS. ALL JUNCTION BOXES SHALL BE PROVIDED WITH METAL PLATE COVER.
- ALL FLUORESCENT LIGHTING FIXTURES SHALL BE EQUIPPED WITH HEAT-TYPE WITH HIGH POWER FACTOR, BALLASTS, CAPACITOR, STARTER AND SPRING LOADED LAMP HOLDERS.
- ALL LIGHT CONTROLLED SWITCHES SHALL BE RATED TO AMPS 200 AC ONLY. SWITCHES SHALL BE INSTALLED FOR OPERATOR WITH HORIZONTAL MOTION.
- ALL METALIC CONDUIT, CABINET BODIES AND EQUIPMENT SHALL BE PROPERLY GROUNDED AND BONDED. GROUNDING SYSTEM SHALL HAVE A RESISTANCE VALUE NOT EXCEEDING 5 OHMS UNLESS OTHERWISE NOTED.
- ALL RECEPTACLE OUTLET SHALL BE PROPERLY GROUNDED TO THE BOX BY MEANS OF GROUNDING LEADS.
- GROUNDING HEIGHT NOT SHOWN OR SPECIFIED ARE AS FOLLOWS:
  - LIGHT CONTROLLED SWITCHES - 1.5M ABOVE FINISHED FLOOR TO CENTER OF DEVICE
  - SWITCHES CONDUIT OUTLET - 0.5M ABOVE FINISHED FLOOR TO CENTER OF DEVICE
  - TELEPHONE / DATA OUTLET - 0.5M ABOVE FINISHED FLOOR TO CENTER OF DEVICE
  - PANELBOARD / DISCONNECT - 1.0M ABOVE FINISHED FLOOR TO TOP OF PANEL
  - MANUAL PULL STATIONS - 1.5M ABOVE FINISHED FLOOR TO CENTER OF DEVICE
  - ALARM BELL/AHORN - 1.0M ABOVE FINISHED FLOOR TO TOP OF PANEL
- ONCE COMPLETE, THE CONTRACTOR SHALL PERFORM THE FOLLOWING TESTS SHALL BE PERFORMED BY THE CONTRACTOR INCLUDING OF THE INSTALLATION TO BE REPORTED IN DETAILS ON FORM APPROVED BY THE ENGINEER:
  - INSULATION RESISTANCE TEST
  - GROUND RESISTANCE TEST
  - OPERATIONAL TEST
  - PHASE BALANCE TEST
  - SYSTEM TEST AND ACCEPTANCE TEST
- ALL WIRES & CABLES SHALL BE LISTED AND SHALL BE COLOR CODED AS FOLLOWS:
 

SIZE 1 -	RED	GREEN
SIZE 2 -	YELLOW	WHITE
SIZE 3 -	BLACK	CONTROL WIRE - ANY COLOR
- THE ELECTRICAL CONTRACTOR SHALL LEAVE AND SHUT UP THE ADDITIONAL SCALE DIMENSIONS, LARGE SCALE AND FULL SIZE DETAILS, APPROVED SHOP DRAWINGS, FIELD WIRING TRACES AND SHALL PRESERVE ALL WORK, PLANS, SPECIFICATIONS AND OTHER TRACES TO REMAIN COMPLETE IN ACCORDANCE TO THE INSTALLATION WORKS.
- ALL CONDUITS SHALL BE PROTECTED AGAINST DAMAGES BY THE ENTRANCE OF WATER AND FOREIGN MATTER BEFORE CONDUIT RUN. ALL ENDS OF CONDUITS SHALL BE PLUGGED TO EXCLUDE DUST AND MOISTURE AND DUST IMMEDIATELY AFTER THE CONDUITS ARE PLACED.
- THE LOCATION OF THE OUTLETS AND EQUIPMENT INDICATED IN THE DRAWINGS ARE ONLY APPROXIMATE. THE WIRE DRAWING ONLY TO BE USED AS A GUIDE FOR INSTALLATION. VERIFY TO THE ARCHITECT THE EXACT LOCATION OF SUCH EQUIPMENT TO BE INSTALLED.
- THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL PANELBOARDS TO THE ENGINEER PRIOR TO FABRICATION. ONE (1) SET OF SHOP DRAWINGS AND ONLY THE APPROVED PANELBOARD FABRICATION SHALL BE UTILIZED FOR THE ENTIRE PROJECT REQUIREMENTS.
- NO CHANGE AND MODIFICATION SHALL BE MADE IN THE PLANS WITHOUT THE ELECTRONIC CONSULTANT / DESIGNER WRITTEN COMMENT.
- ALL ELECTRICAL WORKS HEREIN SHALL BE EXECUTED IN A WORKMANSHIP MANNER AND SHALL PRESENT A NEAT AND ORDERLY ACCEPTANCE. ALL WIRING SHALL BE CONCEALED AS MUCH AS POSSIBLE.

### VICINITY MAP

### DELINEATION OF WORKS FOR PUMPS AND MOTORS

### POWER SINGLE LINE DIAGRAM

**PROFESSIONAL ELECTRICAL ENGINEER**

**ENGR. ARIEL P. DURAN**

REG. NO. 18817  
P.E.C. NO. 18817  
P.R.C. NO. 18817  
P.R.C. NO. 18817

**NOTES**

THE PROVIDED DRAWING IS A REPRESENTATION OF THE PROJECT CONTRACTOR'S ENGINEERING WORK AND SHALL NOT BE REPRODUCED WITHOUT WRITTEN PERMISSION.

**PROJECT & LOCATION**

**PROPOSED ELECTRICAL SYSTEM FOR LABORATORY OF NSWRDCC-LUPEZ SAN ILDEFONSO, BULACAN**

**RECOMMENDING APPROVAL**

**ENGR. OSCAR CARPIO**  
Center Chief, NSWRDCC-LUPEZ

**APPROVED BY**

**GINA M. NILO, Ph.D.**  
OIC, Director - BSMW

**CONTENTS**

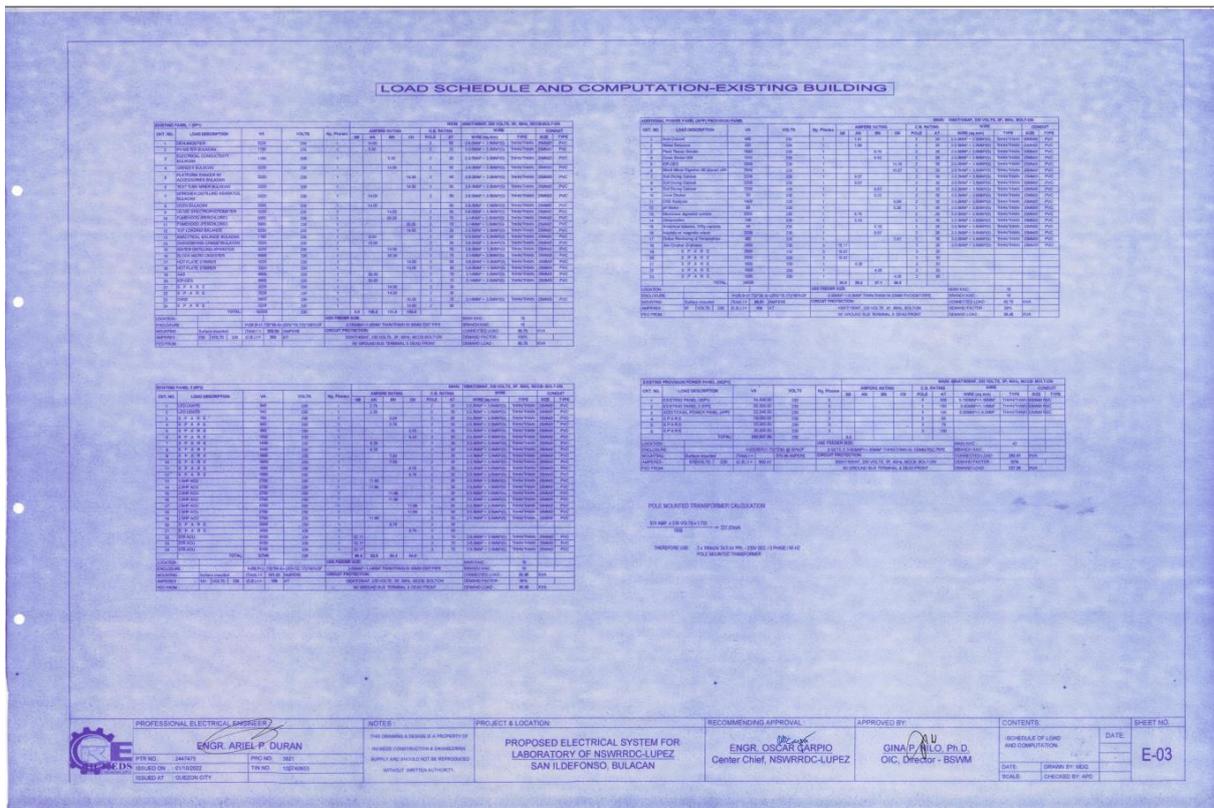
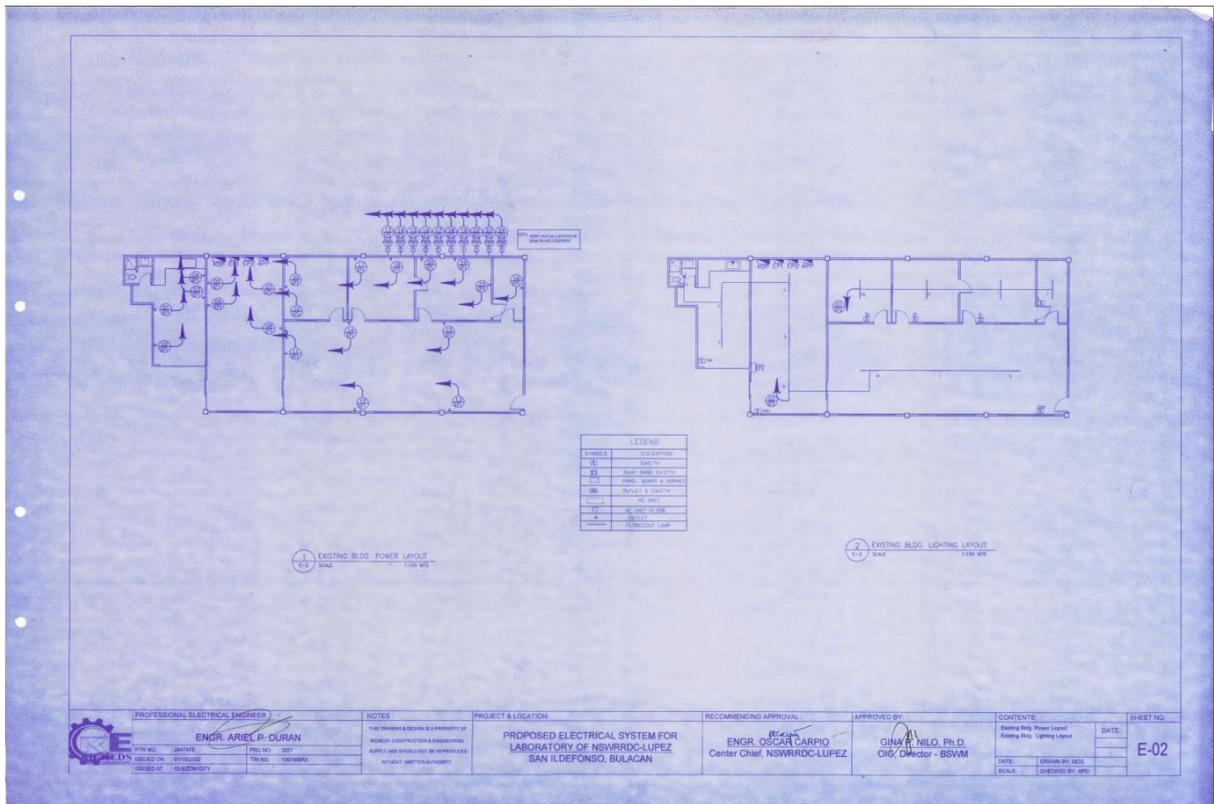
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Power Single Line Diagram  
Vicinity Map

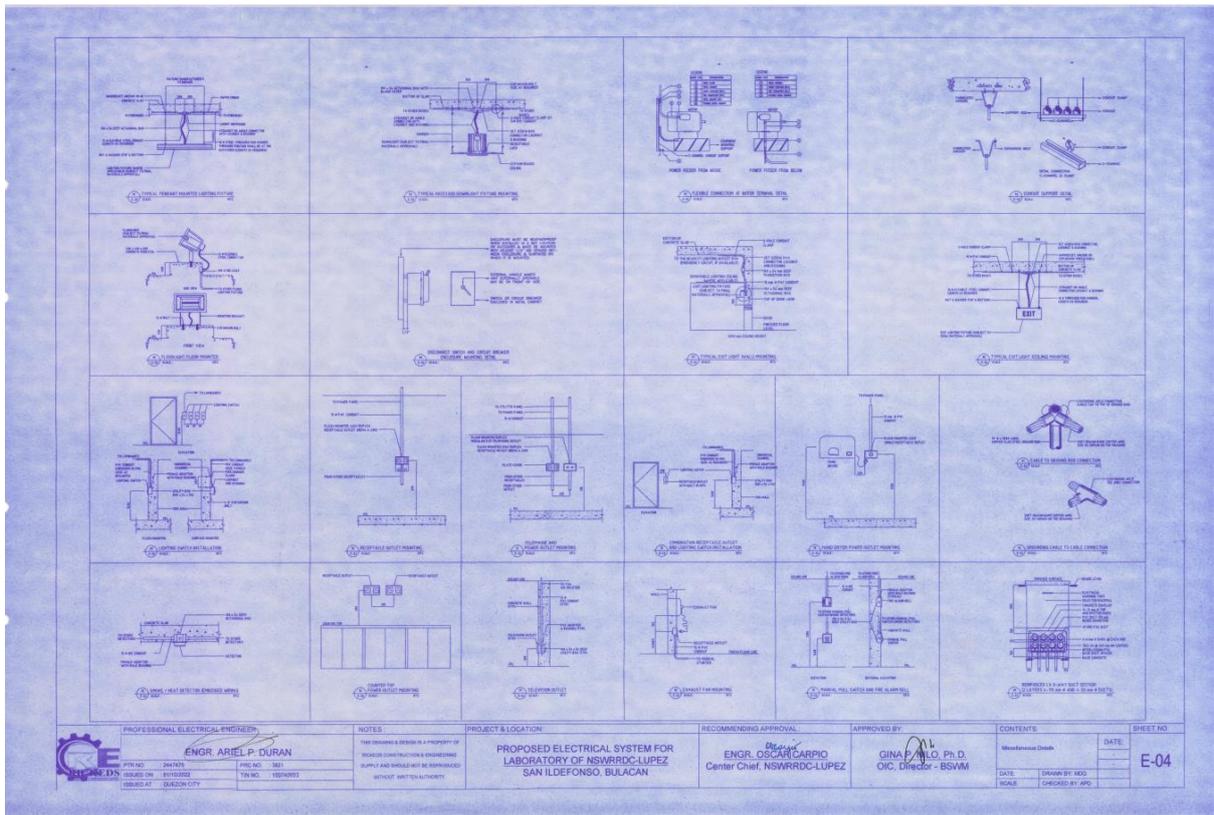
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CHECKED BY: JRD

**SHEET NO.**

**E-01**





<p>PROFESSIONAL ELECTRICAL ENGINEER</p> <p><b>ENGR. ARIEL P. DURAN</b></p> <p>PRD NO. 244762      PRC NO. 2821</p> <p>ISSUED ON 01/10/2022      TRD NO. 1522983</p> <p>ISSUED AT DAVAO CITY</p>	<p>NOTES</p> <p>THIS DRAWING &amp; DESIGN IS A PROPERTY OF REGISTERED CONTRACTOR &amp; ENGINEER. IT IS TO BE USED ONLY BY HIM/HER/ITSELF WITHOUT ANY ALTERATION WITHOUT WRITTEN AUTHORITY.</p>	<p>PROJECT &amp; LOCATION</p> <p><b>PROPOSED ELECTRICAL SYSTEM FOR LABORATORY OF NSWRDDC-LUPEZ SAN ILDEFONSO, BULACAN</b></p>	<p>RECOMMENDING APPROVAL</p> <p><i>Oscar Carpio</i> <b>ENGR. OSCAR CARPIO</b> Center Chief, NSWRDDC-LUPEZ</p>	<p>APPROVED BY</p> <p><i>Gina P. Nilo</i> <b>GINA P. NILO, Ph. D.</b> OIC, Director - BSWM</p>	<p>CONTENTS</p> <p>Microform/CD/DVD</p> <p>DATE _____</p> <p>SCALE _____</p> <p>DATE _____ DRAWN BY: HGO</p> <p>SCALE _____ CHECKED BY: JPO</p>	<p>SHEET NO</p> <p><b>E-04</b></p>
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## ***Section VIII. Bill of Quantities***

### **Notes on the Bill of Quantities**

#### **Objectives**

The objectives of the Bill of Quantities are:

- a. to provide sufficient information on the quantities of Works to be performed to enable Bids to be prepared efficiently and accurately; and
- b. when a Contract has been entered into, to provide a priced Bill of Quantities for use in the periodic valuation of Works executed.

In order to attain these objectives, Works should be itemized in the Bill of Quantities in sufficient detail to distinguish between the different classes of Works, or between Works of the same nature carried out in different locations or in other circumstances which may give rise to different considerations of cost. Consistent with these requirements, the layout and content of the Bill of Quantities should be as simple and brief as possible.

#### **Daywork Schedule**

A Daywork Schedule should be included only if the probability of unforeseen work, outside the items included in the Bill of Quantities, is high. To facilitate checking by the Entity of the realism of rates quoted by the Bidders, the Daywork Schedule should normally comprise the following:

- a. A list of the various classes of labor, materials, and Constructional Plant for which basic daywork rates or prices are to be inserted by the Bidder, together with a statement of the conditions under which the Contractor will be paid for work executed on a daywork basis.
- b. Nominal quantities for each item of Daywork, to be priced by each Bidder at Daywork rates as Bid. The rate to be entered by the Bidder against each basic Daywork item should include the Contractor's profit, overheads, supervision, and other charges.

#### **Provisional Sums**

A general provision for physical contingencies (quantity overruns) may be made by including a provisional sum in the Summary Bill of Quantities. Similarly, a contingency allowance for possible price increases should be provided as a provisional sum in the Summary Bill of Quantities. The inclusion of such provisional sums often facilitates budgetary approval by avoiding the need to request periodic supplementary approvals as the future need arises. Where such provisional sums or contingency allowances are used, the SCC should state the manner in which they will be used, and under whose authority (usually the Procuring Entity's Representative's).

The estimated cost of specialized work to be carried out, or of special goods to be supplied, by other contractors should be indicated in the relevant part of the Bill of Quantities as a particular provisional sum with an appropriate brief description. A separate procurement procedure is normally carried out by the Procuring Entity to select such specialized contractors. To provide an element of competition among the Bidders in respect of any facilities, amenities, attendance, etc., to be provided by the successful Bidder as prime Contractor for the use and convenience of the specialist contractors, each related provisional sum should be followed by an item in the Bill of Quantities inviting the Bidder to quote a sum for such amenities, facilities, attendance, etc.

### **Signature Box**

A signature box shall be added at the bottom of each page of the Bill of Quantities where the authorized representative of the Bidder shall affix his signature. Failure of the authorized representative to sign each and every page of the Bill of Quantities shall be a cause for rejection of his bid.

These Notes for Preparing a Bill of Quantities are intended only as information for the Procuring Entity or the person drafting the Bidding Documents. They should not be included in the final documents.

**Project :** PROPOSED ELECTRICAL SYSTEM FOR LABORATORY OF NSWRDC-LUPEZ  
**Location :** San Ildefonso, Bulacan  
**Owner :** BUREAU OF SOIL AND WATER MANAGEMENT  
**Date :**  
**Subject :** APPROVED BUDGET FOR CONTRACT

ITEM NO.	PARTICULAR	QTY	UNIT	MATERIALS		LABOR		TOTAL AMOUNT
				UNIT COST	TOTAL	UNIT COST	TOTAL	
<b>A</b>	<b>I</b>	<b>GENERAL REQUIREMENTS</b>						
1.0	Mobilization / Demobilization	1.0	lot	18,000.00	18,000.00			18,000.00
2.0	Temporary Facilities (Workers Barracks/Gen. Con. Site Office/ Conference room/CR/Toilet/smoking area /and PM Team Office equip with not limited to Computer, Printer, water dispenser,AC,and office supplies)	1.0	lot	16,000.00	16,000.00	5,600.00	5,600.00	21,600.00
3.0	Safety provision, Enclosure/Safety Canopy, safety Nets and etc	1.0	lot	15,000.00	15,000.00	5,250.00	5,250.00	20,250.00
4.0	Temporary Electrical and Water Consumption	1.0	mos	35,000.00	35,000.00			35,000.00
5.0	Plans and Professional Fees (As-Built)	1.0	lot	40,000.00	40,000.00			40,000.00
6.0	Permits and all other necessary permit/ s required for the project	1.0	lot	200,000.00	200,000.00			200,000.00
	Brgy permit				-			-
	Building Permit				-			-
7.0	Bonds and Insurances				-			-
	Contractor All Risk Insurance	1.0	lot	50,000.00	50,000.00			50,000.00
8.0	Project over-headd and Supervision	1.0	lot	102,000.00	102,000.00			102,000.00
							<b>Sub-total</b>	<b>486,850.00</b>
		<b>ELECTRICAL WORKS</b>						
	<b>I.</b>	<b>FEEDERLINES (MAINS AND SUB-FEEDERS)</b>						
1.0	<b>WIRES-(PHILFLEX)</b>							
1.1	3.5mm <sup>2</sup> THHN/THWN	12	box	4,250.00	51,000.00	1,487.50	17,850.00	68,850.00
1.2	5.5mm <sup>2</sup> THHN/THWN	6	box	5,150.00	30,900.00	1,802.50	10,815.00	41,715.00
1.3	8.0mm <sup>2</sup> THHN/THWN	15	box	8,650.00	129,750.00	3,027.50	45,412.50	175,162.50
1.4	14mm <sup>2</sup> THHN/THWN	4	box	19,560.00	78,240.00	6,846.00	27,384.00	105,624.00
1.5	30mm <sup>2</sup> THHN/THWN	103	mtrs	295.00	30,385.00	103.25	10,634.75	41,019.75
1.6	50mm <sup>2</sup> THHN/THWN	12	mtrs	470.00	5,640.00	164.50	1,974.00	7,614.00
1.7	80mm <sup>2</sup> THHN/THWN	261	mtrs	740.00	193,140.00	259.00	67,599.00	260,739.00
1.8	150mm <sup>2</sup> THHN/THWN	12	mtrs	1,400.00	16,800.00	490.00	5,880.00	22,680.00
1.9	80mm <sup>2</sup> Terminal Lugs	24	pcs	250.00	6,000.00	87.50	2,100.00	8,100.00
1.10	30mm <sup>2</sup> Terminal Lugs	8	pcs	95.00	760.00	33.25	266.00	1,026.00
1.11	Hangers and Support, Miscellaneous, Consumables and Other Fittings	1	lot	35,500.00	35,500.00	12,425.00	12,425.00	47,925.00
							<b>Sub-total</b>	<b>780,455.25</b>
	<b>II</b>	<b>PIPE/CONDUITS</b>						
2.1	20mmØ PVC pipe	115	length	91.00	10,465.00	31.85	3,662.75	14,127.75
2.2	25mmØ PVC pipe	65	length	115.00	7,475.00	40.25	2,616.25	10,091.25
2.3	65mmØ RSC pipe	30	length	2,100.00	63,000.00	735.00	22,050.00	85,050.00
2.4	100mmØ RSC pipe	4	length	3,700.00	14,800.00	1,295.00	5,180.00	19,980.00
2.5	Hangers and Support, Miscellaneous, Consumables and Other Fittings	1	lot	26,000.00	26,000.00	9,100.00	9,100.00	35,100.00
							<b>Sub-total</b>	<b>164,349.00</b>
	<b>III</b>	<b>Boxes</b>						
3.1	Pull Box	6	pcs	1,650.00	9,900.00	577.50	3,465.00	13,365.00
3.2	Utility Box	56	pcs	62.00	3,472.00	21.70	1,215.20	4,687.20
3.3	Junction box	35	pcs	62.00	2,170.00	21.70	759.50	2,929.50
							<b>Sub-total</b>	<b>20,981.70</b>

IV	PANELBOARDS & ECB'S (SQUARE D, SCHEIDER)							
	<b>Switchgear &amp; Panelboards</b>							
	Supply and installation of Switchgear & Panelboards including termination materials, bus bars, extension bus bars breakers, supports and all necessary accessories all in accordance with the drawing and specification to complete the works							
4.1	<b>EPI</b>	1	assy	62,480.00	62,480.00	21,868.00	21,868.00	84,348.00
	Main: 300AT/400AF, 3P, 240V Bolt-On type CB NEMA 1					-	-	-
	Branches:					-	-	-
	11-50AT/50AF, 1P, Bolt-On					-	-	-
	4-20AT/50AF, 1P, Bolt-On					-	-	-
	6-70AT/50AF, 1P, Bolt-On					-	-	-
	3-30AT/50AF, 1P, Bolt-On					-	-	-
	W/ GROUND BUS TERMINAL & DEAD FRONT					-	-	-
4.2	<b>EP2</b>	1	assy	37,620.00	37,620.00	13,167.00	13,167.00	50,787.00
	Main: 150AT/225AF, 3P, 240V Bolt-On type CB NEMA 1					-	-	-
	Branches:					-	-	-
	21-30AT/50AF, 1P, Bolt-On					-	-	-
	3-70AT/50AF, 3P, Bolt-On					-	-	-
	W/ GROUND BUS TERMINAL & DEAD FRONT					-	-	-

SUBJECT: APPROVED BUDGET FOR CONTRACT

ITEM NO.	PARTICULAR	QTY	UNIT	MATERIALS		LABOR		TOTAL AMOUNT
				UNIT COST	TOTAL	UNIT COST	TOTAL	
4.3	<b>APP</b>	1	assy	26,235.00	26,235.00	9,182.25	9,182.25	35,417.25
	Main: 100AT/100AF, 3P, 240V Bolt-On type CB NEMA 1					-	-	-
	Branches:					-	-	-
	20-30AT/100AF, 1P, Bolt-On					-	-	-
	3-30AT/100AF, 3P, Bolt-On					-	-	-
	W/ GROUND BUS TERMINAL & DEAD FRONT					-	-	-
4.4	<b>MDP1</b>	1	assy	127,380.00	127,380.00	44,583.00	44,583.00	171,963.00
	Main: 600AT/600AF, 3P, 240V Bolt-On type CB NEMA 3R					-	-	-
	Branches:					-	-	-
	1-300AT/400AF, 3P, Bolt-On					-	-	-
	1-150AT/200AF, 3P, Bolt-On					-	-	-
	2-100AT/1000AF, 3P, Bolt-On					-	-	-
	1-50AT/100AF, 3P, Bolt-On					-	-	-
	1-75AT/100AF, 3P, Bolt-On					-	-	-
	W/ GROUND BUS TERMINAL & DEAD FRONT					-	-	-
							Sub-total	342,515.25
V	<b>MCB</b>							
5.1	<b>600AT/1000AF, 230 volts, 3Pole, 60Hz,MCCB, NEMA 3R</b>	1	set	57,200.00	57,200.00	20,020.00	20,020.00	77,220.00
	Hangers and Support, Miscellaneous, Consumables and Other Fittings	1	lot	15,000.00	15,000.00	5,250.00	5,250.00	20,250.00
	Others Not Mentioned [Please enumerate]							
							Sub-total	97,470.00
VI	<b>Electric meter ( GE )</b>							
6.1	<b>3-PHASE KWH</b>	1	set	21,500.00	21,500.00		-	21,500.00
							Sub-total	21,500.00
								-
<b>DIRECT COST</b>								PHP 1,914,121.20
<b>MARK-UP /PROFIT /CONTINGENCIES</b>								PHP 191,412.12
<b>12% VALUE ADDED TAX</b>								PHP 229,694.54
<b>TOTAL ELECTRICAL PROJECT COST with VAT</b>								PHP 2,335,227.86

ITEM NO.	PARTICULAR	QTY	UNIT	MATERIALS		LABOR		TOTAL AMOUNT	
				UNIT COST	TOTAL	UNIT COST	TOTAL		
<b>A</b>	<b>I</b>	<b>GENERAL REQUIREMENTS</b>							
	1.0	Mobilization / Demobilization		lot		-		-	
	2.0	Temporary Facilities (Workers Barracks/Gen. Con. Site Office/ Conference room/CR/Toilet/smoking area /and PM Team Office equip with not limited to Computer, Printer, water dispenser,AC,and office supplies)		lot		-	-	-	
	3.0	Safety provision, Enclosure/Safety Canopy, safety Nets and etc		lot		-	-	-	
	4.0	Temporary Electrical and Water Consumption		mos		-		-	
	5.0	Plans and Professional Fees (As-Built)		lot		-		-	
	6.0	Permits and all other necessary permit/ s required for the project		lot		-		-	
		Brgy permit				-		-	
		Building Permit				-		-	
	7.0	Bonds and Insurances				-		-	
		Contractor All Risk Insurance		lot		-		-	
	8.0	Project over-head and Supervision		lot		-		-	
							<b>Sub-total</b>	<b>-</b>	
		<b>ELECTRICAL WORKS</b>							
	<b>I.</b>	<b>FEEDERLINES (MAINS AND SUB-FEEDERS)</b>							
	1.0	<b>WIRES-(PHILFLEX)</b>							
	1.1	3.5mm <sup>2</sup> THHN/THWN		box		-	-	-	
	1.2	5.5mm <sup>2</sup> THHN/THWN		box		-	-	-	
	1.3	8.0mm <sup>2</sup> THHN/THWN		box		-	-	-	
	1.4	14mm <sup>2</sup> THHN/THWN		box		-	-	-	
	1.5	30mm <sup>2</sup> THHN/THWN		mtrs		-	-	-	
	1.6	50mm <sup>2</sup> THHN/THWN		mtrs		-	-	-	
	1.7	80mm <sup>2</sup> THHN/THWN		mtrs		-	-	-	
	1.8	150mm <sup>2</sup> THHN/THWN		mtrs		-	-	-	
	1.9	80mm <sup>2</sup> Terminal Lugs		pcs		-	-	-	
	1.10	30mm <sup>2</sup> Terminal Lugs		pcs		-	-	-	

1.11	Hangers and Support, Miscellaneous, Consumables and Other Fittings	lot	-	-	-	-	
						<b>Sub-total</b>	-
<b>II</b>	<b>PIPE/CONDUITS</b>						
2.1	20mmØ PVC pipe	length	-	-	-	-	
2.2	25mmØ PVC pipe	length	-	-	-	-	
2.3	65mmØ RSC pipe	length	-	-	-	-	
2.4	100mmØ RSC pipe	length	-	-	-	-	
2.5	Hangers and Support, Miscellaneous, Consumables and Other Fittings	lot	-	-	-	-	
						<b>Sub-total</b>	-
<b>III</b>	<b>Boxes</b>						
3.1	Pull Box	pcs	-	-	-	-	
3.2	Utility Box	pcs	-	-	-	-	
3.3	Junction box	pcs	-	-	-	-	
						<b>Sub-total</b>	-
<b>IV</b>	<b>PANELBOARDS &amp; ECB'S (SQUARE D, SCHEIDER)</b>						
	<b>Switchgear &amp; Panelboards</b>						
	Supply and installation of Switchgear & Panelboards including termination materials, bus bars, extension bus bars breakers, supports and all necessary accessories all in accordance with the drawing and specification to complete the works						
4.1	<b>EP1</b>	assy	-	-	-	-	
	Main: 300AT/400AF, 3P, 240V Bolt-On type CB NEMA 1		-	-	-	-	
	Branches:		-	-	-	-	
	11-50AT/50AF, 1P, Bolt-On		-	-	-	-	
	4-20AT/50AF, 1P, Bolt-On		-	-	-	-	
	6-70AT/50AF, 1P, Bolt-On		-	-	-	-	
	3-30AT/50AF, 1P, Bolt-On		-	-	-	-	
	W/ GROUND BUS TERMINAL & DEAD FRONT		-	-	-	-	

4.2	<b>EP2</b>		assy		-	-	-	-
	Main: 150AT/225AF, 3P, 240V Bolt-On type CB NEMA 1				-	-	-	-
	Branches:				-	-	-	-
	21-30AT/50AF, 1P, Bolt-On				-	-	-	-
	3-70AT/50AF, 3P, Bolt-On				-	-	-	-
	W/ GROUND BUS TERMINAL & DEAD FRONT				-	-	-	-
4.3	<b>APP</b>		assy		-	-	-	-
	Main: 100AT/100AF, 3P, 240V Bolt-On type CB NEMA 1				-	-	-	-
	Branches:				-	-	-	-
	20-30AT/100AF, 1P, Bolt-On				-	-	-	-
	3-30AT/100AF, 3P, Bolt-On				-	-	-	-
	W/ GROUND BUS TERMINAL & DEAD FRONT				-	-	-	-
4.4	<b>MDP1</b>		assy		-	-	-	-
	Main: 600AT/600AF, 3P, 240V Bolt-On type CB NEMA 3R				-	-	-	-
	Branches:				-	-	-	-
	1-300AT/400AF, 3P, Bolt-On				-	-	-	-
	1-150AT/200AF, 3P, Bolt-On				-	-	-	-
	2-100AT/1000AF, 3P, Bolt-On				-	-	-	-
	1-50AT/100AF, 3P, Bolt-On				-	-	-	-
	1-75AT/100AF, 3P, Bolt-On				-	-	-	-
	W/ GROUND BUS TERMINAL & DEAD FRONT				-	-	-	-
							<b>Sub-total</b>	-
<b>V</b>	<b>MCB</b>							
5.1	<b>600AT/1000AF, 230 volts, 3Pole, 60Hz, MCCB, NEMA 3R</b>		set		-	-	-	-
	Hangers and Support, Miscellaneous, Consumables and Other Fittings		lot		-	-	-	-
	Others Not Mentioned [Please enumerate]							
							<b>Sub-total</b>	-
<b>VI</b>	<b>Electric meter ( GE )</b>							
6.1	3-PHASE KWH		set		-	-	-	-
							<b>Sub-total</b>	-



## ***Section IX. Checklist of Technical and Financial Documents***

### **Notes on the Checklist of Technical and Financial Documents**

The prescribed documents in the checklist are mandatory to be submitted in the Bid, but shall be subject to the following:

- a. GPPB Resolution No. 09-2020 on the efficient procurement measures during a State of Calamity or other similar issuances that shall allow the use of alternate documents in lieu of the mandated requirements; or
- b. any subsequent GPPB issuances adjusting the documentary requirements after the effectivity of the adoption of the PBDs.

The BAC shall be checking the submitted documents of each Bidder against this checklist to ascertain if they are all present, using a non-discretionary “pass/fail” criterion pursuant to Section 30 of the 2016 revised IRR of RA No. 9184.

# Checklist of Technical and Financial Documents

## I. TECHNICAL COMPONENT ENVELOPE

### *Class “A” Documents*

#### Legal Documents

- (a) Valid PhilGEPS Registration Certificate (Platinum Membership) (all pages);  
**or**

#### Technical Documents

- (b) Statement of the prospective bidder of all its ongoing government and private contracts, including contracts awarded but not yet started, if any, whether similar or not similar in nature and complexity to the contract to be bid; **and**
- (c) Statement of the bidder’s Single Largest Completed Contract (SLCC) similar to the contract to be bid, except under conditions provided under the rules; **and**
- (d) Special PCAB License in case of Joint Ventures; and registration for the type and cost of the contract to be bid; and
- (e) Original copy of Bid Security. If in the form of a Surety Bond, submit also a certification issued by the Insurance Commission;  
**or**  
Original copy of Notarized Bid Securing Declaration; **and**
- (f) Project Requirements, which shall include the following:
- a. Organizational chart for the contract to be bid;
- b. List of contractor’s key personnel (*e.g.*, Project Manager, Project Engineers, Materials Engineers, and Foremen), to be assigned to the contract to be bid, with their complete qualification and experience data;
- c. List of contractor’s major equipment units, which are owned, leased, and/or under purchase agreements, supported by proof of ownership or certification of availability of equipment from the equipment lessor/vendor for the duration of the project, as the case may be; **and**
- (g) Original duly signed Omnibus Sworn Statement (OSS);  
**and** if applicable, Original Notarized Secretary’s Certificate in case of a corporation, partnership, or cooperative; or Original Special Power of Attorney of all members of the joint venture giving full power and authority to its officer to sign the OSS and do acts to represent the Bidder.

#### Financial Documents

- (h) The prospective bidder’s computation of Net Financial Contracting Capacity (NFCC).

### *Class “B” Documents*

- (i) If applicable, duly signed joint venture agreement (JVA) in accordance with RA No. 4566 and its IRR in case the joint venture is already in existence;  
**or**

duly notarized statements from all the potential joint venture partners stating that they will enter into and abide by the provisions of the JVA in the instance that the bid is successful.

## II. FINANCIAL COMPONENT ENVELOPE

- (j) Original of duly signed and accomplished Financial Bid Form; **and**

*Other documentary requirements under RA No. 9184*

- (k) Original of duly signed Bid Prices in the Bill of Quantities; **and**
- (l) Duly accomplished Detailed Estimates Form, including a summary sheet indicating the unit prices of construction materials, labor rates, and equipment rentals used in coming up with the Bid; **and**
- (m) Cash Flow by Quarter.

## Annex A: Bid Securing Declaration Form

[ shall be submitted with the Bid if bidder opts to provide this form of Bid Security]

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REPUBLIC OF THE PHILIPPINES)  
CITY OF \_\_\_\_\_) S.S

### BID SECURING DECLARATION

**Project Identification No.: [Insert number]**

To: [Insert name and address of the Procuring Entity]

I/We, the undersigned, declare that:

1. I/We understand that, according to your conditions, bids must be supported by a Bid Security, which may be in the form of a Bid Securing Declaration.
2. I/We shall furnish the required performance security within ten (10) calendar days in/ Case of receipt of Notice of Award (pursuant to GPPB Circular No. 04-2020 and GPPB Resolution No. 16-2020).
3. I/We accept that: (a) I/we will be automatically disqualified from bidding for any procurement contract with any procuring entity for a period of two (2) years upon receipt of your Blacklisting Order; and, (b) I/we will pay the applicable fine provided under Section 6 of the Guidelines on the Use of Bid Securing Declaration, within fifteen (15) days from receipt of the written demand by the procuring entity for the commission of acts resulting to the enforcement of the bid securing declaration under Sections 23.1(b), 34.2, 40.1 and 69.1, except 69.1(f), of the IRR of RA No. 9184; without prejudice to other legal action the government may undertake.
4. I/We understand that this Bid Securing Declaration shall cease to be valid on the following circumstances:
  - a. Upon expiration of the bid validity period, or any extension thereof pursuant to your request;
  - b. I am/we are declared ineligible or post-disqualified upon receipt of your notice to such effect, and (i) I/we failed to timely file a request for reconsideration or (ii) I/we filed a waiver to avail of said right; and
  - c. I am/we are declared the bidder with the Lowest Calculated Responsive Bid, and I/we have furnished the performance security and signed the Contract.

IN WITNESS WHEREOF, I/We have hereunto set my/our hand/s this \_\_\_\_\_ day of [month] [year] at [place of execution].

[Insert NAME OF BIDDER OR ITS AUTHORIZED REPRESENTATIVE]

[Insert signatory's legal capacity]  
Affiant

**[Jurat]**

[Format shall be based on the latest Rules on Notarial Practice]

Download from: <https://www.gppb.gov.ph/downloadables.php>

APPENDIX "1"

**Bid Form for the Procurement of Goods**

*[shall be submitted with the Bid]*

**BID FORM**

Date : \_\_\_\_\_

Project Identification No. : \_\_\_\_\_

To: *[name and address of Procuring Entity]*

Having examined the Philippine Bidding Documents (PBDs) including the Supplemental or Bid Bulletin Numbers *[insert numbers]*, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to *[supply/deliver/perform]* *[description of the Goods]* in conformity with the said PBDs for the sum of *[total Bid amount in words and figures]* or the total calculated bid price, as evaluated and corrected for computational errors, and other bid modifications in accordance with the Price Schedules attached herewith and made part of this Bid. The total bid price includes the cost of all taxes, such as, but not limited to: *[specify the applicable taxes, e.g. (i) value added tax (VAT), (ii) income tax, (iii) local taxes, and (iv) other fiscal levies and duties]*, which are itemized herein or in the Price Schedules,

If our Bid is accepted, we undertake:

- a. to deliver the goods in accordance with the delivery schedule specified in the Schedule of Requirements of the Philippine Bidding Documents (PBDs);
- b. to provide a performance security in the form, amounts, and within the times prescribed in the PBDs;
- c. to abide by the Bid Validity Period specified in the PBDs and it shall remain binding upon us at any time before the expiration of that period.

*[Insert this paragraph if Foreign-Assisted Project with the Development Partner:*

Commissions or gratuities, if any, paid or to be paid by us to agents relating to this Bid, and to contract execution if we are awarded the contract, are listed below:

Name and address of agent	Amount and Purpose of Commission or gratuity
---------------------------	--

_____	_____
_____	_____

*(if none, state "None")*

Until a formal Contract is prepared and executed, this Bid, together with your written acceptance thereof and your Notice of Award, shall be binding upon us.

We understand that you are not bound to accept the Lowest Calculated Bid or any Bid you may receive.

We certify/confirm that we comply with the eligibility requirements pursuant to the PBDs.

The undersigned is authorized to submit the bid on behalf of *[name of the bidder]* as evidenced by the attached *[state the written authority]*.

We acknowledge that failure to sign each and every page of this Bid Form, including the attached Schedule of Prices, shall be a ground for the rejection of our bid.

Name: \_\_\_\_\_

Legal capacity: \_\_\_\_\_

Signature: \_\_\_\_\_

Duly authorized to sign the Bid for and behalf of: \_\_\_\_\_

Date: \_\_\_\_\_

**Price Schedule for Goods Offered from Abroad**  
*[shall be submitted with the Bid if bidder is offering goods from Abroad]*

**For Goods Offered from Abroad**

Name of Bidder \_\_\_\_\_ Project ID No. \_\_\_\_\_ Page \_\_\_\_ of \_\_\_\_

1	2	3	4	5	6	7	8	9
Item	Description	Country of origin	Quantity	Unit price CIF port of entry (specify port) or CIP named place  (specify border point or place of destination)	Total CIF or CIP price per item  (col. 4 x 5)	Unit Price Delivered Duty Unpaid (DDU)	Unit price Delivered Duty Paid (DDP)	Total Price delivered DDP (col 4 x 8)

Name: \_\_\_\_\_

Legal Capacity: \_\_\_\_\_

Signature: \_\_\_\_\_

Duly authorized to sign the Bid for and behalf of: \_\_\_\_\_

## Price Schedule for Goods Offered from Within the Philippines

*[shall be submitted with the Bid if bidder is offering goods from within the Philippines]*

### For Goods Offered from Within the Philippines

Name of Bidder \_\_\_\_\_ Project ID No. \_\_\_\_\_ Page \_\_\_ of \_\_\_

1	2	3	4	5	6	7	8	9	10
Item	Description	Country of origin	Quantity	Unit price EXW per item	Transportation and all other costs incidental to delivery, per item	Sales and other taxes payable if Contract is awarded, per item	Cost of Incidental Services, if applicable, per item	Total Price, per unit  (col 5+6+7+8)	Total Price delivered Final Destination  (col 9) x (col 4)

Name: \_\_\_\_\_

Legal Capacity: \_\_\_\_\_

Signature: \_\_\_\_\_

Duly authorized to sign the Bid for and behalf of: \_\_\_\_\_

## Omnibus Sworn Statement (Revised)

*[shall be submitted with the Bid]*

REPUBLIC OF THE PHILIPPINES )  
CITY/MUNICIPALITY OF \_\_\_\_\_ ) S.S.

### AFFIDAVIT

I, [Name of Affiant], of legal age, [Civil Status], [Nationality], and residing at [Address of Affiant], after having been duly sworn in accordance with law, do hereby depose and state that:

1. *[Select one, delete the other:]*

*[If a sole proprietorship:]* I am the sole proprietor or authorized representative of [Name of Bidder] with office address at [address of Bidder];

*[If a partnership, corporation, cooperative, or joint venture:]* I am the duly authorized and designated representative of [Name of Bidder] with office address at [address of Bidder];

2. *[Select one, delete the other:]*

*[If a sole proprietorship:]* As the owner and sole proprietor, or authorized representative of [Name of Bidder], I have full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for [Name of the Project] of the [Name of the Procuring Entity], as shown in the attached duly notarized Special Power of Attorney;

*[If a partnership, corporation, cooperative, or joint venture:]* I am granted full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for [Name of the Project] of the [Name of the Procuring Entity], as shown in the attached [state title of attached document showing proof of authorization (e.g., duly notarized Secretary's Certificate, Board/Partnership Resolution, or Special Power of Attorney, whichever is applicable)];

3. [Name of Bidder] is not "blacklisted" or barred from bidding by the Government of the Philippines or any of its agencies, offices, corporations, or Local Government Units, foreign government/foreign or international financing institution whose blacklisting rules have been recognized by the Government Procurement Policy Board, by itself or by relation, membership, association, affiliation, or controlling interest with another blacklisted person or entity as defined and provided for in the Uniform Guidelines on Blacklisting;

4. Each of the documents submitted in satisfaction of the bidding requirements is an authentic copy of the original, complete, and all statements and information provided therein are true and correct;

5. [Name of Bidder] is authorizing the Head of the Procuring Entity or its duly authorized representative(s) to verify all the documents submitted;

6. *[Select one, delete the rest:]*

*[If a sole proprietorship:]* The owner or sole proprietor is not related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical

Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

*[If a partnership or cooperative:]* None of the officers and members of *[Name of Bidder]* is related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

*[If a corporation or joint venture:]* None of the officers, directors, and controlling stockholders of *[Name of Bidder]* is related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

7. *[Name of Bidder]* complies with existing labor laws and standards; and
8. *[Name of Bidder]* is aware of and has undertaken the responsibilities as a Bidder in compliance with the Philippine Bidding Documents, which includes:
  - a. Carefully examining all of the Bidding Documents;
  - b. Acknowledging all conditions, local or otherwise, affecting the implementation of the Contract;
  - c. Making an estimate of the facilities available and needed for the contract to be bid, if any; and
  - d. Inquiring or securing Supplemental/Bid Bulletin(s) issued for the *[Name of the Project]*.
9. *[Name of Bidder]* did not give or pay directly or indirectly, any commission, amount, fee, or any form of consideration, pecuniary or otherwise, to any person or official, personnel or representative of the government in relation to any procurement project or activity.
10. In case advance payment was made or given, failure to perform or deliver any of the obligations and undertakings in the contract shall be sufficient grounds to constitute criminal liability for Swindling (Estafa) or the commission of fraud with unfaithfulness or abuse of confidence through misappropriating or converting any payment received by a person or entity under an obligation involving the duty to deliver certain goods or services, to the prejudice of the public and the government of the Philippines pursuant to Article 315 of Act No. 3815 s. 1930, as amended, or the Revised Penal Code.

IN WITNESS WHEREOF, I have hereunto set my hand this \_\_ day of \_\_, 20\_\_ at \_\_\_\_\_, Philippines.

*[Insert NAME OF BIDDER OR ITS AUTHORIZED REPRESENTATIVE]*

*[Insert signatory's legal capacity]*  
Affiant

*[Jurat]*

*[Format shall be based on the latest Rules on Notarial Practice]*

## Performance Securing Declaration (Revised)

*[if used as an alternative performance security but it is not required to be submitted with the Bid, as it shall be submitted within ten (10) days after receiving the Notice of Award]*

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REPUBLIC OF THE PHILIPPINES)  
CITY OF \_\_\_\_\_ ) S.S.

### PERFORMANCE SECURING DECLARATION

Invitation to Bid: [Insert Reference Number indicated in the Bidding Documents]

To: [Insert name and address of the Procuring Entity]

I/We, the undersigned, declare that:

1. I/We understand that, according to your conditions, to guarantee the faithful performance by the supplier/distributor/manufacturer/contractor/consultant of its obligations under the Contract, I/we shall submit a Performance Securing Declaration within a maximum period of ten (10) calendar days from the receipt of the Notice of Award prior to the signing of the Contract.
2. I/We accept that: I/we will be automatically disqualified from bidding for any procurement contract with any procuring entity for a period of one (1) year for the first offense, or two (2) years **for the second offense**, upon receipt of your Blacklisting Order if I/We have violated my/our obligations under the Contract;
3. I/We understand that this Performance Securing Declaration shall cease to be valid upon:
  - a. issuance by the Procuring Entity of the Certificate of Final Acceptance, subject to the following conditions:
    - i. Procuring Entity has no claims filed against the contract awardee;
    - ii. It has no claims for labor and materials filed against the contractor; and
    - iii. Other terms of the contract; or
  - b. replacement by the winning bidder of the submitted PSD with a performance security in any of the prescribed forms under Section 39.2 of the 2016 revised IRR of RA No. 9184 as required by the end-user.

IN WITNESS WHEREOF, I/We have hereunto set my/our hand/s this \_\_\_\_ day of [month] [year] at [place of execution].

*[Insert NAME OF BIDDER OR ITS  
AUTHORIZED REPRESENTATIVE]*

*[Insert signatory's legal capacity]*

Affiant

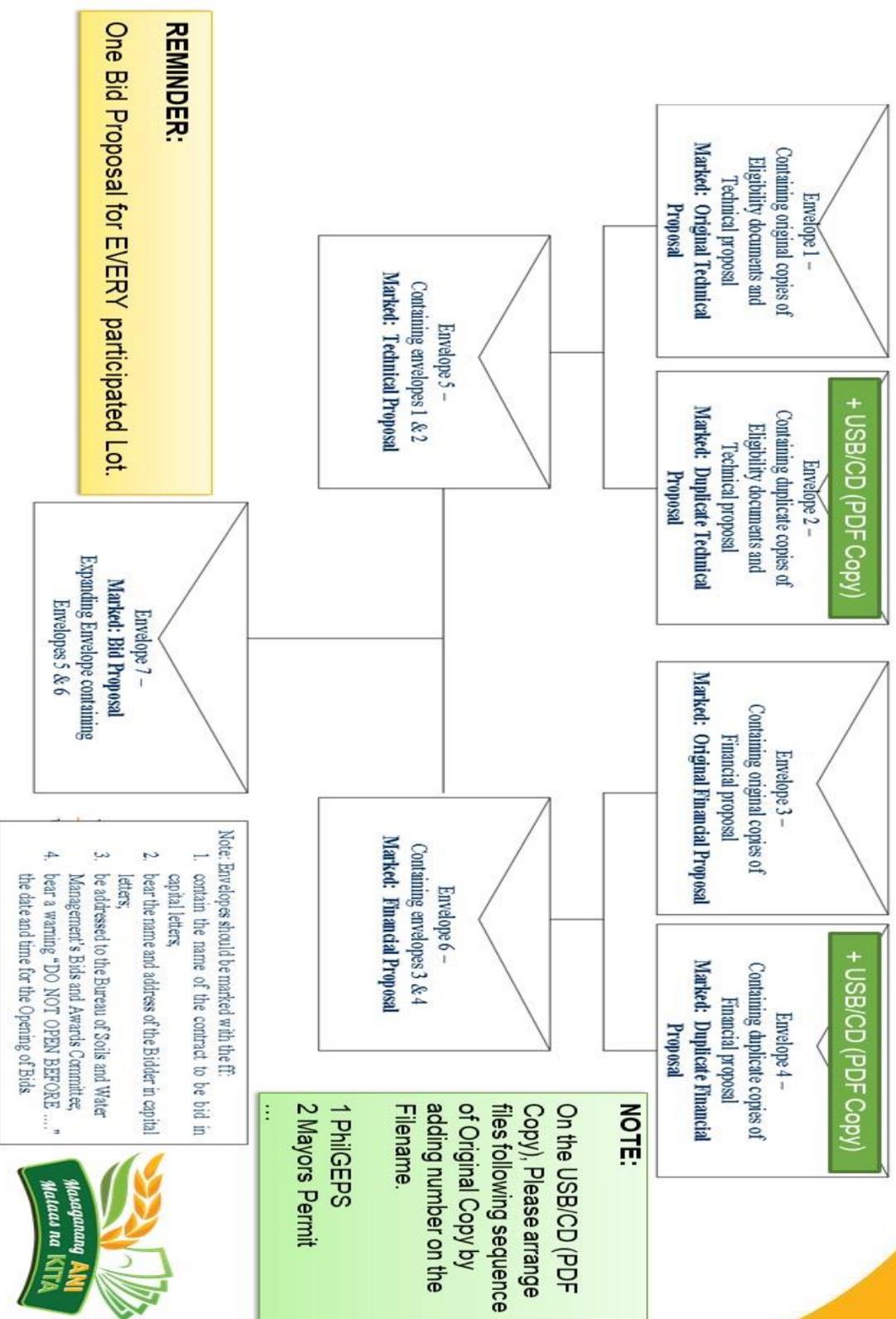
**[Jurat]**

*[Format shall be based on the latest Rules on Notarial Practice]*





# Sealing and Marking of Bid:







**BUREAU OF SOILS AND WATER MANAGEMENT**

Reference Code: BSWM\_WD\_RE\_0006

Control No.:

**PROGRAM OF WORKS**

Effective date: May 4, 2020

Rev. No. 2 Page No.: \_\_\_ of \_\_\_

<b>NAME/LOCATION OF PROJECT:</b>	Improvement of Machinery Shed for Truck Mounted Drilling Rig	Appropriation (Php) Source of Funds Issued Obligated Authority Released	<b>2,000,000.00</b>
<b>Location:</b>	San Ildefonso, Bulacan	Calendar Days to Complete Starting Date	<b>100 C.D.</b>
<b>PROJECT CATEGORY:</b>	Building		

**PROJECT DESCRIPTION:**

*Improvement of Machinery Shed*

MINIMUM EQUIPMENT REQUIREMENT				TECHNICAL PERSONNEL REQUIRED			
Description	No.	Description	No.	Description	No.	Description	No.
2 bagger mixer	1	concrete vibrator	1	Project Engineer	1	Driver	1
boom truck	1		1	Foreman	1	Skilled Laborer	2
welding machine	1		1	L.E. Operator	1	unskilled laborer	10

**ESTIMATED COST OF PROPOSED WORK**

ITEM NO.	DESCRIPTION	% OF TOTAL	UNIT	QTY.	DIRECT COST		ADJUSTED UNIT COST
					TOTAL	UNIT COST	
<b>I. GENERAL REQUIREMENTS</b>							
A.	Temporary Facility	-	sq.m.	-	-	536.06	
B.	Project Billboard	0.27	ls	1	5,460.33	5460.33	
C.	Occupational Safety and Health Program	-	work force	-	-	3000.00	
D.	Mobilization & Demobilization	0.59	hr	8	11,823.12	1477.89	
<b>II. EARTHWORKS</b>							
100	Clearing	0.78	sq.m.	425	15,654.14	36.83	
103	Structural Excavation	0.34	cu.m.	20	6,893.19	344.66	
100	Structural Backfill	0.64	cu.m.	16	12,834.21	802.14	
300	Gravel Surfacing	3.32	cu.m.	65	66,427.93	1021.97	
	Backfilling with compaction	4.53	cu.m.	113	90,641.64	802.14	
<b>III. CONCRETE AND MASONRY WORKS</b>							
407	Concrete Class A	5.86	cu.m.	17	117,259.94	6897.64	
404	Reinforcing Steel Bars	15.73	kg	3,369	314,555.94	93.37	
	Concrete Hollow Blocks, 125x400x200mm	1.53	P/sq.m.	40	30,630.99	765.77	
	Formworks and Scaffolding	3.42	cu.m.	15	68,319.48	4554.63	
<b>IV. IRONWORKS FOR ROOF TRUSS AND TRUSS BEAM</b>							
	Roof Truss, Purlins & Beam	29.31	kg	5,870	586,083.40	99.84	
<b>V. TINSMITRY</b>							
	Pre-painted Metal Roofing Sheet, #26 long span	3.97	sq.m.	237	79,355.66	334.83	
	Pre-painted Ridge roll, # 24	0.19	m	14	3,796.10	271.15	
	Pre-painted Gutter, # 24	0.38	m	28	7,592.20	271.15	
	Pre-painted Flashing, #24	0.68	m	50	13,557.50	271.15	
<b>TOTAL</b>		<b>71.55</b>			<b>1,430,885.78</b>		



**BUREAU OF SOILS AND WATER MANAGEMENT**

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	<b>% of Total</b>	<b>Amount</b>
I. Estimated Contract Cost		
A. Direct Cost		
1. Materials	47.38%	947,540.43
2. Labor	16.64%	332,867.90
3. Equipment	7.52%	150,477.45
<b>Sub-total</b>	<b>71.55%</b>	<b>1,430,885.78</b>
B. Indirect Cost		
1. Overhead, Contingencies, Misc. (15% of DC)	10.64%	212,859.40
2. Profit (10% of DC)	7.10%	141,906.27
3. VAT (12% of sum of DC, Profit & OCM)	10.71%	214,278.17
<b>Sub-total</b>	<b>28.45%</b>	<b>569,043.84</b>
<b>Total</b>	<b>100.00%</b>	<b>1,999,929.62</b>
II. Estimated Government Expenditures		
A. Eng'g and Administrative Cost (1% of sum of DC, OCM, Profit, & VAT)	1%	19,999.30
<b>TOTAL</b>		<b>2,019,928.92</b>