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

# Procurement of INFRASTRUCTURE PROJECTS

Government of the Republic of the Philippines

## PROPOSED UPGRADING OF ELECTRICAL SYSTEM OF BAGO BANTAY ELEMENTARY SCHOOL

20-00068

Fifth Edition August 2016

## 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 (GoP) for use by all branches, agencies, departments, bureaus, offices, or instrumentalities of the Government, including government-owned and/or -controlled corporations (GOCCs), government financial institutions (GFIs), state universities and colleges (SUCs), local government units (LGUs), and autonomous regional government. The procedures and practices presented in this document have been developed through broad experience, and are for mandatory<sup>1</sup> use in projects that are financed in whole or in part by the GoP 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 No. 9184 (R. A. 9184).

This PBDs is 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: (a) the objectives, scope, and expected outputs and/or results of the proposed contract; (b) the eligibility requirements of Bidders; (c) the expected contract duration; and (d) the obligations, duties, and/or functions of the winning bidder.

In order to simplify the preparation of the Bidding Documents for each procurement, the PBDs groups the provisions that are intended to be used unchanged in Section II. Instructions to Bidders (ITB) and in Section IV. General Conditions of Contract (GCC). Data and provisions specific to each procurement and contract should be included in Section III. Bid Data Sheet (BDS); Section V. Special Conditions of Contract (SCC); Section VI. Specifications; Section VII. Drawings; Section VIII. Bill of Quantities; and Section X. Foreign-Assisted Projects. The forms to be used are provided in Section IX. Bidding Forms.

Care should be taken to check the relevance of the provisions of the Bidding Documents against the requirements of the specific Works to be procured. In addition, 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, except for the notes introducing Section IX. Bidding Forms, where the information is useful for the Bidder. 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 Project. 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 proposal submission," should be furnished in the BDS and SCC. The final documents should contain neither blank spaces nor options.

<sup>&</sup>lt;sup>1</sup> Unless the Treaty or International or Executive Agreement expressly provides use of foreign government/foreign or international financing institution procurement guidelines.

- (c) This Preface and the footnotes or notes in italics included in the Invitation to Bid, BDS, SCC, 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. The Bidding Documents should contain no footnotes except Section IX. Bidding Forms since these provide important guidance to Bidders.
- (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) If modifications must be made to bidding procedures, they can be presented in the BDS. Modifications for specific Project or Contract details should be provided in the SCC as amendments to the Conditions of Contract. For easy completion, whenever reference has to be made to specific clauses in the BDS or SCC these terms shall be printed in bold type face on Section II. Instructions to Bidders, and Section IV. General Conditions of Contract, respectively.

## **TABLE OF CONTENTS**

SECTION I. INVITATION TO BID	5
SECTION II. INSTRUCTIONS TO BIDDERS	6
SECTION III. BID DATA SHEET	36
SECTION IV. GENERAL CONDITIONS OF CONTRACT	37
SECTION V. SPECIAL CONDITIONS OF CONTRACT	70
SECTION VI. SPECIFICATIONS	71
SECTION VII. DRAWINGS	73
SECTION VIII. BILL OF QUANTITIES	74
SECTION IX. BIDDING FORMS	76

## Notes on the Invitation to Bid

The Invitation to Bid provides information that enables potential Bidders to decide whether to participate in the procurement at hand. The Invitation to Bid shall be:

- (a) Posted continuously in the Philippine Government Electronic Procurement System (PhilGEPS) website and the website of the Procuring Entity concerned, if available, and the website prescribed by the foreign government/foreign or international financing institution, if applicable, for seven (7) calendar days starting on the date of advertisement; and
- (b) Posted at any conspicuous place reserved for this purpose in the premises of the Procuring Entity concerned for seven (7) calendar days, as certified by the head of the Bids and Awards Committee (BAC) Secretariat of the Procuring Entity concerned.
- (c) Advertised at least once in a newspaper of general nationwide circulation which has been regularly published for at least two (2) years before the date of issue of the advertisement, subject to Sections 21.2.1(c) of the 2016 Revised IRR of R.A. 9184<sup>2</sup>;

Apart from the essential items listed in the Bidding Documents, the Invitation to Bid should also indicate the following:

- (a) The date of availability of the Bidding Documents, which shall be from the time the Invitation to Bid 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 from the last day of posting of the Invitation to Bid; and
- (d) Any important bid evaluation criteria.

The Invitation to Bid should be incorporated into the Bidding Documents. The information contained in the Invitation to Bid must conform to the Bidding Documents and in particular to the relevant information in the BDS.

For foreign-assisted projects, the Invitation to Bid to be used is provided in Section X-Foreign-Assisted Projects.

 $<sup>^2</sup>$  Two years after the effectivity of the 2016 Revised IRR of RA 9184 on 28 October 2016, advertisement in a newspaper of general nationwide circulation shall no longer be required. However, a Procuring Entity that cannot post its opportunities in the PhilGEPS for justifiable reasons shall continue to publish its advertisements in a newspaper of general nationwide circulation.

## **REPUBLIC OF THE PHILIPPINES** QUEZON CITY GOVERNMENT



BIDS AND AWARDS COMMITTEE FOR INFRASTRACTURE & CONSULTANCY

2nd floor, Finance Building, Procurement Department, Quezon City Hall Complex, Elliptical Road, Quezon City

October 30, 2020

No.	Project No.	Project Name Proposed Relocation of Main	Location	District	Amount	Duration (Calendar Days)	Office	Source Fund
1	20-00067	Distribution Line at Camp General Emilio Aguinaldo High School	Camp Aguinaldo	3	Php1,518,907.50	60	City Engineering Department	Special Educational Fund (SEF)
2	20-00068	Proposed Upgrading of Electrical System of Bago Bantay Elementary School	Ramon Magsaysay	1	Php1,938,371.40	90	City Engineering Department	Special Educational Fund (SEF)
3	20-00069	Proposed Installation of Electrical System of Lagro High School, Misa De Gallo Street corner Ascencion	Greater Lagro	5	Php4,168,193.37	120	City Engineering Department	Special Educational Fund (SEF)
8	20-00070	Proposed Rehabilitation of Infantry Facility at Camp Karingal	Botocan	4	Php4,207,082.62	90	City Engineering Department	General Fund Engineering Dept.
4	20-00071	Proposed Installation of Main Electrical Service Entrance of Leandro Locsin Senior High School	Kaligayahan	5	Php4,472,485.17	120	City Engineering Department	Special Educational Fund (SEF)
6	20-00072	Proposed Renovation of two (2) Buildings at Holy Spirit National High School	Holy Spirit	2	Php11,477,167.19	0.00000000	City Engineering Department	Special Educational Fund (SEF)
7	20-00073	Proposed Rehabilitation of two (2) Buildings at Nagkaisang Nayon Elementary School	Ngkaisang Nayon	5 1	Php18,318,800.87		City Engineering Department	Special Educational Fund (SEF)

## **INVITATION TO BID**

- The QUEZON CITY LOCAL GOVERNMENT now invites bids for Various Projects. 1. Completion of the works is required as stated above. 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
- A complete set of Bidding Documents may be acquired by interested Bidders on November 2. 02, 2020 upon submission of a Document Request List (DRL) printed from the Philippine Government Electronic Procurement System (PhilGEPS) website from the address below and upon payment of the applicable fee for the Bidding Documents, pursuant to the latest Guidelines issued by the GPPB.

#### STANDARD RATES:

Approved Budget for the Contract	Maximum Cost of Bidding Documents (in Philippine Peso)
More than 1 Million up to 5 Million	5,000.00
More than 5 Million up to 10 Million	10,000,00
More than 10 Million up to 50 Million	25,000,00

It may also be downloaded free of charge from the website of the Philippine Government Electronic Procurement System (PhilGEPS) and the website of the Procuring Entity, provided that Bidders shall pay the applicable fee for the Bidding Documents not later than the submission of the bids.

- The following are the requirements for purchase of Bidding Documents;
  - 1. PhilGEPS Registration Certificate (Platinum 3 Pages)
  - 2. Document Request List (DRL)
  - Authorization to purchase bidding documents
     3.1 Secretary's Certificate (for corporation)
     3.2 Special Power of Attorney (for sole proprietorship)
- 4. Notarized Joint Venture Agreement (if applicable)
- 5. Letter of Intent

3.

It must be duly received by the BAC Secretariat at 2<sup>nd</sup> Floor, Procurement Department, Finance Building, Quezon City Hall Compound on or before November 09, 2020 - 5:00PM

- 4. The QC- BAC- INFRASTRUCTURE & CONSULTANCY will hold a Pre-Bid Conference on November 11, 2020 at 1:30 PM at 2<sup>nd</sup> Floor, Procurement Department-Bidding Room, Finance Building, Quezon City Hall Compound or we encourage the prospective bidders to join through our Virtual Conference (ZOOM APP) Meeting ID: 89111859539 Password : 598996
- Bids must be duly received by the BAC Secretariat at the address below on or before November 23, 2020 – 9:00AM. All Bids must be accompanied by a bid security in any of the acceptable forms and in the amount stated in ITB Clause.

Bid opening will be on November 23, 2020 - 10:00PM at 2<sup>nd</sup> Floor, Procurement **Department-Bidding Room, Finance Building, Quezon City Hall Compound**. Bids will be opened in the presence of the bidders' representatives who choose to attend at the address below. Late bids shall not be accepted.

- 6. The *Quezon City Local Government* 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 Section 41 of RA 9184 and its IRR, without thereby incurring any liability to the affected bidder or bidders.
- 7. For further information, please refer to:

#### ATTY. DOMINIC B. GARCIA

OIC, Procurement Department 2<sup>nd</sup> Floor, Procurement Department, Finance Building, Quezon City Hall Compound Elliptical Road, Barangay Central Diliman, Quezon City. Tel. No. (02)8988-4242 loc. 8506/8710 Email Add: procurement@quezoncity.gov.ph Website: <u>www.quezoncity.gov.ph</u>

By:

ATTY. MARK DAVE DIAMOND P. PERRAL Chairman BA¢-Infra and Consultancy

#### Notes on the Instructions to Bidders

This Section of the Bidding Documents provides the information necessary for Bidders to prepare responsive bids, in accordance with the requirements of the Procuring Entity. It also provides information on the bid submission, eligibility check, opening and evaluation of bids, and on the award of contract.

This Section also contains provisions that are to be used unchanged. Section III. Bid Data Sheet consists of provisions that supplement, amend, or specify in detail information or requirements included in this Section and which are specific to each procurement.

Matters governing the performance of the Contractor, payments under the contract, or matters affecting the risks, rights, and obligations of the parties under the contract are not normally included in this Section, but rather under Section IV. General Conditions of Contract (GCC), and/or Section V. Special Conditions of Contract (SCC). If duplication of a subject is inevitable in the other sections of the document prepared by the Procuring Entity, care must be exercised to avoid contradictions between clauses dealing with the same matter.

## **TABLE OF CONTENTS**

А.	Gen	NERAL	9
	1.	Scope of Bid	9
	2.	Source of Funds	9
	3.	Corrupt, Fraudulent, Collusive, Coercive, and Obstructive Practices	9
	4.	Conflict of Interest	11
	5.	Eligible Bidders	12
	6.	Bidder's Responsibilities	13
	7.	Origin of GOODS and Services	16
	8.	Subcontracts	16
B.	Cor	NTENTS OF BIDDING DOCUMENTS	16
	9.	Pre-Bid Conference	16
	10.	Clarification and Amendment of Bidding Documents	17
C.	PRE	CPARATION OF BIDS	17
	11.	Language of Bids	17
	12.	Documents Comprising the Bid: Eligibility and Technical Components	18
	13.	Documents Comprising the Bid: Financial Component	20
	14.	Alternative Bids	21
	15.	Bid Prices	21
	16.	Bid Currencies	22
	17.	Bid Validity	22
	18.	Bid Security	22
	19.	Format and Signing of Bids	25
	20.	Sealing and Marking of Bids	25
D.	SUB	MISSION AND OPENING OF BIDS	26
	21.	Deadline for Submission of Bids	26
	22.	Late Bids	26
	23.	Modification and Withdrawal of Bids	26
	24.	Opening and Preliminary Examination of Bids	27
E.	EVA	ALUATION AND COMPARISON OF BIDS	29
	25.	Process to be Confidential	29
	26.	Clarification of Bids	29
	27.	Detailed Evaluation and Comparison of Bids	29
	28.	Post Qualification	30

	29.	Reservation Clause	31
F.	Aw	ARD OF CONTRACT	32
	30.	Contract Award	32
	31.	Signing of the Contract	33
	32.	Performance Security	34
	33.	Notice to Proceed	35
	34.	Protest Mechanism	35

#### A. General

#### 1. Scope of Bid

- 1.1. The Procuring Entity named in the **<u>BDS</u>**, invites bids for the construction of Works, as described in Section VI. Specifications.
- 1.2. The name, identification, and number of lots specific to this bidding are provided in the **BDS**. The contracting strategy and basis of evaluation of lots is described in **ITB** Clause 27.
- 1.3. The successful Bidder will be expected to complete the Works by the intended completion date specified in **SCC** Clause 1.17.

#### 2. Source of Funds

The Procuring Entity has a budget or received funds from the Funding Source named in the <u>BDS</u>, and in the amount indicated in the <u>BDS</u>. It intends to apply part of the funds received for the Project, as defined in the <u>BDS</u>, to cover eligible payments under the Contract for the Works.

# 3. Corrupt, Fraudulent, Collusive, Coercive, and Obstructive Practices

- 3.1. Unless otherwise specified in the **BDS**, the Procuring Entity, as well as bidders and contractors, shall observe the highest standard of ethics during the procurement and execution of the contract. In pursuance of this policy, the Funding Source:
  - (a) defines, for purposes of this provision, the terms set forth below as follows:
    - (i) "corrupt practice" means behavior on the part of officials in the public or private sectors by which they improperly and unlawfully enrich themselves, others, or induce others to do so, by misusing the position in which they are placed, and includes the offering, giving, receiving, or soliciting of anything of value to influence the action of any such official in the procurement process or in contract execution; entering, on behalf of the Procuring Entity, into any contract or transaction manifestly and grossly disadvantageous to the same, whether or not the public officer profited or will profit thereby, and similar acts as provided in Republic Act 3019;
    - (ii) "fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Procuring Entity, and includes collusive practices among Bidders (prior to or after Bid submission) designed to establish bid prices at artificial, noncompetitive levels and to deprive the Procuring Entity of the benefits of free and open competition;

- (iii) "collusive practices" means a scheme or arrangement between two or more Bidders, with or without the knowledge of the Procuring Entity, designed to establish bid prices at artificial, non-competitive levels; and
- (iv) "coercive practices" means harming or threatening to harm, directly or indirectly, persons, or their property to influence their participation in a procurement process, or affect the execution of a contract;
- (v) "obstructive practice" is
  - deliberately destroying. falsifying. (aa) altering or concealing of evidence material to an administrative proceedings or investigation or making false statements to investigators in order to materially impede an administrative proceedings or investigation of the Procuring Entity or any foreign government/foreign or international financing institution into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the administrative proceedings or investigation or from pursuing such proceedings or investigation; or
  - (bb) acts intended to materially impede the exercise of the inspection and audit rights of the Procuring Entity or any foreign government/foreign or international financing institution herein.
- (b) will reject a proposal for award if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the Contract; and
- (c) will declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded Contract funded by the Funding Source if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing or, or in executing, a Contract funded by the Funding Source.
- 3.2. Further, the Procuring Entity will seek to impose the maximum civil, administrative, and/or criminal penalties available under the applicable laws on individuals and organizations deemed to be involved in any of the practices mentioned in **ITB** Clause 3.1(a).
- 3.3. Furthermore, the Funding Source and the Procuring Entity reserve the right to inspect and audit records and accounts of a contractor in the bidding for and performance of a contract themselves or through independent auditors as reflected in the GCC Clause 34.

#### 4. Conflict of Interest

- 4.1. All Bidders found to have conflicting interests shall be disqualified to participate in the procurement at hand, without prejudice to the imposition of appropriate administrative, civil, and criminal sanctions. A Bidder may be considered to have conflicting interests with another Bidder in any of the events described in paragraphs (a) through (c) and a general conflict of interest in any of the circumstances set out in paragraphs (d) through (g) below:
  - (a) A Bidder has controlling shareholders in common with another Bidder;
  - (b) A Bidder receives or has received any direct or indirect subsidy from any other Bidder;
  - (c) A Bidder has the same legal representative as that of another Bidder for purposes of this Bid;
  - (d) A Bidder has a relationship, directly or through third parties, that puts them in a position to have access to information about or influence on the bid of another Bidder or influence the decisions of the Procuring Entity regarding this bidding process;
  - (e) A Bidder submits more than one bid in this bidding process. However, this does not limit the participation of subcontractors in more than one bid;
  - (f) A Bidder who participated as a consultant in the preparation of the design or technical specifications of the goods and related services that are the subject of the bid; or
  - (g) A Bidder who lends, or temporarily seconds, its personnel to firms or organizations which are engaged in consulting services for the preparation related to procurement for or implementation of the project, if the personnel would be involved in any capacity on the same project.
- 4.2. In accordance with Section 47 of the IRR of RA 9184, all Bidding Documents shall be accompanied by a sworn affidavit of the Bidder that it is not related to the Head of the Procuring Entity (HoPE), members of the Bids and Awards Committee (BAC), members of the Technical Working Group (TWG), members of the BAC Secretariat, the head of the Project Management Office (PMO) or the end-user unit, and the project consultants, by consanguinity or affinity up to the third civil degree. On the part of the Bidder, this Clause shall apply to the following persons:
  - (a) If the Bidder is an individual or a sole proprietorship, to the Bidder himself;
  - (b) If the Bidder is a partnership, to all its officers and members;

- (c) If the Bidder is a corporation, to all its officers, directors, and controlling stockholders;
- (d) If the Bidder is a cooperative, to all its officers, directors, and controlling shareholders or members; and
- (e) If the Bidder is a joint venture (JV), the provisions of items (a), (b), (c) or (d) of this Clause shall correspondingly apply to each of the members of the said JV, as may be appropriate.

Relationship of the nature described above or failure to comply with this Clause will result in the automatic disqualification of a Bidder.

#### 5. Eligible Bidders

- 5.1. Unless otherwise indicated in the **<u>BDS</u>**, the following persons shall be eligible to participate in this Bidding:
  - (a) Duly licensed Filipino citizens/sole proprietorships;
  - (b) Partnerships duly organized under the laws of the Philippines and of which at least seventy five percent (75%) of the interest belongs to citizens of the Philippines;
  - (c) Corporations duly organized under the laws of the Philippines, and of which at least seventy five percent (75%) of the outstanding capital stock belongs to citizens of the Philippines;
  - (d) Cooperatives duly organized under the laws of the Philippines.
  - (e) Persons/entities forming themselves into a JV, i.e., a group of two (2) or more persons/entities that intend to be jointly and severally responsible or liable for a particular contract: Provided, however, that, in accordance with Letter of Instructions No. 630, Filipino ownership or interest of the joint venture concerned shall be at least seventy five percent (75%): Provided, further, that joint ventures in which Filipino ownership or interest is less than seventy five percent (75%) may be eligible where the structures to be built require the application of techniques and/or technologies which are not adequately possessed by a person/entity meeting the seventy five percent (75%) Filipino ownership requirement: Provided, finally, that in the latter case, Filipino ownership or interest shall not be less than twenty five percent (25%). For this purpose, Filipino ownership or interest shall be based on the contributions of each of the members of the joint venture as specified in their JVA.
- 5.2. The Procuring Entity may also invite foreign bidders when provided for under any Treaty or International or Executive Agreement as specified in the **BDS**.
- 5.3. Government owned or controlled corporations (GOCCs) may be eligible to participate only if they can establish that they (a) are legally and financially

autonomous, (b) operate under commercial law, and (c) are not attached agencies of the Procuring Entity.

5.4. (a) 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 Philippine Statistics Authority (PSA) consumer price index. However, contractors under Small A and Small B categories without similar experience on the contract to be bid may be allowed to bid if the cost of such contract is not more than the Allowable Range of Contract Cost (ARCC) of their registration based on the guidelines as prescribed by the PCAB.

(b) 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 **BDS**.

For this purpose, contracts similar to the Project shall be those described in the **BDS**.

5.5. The Bidder must submit a computation of its Net Financial Contracting Capacity (NFCC), which must be at least equal to the ABC to be bid, calculated as follows:

NFCC = [(Current assets minus current liabilities) (15)] minus the value of all outstanding or uncompleted portions of the projects under ongoing contracts, including awarded contracts yet to be started coinciding with the contract for this Project.

The values of the domestic bidder's current assets and current liabilities shall be based on the latest Audited Financial Statements (AFS) submitted to the BIR.

For purposes of computing the foreign bidders' NFCC, the value of the current assets and current liabilities shall be based on their audited financial statements prepared in accordance with international financial reporting standards.

#### 6. Bidder's Responsibilities

- 6.1. The Bidder or its duly authorized representative shall submit a sworn statement in the form prescribed in Section IX. Bidding Forms as required in **ITB** Clause 12.1(b)(iii).
- 6.2. The Bidder is responsible for the following:
  - (a) Having taken steps to carefully examine all of the Bidding Documents;
  - (b) Having acknowledged all conditions, local or otherwise, affecting the implementation of the contract;

- (c) Having made an estimate of the facilities available and needed for the contract to be bid, if any;
- (d) Having complied with its responsibility to inquire or secure Supplemental/Bid Bulletin/s as provided under **ITB** Clause 10.4.
- (e) Ensuring that it is not "blacklisted" or barred from bidding by the GoP or any of its agencies, offices, corporations, or LGUs, including foreign government/foreign or international financing institution whose blacklisting rules have been recognized by the GPPB;
- (f) Ensuring that 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;
- (g) Authorizing the HoPE or its duly authorized representative/s to verify all the documents submitted;
- (h) Ensuring that the signatory is the duly authorized representative of the Bidder, and 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, accompanied by the duly notarized Special Power of Attorney, Board/Partnership Resolution, or Secretary's Certificate, whichever is applicable;
- (i) Complying with the disclosure provision under Section 47 of RA 9184 and its IRR in relation to other provisions of RA 3019;
- (j) Complying with existing labor laws and standards, in the case of procurement of services. Moreover, bidder undertakes to:
  - (i) Ensure the entitlement of workers to wages, hours of work, safety and health and other prevailing conditions of work as established by national laws, rules and regulations; or collective bargaining agreement; or arbitration award, if and when applicable.

In case there is a finding by the Procuring Entity or the DOLE of underpayment or non-payment of workers' wage and wagerelated benefits, bidder agrees that the performance security or portion of the contract amount shall be withheld in favor of the complaining workers pursuant to appropriate provisions of Republic Act No. 9184 without prejudice to the institution of appropriate actions under the Labor Code, as amended, and other social legislations.

(ii) Comply with occupational safety and health standards and to correct deficiencies, if any.

In case of imminent danger, injury or death of the worker, bidder undertakes to suspend contract implementation pending clearance to proceed from the DOLE Regional Office and to comply with Work Stoppage Order; and

- (iii) Inform the workers of their conditions of work, labor clauses under the contract specifying wages, hours of work and other benefits under prevailing national laws, rules and regulations; or collective bargaining agreement; or arbitration award, if and when applicable, through posting in two (2) conspicuous places in the establishment's premises; and
- (k) Ensuring that it 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;

Failure to observe any of the above responsibilities shall be at the risk of the Bidder concerned.

- 6.3. The Bidder, by the act of submitting its bid, shall be deemed to have inspected the site, determined the general characteristics of the contract works and the conditions for this Project and examine all instructions, forms, terms, and project requirements in the Bidding Documents.
- 6.4. It shall be the sole responsibility of the prospective bidder to determine and to satisfy itself by such means as it considers necessary or desirable as to all matters pertaining to this Project, including: (a) the location and the nature of the contract, project, or 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.
- 6.5. The Procuring Entity shall not assume any responsibility regarding erroneous interpretations or conclusions by the prospective or eligible bidder out of the data furnished by the procuring entity. However, the Procuring Entity shall ensure that all information in the Bidding Documents, including supplemental/bid bulletins issued are correct and consistent.
- 6.6. Before submitting their bids, the Bidders are deemed to have become familiar with all existing laws, decrees, ordinances, acts and regulations of the Philippines which may affect the contract in any way.
- 6.7. The Bidder shall bear all costs associated with the preparation and submission of his bid, and the Procuring Entity will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.
- 6.8. The Bidder should note that the Procuring Entity will accept bids only from those that have paid the applicable fee for the Bidding Documents at the office indicated in the Invitation to Bid.

#### 7. Origin of Goods and Services

There is no restriction on the origin of Goods, or Contracting of Works or Services other than those prohibited by a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations.

#### 8. Subcontracts

- 8.1. Unless otherwise specified in the **BDS**, the Bidder may subcontract portions of the Works to an extent as may be approved by the Procuring Entity and stated in the **BDS**. However, subcontracting of any portion shall not relieve the Bidder from any liability or obligation that may arise from the contract for this Project.
- 8.2. Subcontractors must submit the documentary requirements under **ITB** Clause 12 and comply with the eligibility criteria specified in the **BDS**. In the event that any subcontractor is found by the Procuring Entity to be ineligible, the subcontracting of such portion of the Works shall be disallowed.
- 8.3. The Bidder may identify the subcontractor to whom a portion of the Works will be subcontracted at any stage of the bidding process or during contract implementation. If the Bidder opts to disclose the name of the subcontractor during bid submission, the Bidder shall include the required documents as part of the technical component of its bid.

#### **B.** Contents of Bidding Documents

#### 9. Pre-Bid Conference

9.1. (a) If so specified in the <u>BDS</u>, a pre-bid conference shall be held at the venue and on the date indicated therein, to clarify and address the Bidders' questions on the technical and financial components of this Project.

(b) The pre-bid conference shall be held at least twelve (12) calendar days before the deadline for the submission of and receipt of bids, but not earlier than seven (7) calendar days from the posting of the Invitation to Bid/Bidding Documents in the PhilGEPS website. If the Procuring Entity determines that, by reason of the method, nature, or complexity of the contract to be bid, or when international participation will be more advantageous to the GoP, a longer period for the preparation of bids is necessary, the pre-bid conference shall be held at least thirty (30) calendar days before the deadline for the submission and receipt of bids, as specified in the **BDS**.

9.2. Bidders are encouraged to attend the pre-bid conference to ensure that they fully understand the Procuring Entity's requirements. Non-attendance of the Bidder will in no way prejudice its bid; however, the Bidder is expected to know the changes and/or amendments to the Bidding Documents as recorded in the minutes of the pre-bid conference and the Supplemental/Bid Bulletin. The minutes of the pre-bid conference shall be recorded and prepared not later than five (5) calendar days after the pre-bid conference. The minutes shall be

made available to prospective bidders not later than five (5) days upon written request.

9.3. Decisions of the BAC amending any provision of the bidding documents shall be issued in writing through a Supplemental/Bid Bulletin at least seven (7) calendar days before the deadline for the submission and receipt of bids.

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

- 10.1. Prospective bidders may request for clarification(s) on and/or interpretation of any part of the Bidding Documents. Such a request must be in writing and submitted to the Procuring Entity at the address indicated in the <u>BDS</u> at least ten (10) calendar days before the deadline set for the submission and receipt of Bids.
- 10.2. The BAC shall respond to the said request by issuing a Supplemental/Bid Bulletin, to be made available to all those who have properly secured the Bidding Documents, at least seven (7) calendar days before the deadline for the submission and receipt of Bids.
- 10.3. Supplemental/Bid Bulletins may also be issued upon the Procuring Entity's initiative for purposes of clarifying or modifying any provision of the Bidding Documents not later than seven (7) calendar days before the deadline for the submission and receipt of Bids. Any modification to the Bidding Documents shall be identified as an amendment.
- 10.4. Any Supplemental/Bid Bulletin issued by the BAC shall also be posted in the PhilGEPS and the website of the Procuring Entity concerned, if available, and at any conspicuous place in the premises of the Procuring Entity concerned. It shall be the responsibility of all Bidders who have properly secured the Bidding Documents to inquire and secure Supplemental/Bid Bulletins that may be issued by the BAC. However, Bidders who have submitted bids before the issuance of the Supplemental/Bid Bulletin must be informed and allowed to modify or withdraw their bids in accordance with **ITB** Clause 23.

#### C. Preparation of Bids

#### 11. Language of Bids

The eligibility requirements or statements, the bids, and all other documents to be submitted to the BAC must be in English. If the eligibility requirements or statements, the bids, and all other documents submitted to the BAC are in foreign language other than English, it must be accompanied by a translation of the documents in English. The documents shall be translated by the relevant foreign government agency, the foreign government agency authorized to translate documents, or a registered translator in the foreign bidder's country; and 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. The English translation shall govern, for purposes of interpretation of the bid.

#### 12. Documents Comprising the Bid: Eligibility and Technical Components

- 12.1. Unless otherwise indicated in the **<u>BDS</u>**, the first envelope shall contain the following eligibility and technical documents:
  - (a) Eligibility Documents –

Class "A" Documents

- (i) PhilGEPS Certificate of Registration and Membership in accordance with Section 8.5.2 of the IRR, except for foreign bidders participating in the procurement by a Philippine Foreign Service Office or Post, which shall submit their eligibility documents under Section 23.1 of the IRR, provided, that the winning bidder shall register with the PhilGEPS in accordance with Section 37.1.4 of the IRR;
- (ii) Statement 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

Statement of the Bidder's SLCC similar to the contract to be bid, in accordance with ITB Clause 5.4.

The two statements required shall indicate for each contract the following:

- (ii.1) name of the contract;
- (ii.2) date of the contract;
- (ii.3) contract duration;
- (ii.4) owner's name and address;
- (ii.5) nature of work;
- (ii.6) contractor's role (whether sole contractor, subcontractor, or partner in a JV) and percentage of participation;
- (ii.7) total contract value at award;
- (ii.8) date of completion or estimated completion time;
- (ii.9) total contract value at completion, if applicable;
- (ii.10) percentages of planned and actual accomplishments, if applicable; and

(ii.11) value of outstanding works, if applicable.

The statement of the Bidder's SLCC shall be supported by the Notice of Award and/or Notice to Proceed, Project Owner's Certificate of Final Acceptance issued by the Owner other than the Contractor or the Constructors Performance Evaluation System (CPES) Final Rating, which must be at least satisfactory. In case of contracts with the private sector, an equivalent document shall be submitted;

- (iii) Unless otherwise provided in the <u>BDS</u>, a valid special PCAB License in case of joint ventures, and registration for the type and cost of the contract for this Project; and
- (iv) NFCC computation in accordance with ITB Clause 5.5.

Class "B" Documents

- (v) If applicable, Joint Venture Agreement (JVA) in accordance with RA 4566.
- (b) Technical Documents
  - (i) Bid security in accordance with **ITB** Clause 18. If the Bidder opts to submit the bid security in the form of:
    - (i.1) a bank draft/guarantee or an irrevocable letter of credit issued by a foreign bank, it shall be accompanied by a confirmation from a Universal or Commercial Bank; or
    - (i.2) a surety bond accompanied by a certification coming from the Insurance Commission that the surety or insurance company is authorized to issue such instruments.
  - (ii) Project Requirements, which shall include the following:
    - (ii.1) Organizational chart for the contract to be bid;
    - (ii.2) List of contractor's 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. These personnel must meet the required minimum years of experience set in the **BDS**; and
    - (ii.3) 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, which must meet the minimum requirements for the contract set in the **BDS**; and

(iii) Sworn statement in accordance with Section 25.3 of the IRR of RA 9184 and using the form prescribed in Section IX. Bidding Forms.

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

- 13.1. Unless otherwise stated in the **<u>BDS</u>**, the financial component of the bid shall contain the following:
  - (a) Financial Bid Form, which includes bid prices and the bill of quantities, in accordance with **ITB** Clauses 15.1 and 15.3; and
  - (b) Any other document related to the financial component of the bid as stated in the **BDS**.
- 13.2. (a) Unless otherwise stated in the **BDS**, all Bids that exceed the ABC shall not be accepted.
  - (b) Unless otherwise indicated in the <u>BDS</u>, for foreign-funded procurement, a ceiling may be applied to bid prices provided the following conditions are met:
    - (i) Bidding Documents are obtainable free of charge on a freely accessible website. If payment of Bidding Documents is required by the procuring entity, payment could be made upon the submission of bids.
    - (ii) The procuring entity has procedures in place to ensure that the ABC is based on recent estimates made by the engineer or the responsible unit of the procuring entity and that the estimates are based on adequate detailed engineering (in the case of infrastructure projects) and reflect the quality, supervision and risk and inflationary factors, as well as prevailing market prices, associated with the types of works or goods to be procured.
    - (iii) The procuring entity has trained cost estimators on estimating prices and analyzing bid variances. In the case of infrastructure projects, the procuring entity must also have trained quantity surveyors.
    - (iv) The procuring entity has established a system to monitor and report bid prices relative to ABC and engineer's/procuring entity's estimate.
    - (v) The procuring entity has established a monitoring and evaluation system for contract implementation to provide a feedback on actual total costs of goods and works.

#### 14. Alternative Bids

- 14.1. Alternative Bids shall be rejected. For this purpose, alternative bid is an offer made by a Bidder in addition or as a substitute to its original bid which may be included as part of its original bid or submitted separately therewith for purposes of bidding. A bid with options is considered an alternative bid regardless of whether said bid proposal is contained in a single envelope or submitted in two (2) or more separate bid envelopes.
- 14.2. 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 <u>BDS</u>, alternative bids shall not be accepted.
- 14.3. Each Bidder shall submit only one Bid, either individually or as a partner in a JV. A Bidder who submits or participates in more than one bid (other than as a subcontractor if a subcontractor is permitted to participate in more than one bid) will cause all the proposals with the Bidder's participation to be disqualified. This shall be without prejudice to any applicable criminal, civil and administrative penalties that may be imposed upon the persons and entities concerned.

#### 15. Bid Prices

- 15.1. The contract shall be for the whole Works, as described in **ITB** Clause 1.1, based on the priced Bill of Quantities submitted by the Bidder.
- 15.2. The Bidder shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Bids not addressing or providing all of the required items in the Bidding Documents including, where applicable, Bill of Quantities, shall be considered non-responsive and, thus, automatically disqualified. In this regard, where a required item is provided, but no price is indicated, the same shall be considered as non-responsive, but specifying a zero (0) or a dash (-) for the said item would mean that it is being offered for free to the Government, except those required by law or regulations to be provided for.
- 15.3. All duties, taxes, and other levies payable by the Contractor under the Contract, or for any other cause, prior to the deadline for submission of bids, shall be included in the rates, prices, and total bid price submitted by the Bidder.
- 15.4. All bid prices for the given scope of work in the contract as awarded shall be considered as fixed prices, and therefore not subject to price escalation during contract implementation, except under extraordinary circumstances as specified in GCC Clause 48. Upon the recommendation of the Procuring Entity, price escalation may be allowed in extraordinary circumstances as may be determined by the National Economic and Development Authority in accordance with the Civil Code of the Philippines, and upon approval by the GPPB. Furthermore, in cases where the cost of the awarded contract is affected by any applicable new laws, ordinances, regulations, or other acts of

the GoP, promulgated after the date of bid opening, a contract price adjustment shall be made or appropriate relief shall be applied on a no loss-no gain basis.

#### 16. Bid Currencies

- 16.1. All bid prices shall be quoted in Philippine Pesos unless otherwise provided in the **<u>BDS</u>**. However, for purposes of bid evaluation, bids denominated in foreign currencies shall be converted to Philippine currency based on the exchange rate prevailing on the day of the Bid Opening.
- 16.2. If so allowed in accordance with **ITB** Clause 16.1, the Procuring Entity for purposes of bid evaluation and comparing the bid prices will convert the amounts in various currencies in which the bid price is expressed to Philippine Pesos at the exchange rate as published in the *Bangko Sentral ng Pilipinas* (BSP) reference rate bulletin on the day of the bid opening.
- 16.3. Unless otherwise specified in the <u>BDS</u>, payment of the contract price shall be made in Philippine Pesos.

#### 17. Bid Validity

- 17.1. Bids shall remain valid for the period specified in the **BDS** which shall not exceed one hundred twenty (120) calendar days from the date of the opening of bids.
- 17.2. In exceptional circumstances, prior to the expiration of the bid validity period, the Procuring Entity may request Bidders to extend the period of validity of their bids. The request and the responses shall be made in writing. The bid security described in **ITB** Clause 18 should also be extended corresponding to the extension of the bid validity period at the least. A Bidder may refuse the request without forfeiting its bid security, but his bid shall no longer be considered for further evaluation and award. A Bidder granting the request shall not be required or permitted to modify its bid.

#### **18. Bid Security**

18.1. The Bidder shall submit a Bid Securing Declaration or any form of Bid Security in an amount stated in the **<u>BDS</u>**, which shall be not less than the percentage of the ABC in accordance with the following schedule:

	Form of Bid Security	Amount of Bid Security (Not less than the Percentage of the ABC)
(a)	Cash or cashier's/manager's check issued by a Universal or Commercial Bank. For biddings conducted by LGUs, the cashier's/manager's	Two percent (2%)
	check may be issued by other	

	banks certified by the BSP as authorized to issue such financial instrument.	
b)	Bankdraft/guaranteeorirrevocableletter of credit issuedby a Universal or CommercialBank:Provided, however, that itshallbeconfirmedorauthenticatedby a Universal orCommercialBank, if issued by aforeign bank.ForbiddingsconductedForbiddingsconductedbyLGUs,theBankDraft/Guarantee, orirrevocableguarantee, orirrevocableletterofcreditmay beissued by otherbankscertifiedbythe BSP asauthorized toissue such financialinstrument.	
(c)	Surety bond callable upon demand issued by a surety or insurance company duly certified by the Insurance Commission as authorized to issue such security; and/or	Five percent (5%)

The Bid Securing Declaration mentioned above is an undertaking which states, among others, that the Bidder shall enter into contract with the procuring entity and furnish the performance security required under ITB Clause 32.2, within ten (10) calendar days from receipt of the Notice of Award, and commits to pay the corresponding amount as fine, and be suspended for a period of time from being qualified to participate in any government procurement activity in the event it violates any of the conditions stated therein as provided in the guidelines issued by the GPPB.

- 18.2. The bid security should be valid for the period specified in the <u>BDS</u>. Any bid not accompanied by an acceptable bid security shall be rejected by the Procuring Entity as non-responsive.
- 18.3. No bid securities shall be returned to Bidders after the opening of bids and before contract signing, except to those that failed or declared as post-disqualified, upon submission of a written waiver of their right to file a request for reconsideration and/or protest, or lapse of the reglementary period without having filed a request for reconsideration or protest. Without prejudice on its forfeiture, Bid Securities shall be returned only after the Bidder with the Lowest Calculated Responsive Bid (LCRB) has signed the contract and furnished the Performance Security, but in no case later than the expiration of the Bid Security validity period indicated in **ITB** Clause 18.2.

- 18.4. Upon signing and execution of the contract, pursuant to **ITB** Clause 31, and the posting of the performance security, pursuant to **ITB** Clause 32, the successful Bidder's Bid Security will be discharged, but in no case later than the Bid Security validity period as indicated in **ITB** Clause 18.2.
- 18.5. The bid security may be forfeited:
  - (a) if a Bidder:
    - (i) withdraws its bid during the period of bid validity specified in **ITB** Clause 17;
    - (ii) does not accept the correction of errors pursuant to **ITB** Clause 27.3(b);
    - (iii) has a finding against the veracity of the required documents submitted in accordance with ITB Clause 28.2;
    - (iv) submission of eligibility requirements containing false information or falsified documents;
    - (v) submission of bids that contain false information or falsified documents, or the concealment of such information in the bids in order to influence the outcome of eligibility screening or any other stage of the public bidding;
    - (vi) allowing the use of one's name, or using the name of another for purposes of public bidding;
    - (vii) withdrawal of a bid, or refusal to accept an award, or enter into contract with the Government without justifiable cause, after the Bidder had been adjudged as having submitted the LCRB;
    - (viii) refusal or failure to post the required performance security within the prescribed time;
    - (ix) refusal to clarify or validate in writing its bid during postqualification within a period of seven (7) calendar days from receipt of the request for clarification;
    - (x) any documented attempt by a Bidder to unduly influence the outcome of the bidding in his favor;
    - (xi) failure of the potential joint venture partners to enter into the joint venture after the bid is declared successful; or
    - (xii) all other acts that tend to defeat the purpose of the competitive bidding, such as habitually withdrawing from bidding, submitting late Bids or patently insufficient bid, for at least three (3) times within a year, except for valid reasons.
  - (b) if the successful Bidder:

- (i) fails to sign the contract in accordance with **ITB** Clause 31;
- (ii) fails to furnish performance security in accordance with **ITB** Clause 32.

#### **19.** Format and Signing of Bids

- 19.1 Bidders shall submit their bids through their duly authorized representative using the appropriate forms provided in Section IX. Bidding Forms on or before the deadline specified in the **ITB** Clause 21 in two (2) separate sealed bid envelopes, and which shall be submitted simultaneously. The first shall contain the technical component of the bid, including the eligibility requirements under **ITB** Clause 12.1, and the second shall contain the financial component of the bid. This shall also be observed for each lot in the case of lot procurement.
- 19.2 Forms as mentioned in **ITB** Clause 19.1 must be completed without any alterations to their format, and no substitute form shall be accepted. All blank spaces shall be filled in with the information requested.
- 19.3 The Bidder shall prepare and submit an original of the first and second envelopes as described in **ITB** Clauses 12 and 13. In addition, the Bidder shall submit copies of the first and second envelopes. In the event of any discrepancy between the original and the copies, the original shall prevail.
- 19.4 Each and every page of the Bid Form, including the Bill of Quantities, under Section IX hereof, shall be signed by the duly authorized representative/s of the Bidder. Failure to do so shall be a ground for the rejection of the bid.
- 19.5 Any interlineations, erasures, or overwriting shall be valid only if they are signed or initialed by the duly authorized representative/s of the Bidder.

#### 20. Sealing and Marking of Bids

- 20.1. Bidders shall enclose their original eligibility and technical documents described in **ITB** Clause 12, in one sealed envelope marked "ORIGINAL TECHNICAL COMPONENT," and the original of their financial component in another sealed envelope marked "ORIGINAL FINANCIAL COMPONENT," sealing them all in an outer envelope marked "ORIGINAL BID."
- 20.2. Each copy of the first and second envelopes shall be similarly sealed duly marking the inner envelopes as "COPY NO. \_\_\_\_\_ TECHNICAL COMPONENT" and "COPY NO. \_\_\_\_\_ FINANCIAL COMPONENT" and the outer envelope as "COPY NO. \_\_\_\_\_," respectively. These envelopes containing the original and the copies shall then be enclosed in one single envelope.
- 20.3. The original and the number of copies of the bid as indicated in the **BDS** shall be typed or written in ink and shall be signed by the Bidder or its duly authorized representative/s.

- 20.4. All envelopes shall:
  - (a) contain the name of the contract to be bid in capital letters;
  - (b) bear the name and address of the Bidder in capital letters;
  - (c) be addressed to the Procuring Entity's BAC in accordance with **ITB** Clause 20.1;
  - (d) bear the specific identification of this bidding process indicated in the **ITB** Clause 1.2; and
  - (e) bear a warning "DO NOT OPEN BEFORE..." the date and time for the opening of bids, in accordance with **ITB** Clause 21.
- 20.5. Bid envelopes that are not properly sealed and marked, as required in the bidding documents, shall not be rejected, but the Bidder or its duly authorized representative shall acknowledge such condition of the bid as submitted. The BAC or the Procuring Entity shall assume no responsibility for the misplacement of the contents of the improperly sealed or marked bid, or for its premature opening.

#### D. Submission and Opening of Bids

#### 21. Deadline for Submission of Bids

Bids must be received by the Procuring Entity's BAC at the address and on or before the date and time indicated in the <u>BDS</u>.

#### 22. Late Bids

Any bid submitted after the deadline for submission and receipt of bids prescribed by the Procuring Entity, pursuant to **ITB** Clause 21, shall be declared "Late" and shall not be accepted by the Procuring Entity. The BAC shall record in the minutes of Bid Submission and Opening, the Bidder's name, its representative and the time the late bid was submitted.

#### 23. Modification and Withdrawal of Bids

- 23.1. The Bidder may modify its bid after it has been submitted; provided that the modification is received by the Procuring Entity prior to the deadline prescribed for submission and receipt of bids. The Bidder shall not be allowed to retrieve its original bid, but shall be allowed to submit another bid equally sealed and properly identified in accordance with Clause 20, linked to its original bid marked as "TECHNICAL MODIFICATION" or "FINANCIAL MODIFICATION" and stamped "received" by the BAC. Bid modifications received after the applicable deadline shall not be considered and shall be returned to the Bidder unopened.
- 23.2. A Bidder may, through a Letter of Withdrawal, withdraw its bid after it has been submitted, for valid and justifiable reason; provided that the Letter of

Withdrawal is received by the Procuring Entity prior to the deadline prescribed for submission and receipt of bids. The Letter of Withdrawal must be executed by the authorized representative of the Bidder identified in the Omnibus Sworn Statement, a copy of which should be attached to the letter.

- 23.3. Bids requested to be withdrawn in accordance with **ITB** Clause 23.1 shall be returned unopened to the Bidders. A Bidder, who has acquired the bidding documents may also express its intention not to participate in the bidding through a letter which should reach and be stamped by the BAC before the deadline for submission and receipt of bids. A Bidder that withdraws its bid shall not be permitted to submit another bid, directly or indirectly, for the same contract.
- 23.4. No bid may be modified after the deadline for submission of bids. No bid may be withdrawn in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Financial Bid Form. Withdrawal of a bid during this interval shall result in the forfeiture of the Bidder's bid security, pursuant to **ITB** Clause 18.5, and the imposition of administrative, civil, and criminal sanctions as prescribed by RA 9184 and its IRR.

#### 24. Opening and Preliminary Examination of Bids

- 24.1. The BAC shall open the Bids in public, immediately after the deadline for the submission and receipt of bids in public, as specified in the **BDS**. In case the Bids cannot be opened as scheduled due to justifiable reasons, the BAC shall take custody of the Bids submitted and reschedule the opening of Bids on the next working day or at the soonest possible time through the issuance of a Notice of Postponement to be posted in the PhilGEPS website and the website of the Procuring Entity concerned.
- 24.2. Unless otherwise specified in the BDS, the BAC shall open the first bid envelopes and determine each Bidder's compliance with the documents prescribed in ITB Clause 12, using a non-discretionary "pass/fail" criterion. If a Bidder submits the required document, it shall be rated "passed" for that particular requirement. In this regard, bids that fail to include any requirement or are incomplete or patently insufficient shall be considered as "failed". Otherwise, the BAC shall rate the said first bid envelope as "passed".
- 24.3. Unless otherwise specified in the **BDS**, immediately after determining compliance with the requirements in the first envelope, the BAC shall forthwith open the second bid envelope of each remaining eligible Bidder whose first bid envelope was rated "passed." The second envelope of each complying Bidder shall be opened within the same day. In case one or more of the requirements in the second envelope of a particular bid is missing, incomplete or patently insufficient, and/or if the submitted total bid price exceeds the ABC unless otherwise provided in **ITB** Clause 13.2, the BAC shall rate the bid concerned as "failed." Only bids that are determined to contain all the bid requirements for both components shall be rated "passed" and shall immediately be considered for evaluation and comparison.

- 24.4. Letters of Withdrawal shall be read out and recorded during bid opening, and the envelope containing the corresponding withdrawn bid shall be returned to the Bidder unopened.
- 24.5. All members of the BAC who are present during bid opening shall initial every page of the original copies of all bids received and opened.
- 24.6. In the case of an eligible foreign bidder as described in **ITB** Clause 5, the following Class "A" Documents may be substituted with the appropriate equivalent documents, if any, issued by the country of the foreign bidder concerned, which shall likewise be uploaded and maintained in the PhilGEPS in accordance with Section 8.5.2 of the IRR.:
  - a) Registration certificate from the Securities and Exchange Commission (SEC), Department of Trade and Industry (DTI) for sole proprietorship, or CDA for cooperatives;
  - b) Mayor's/Business permit issued by the local government where the principal place of business of the Bidder is located; and
  - c) Audited Financial Statements showing, among others, the prospective Bidder's total and current assets and liabilities stamped "received" by the Bureau of Internal Revenue or its duly accredited and authorized institutions, for the preceding calendar year which should not be earlier than two years from the date of bid submission.
- 24.7. Each partner of a joint venture agreement shall likewise submit the document required in ITB Clause 12.1(a)(i). Submission of documents required under ITB Clauses 12.1(a)(ii) to 12.1(a)(iv) by any of the joint venture partners constitutes compliance.
- 24.8. The Procuring Entity shall prepare the minutes of the proceedings of the bid opening that shall include, as a minimum: (a) names of Bidders, their bid price (per lot, if applicable, and/or including discount, if any), bid security, findings of preliminary examination, and whether there is a withdrawal or modification; and (b) attendance sheet. The BAC members shall sign the abstract of bids as read.
- 24.8. The Bidders or their duly authorized representatives may attend the opening of bids. The BAC shall ensure the integrity, security, and confidentiality of all submitted bids. The Abstract of Bids as read and the minutes of the Bid Opening shall be made available to the public upon written request and payment of a specified fee to recover cost of materials.
- 24.9 To ensure transparency and accurate representation of the bid submission, the BAC Secretariat shall notify in writing all Bidders whose bids it has received through its PhilGEPS-registered physical address or official e-mail address. The notice shall be issued within seven (7) calendar days from the date of the bid opening.

#### E. Evaluation and Comparison of Bids

#### 25. Process to be Confidential

- 25.1. Members of the BAC, including its staff and personnel, as well as its Secretariat and TWG, are prohibited from making or accepting any kind of communication with any Bidder regarding the evaluation of their bids until the issuance of the Notice of Award, unless otherwise allowed in the case of **ITB** Clause 26.
- 25.2. Any effort by a Bidder to influence the Procuring Entity in the Procuring Entity's decision in respect of bid evaluation, bid comparison or contract award will result in the rejection of the Bidder's bid.

#### 26. Clarification of Bids

To assist in the evaluation, comparison and post-qualification of the bids, the Procuring Entity may ask in writing any Bidder for a clarification of its bid. All responses to requests for clarification shall be in writing. Any clarification submitted by a Bidder in respect to its bid and that is not in response to a request by the Procuring Entity shall not be considered

#### 27. Detailed Evaluation and Comparison of Bids

- 27.1. The Procuring Entity will undertake the detailed evaluation and comparison of Bids which have passed the opening and preliminary examination of Bids, pursuant to **ITB** Clause 24, in order to determine the Lowest Calculated Bid.
- 27.2. The Lowest Calculated Bid shall be determined in two steps:
  - (a) The detailed evaluation of the financial component of the bids, to establish the correct calculated prices of the bids; and
  - (b) The ranking of the total bid prices as so calculated from the lowest to highest. The bid with the lowest price shall be identified as the Lowest Calculated Bid.
- 27.3. The Procuring Entity's BAC shall immediately conduct a detailed evaluation of all bids rated "passed," using non-discretionary "pass/fail" criterion. The BAC shall consider the following in the evaluation of bids:
  - (a) <u>Completeness of the bid</u>. Unless the <u>BDS</u> allows partial bids, bids not addressing or providing all of the required items in the Schedule of Requirements including, where applicable, bill of quantities, shall be considered non-responsive and, thus, automatically disqualified. In this regard, where a required item is provided, but no price is indicated, the same shall be considered as non-responsive, but specifying a zero (0) or a dash (-) for the said item would mean that it is being offered for free to the Procuring Entity, except those required by law or regulations to be provided for; and

- (b) <u>Arithmetical corrections</u>. Consider computational errors and omissions to enable proper comparison of all eligible bids. It may also consider bid modifications. Any adjustment shall be calculated in monetary terms to determine the calculated prices.
- 27.4. Based on the detailed evaluation of bids, those that comply with the abovementioned requirements shall be ranked in the ascending order of their total calculated bid prices, as evaluated and corrected for computational errors, discounts and other modifications, to identify the Lowest Calculated Bid. Total calculated bid prices, as evaluated and corrected for computational errors, discounts and other modifications, which exceed the ABC shall not be considered, unless otherwise indicated in the **BDS**.
- 27.5. The Procuring Entity's evaluation of bids shall be based on the bid price quoted in the Bid Form, which includes the Bill of Quantities.
- 27.6. Bids shall be evaluated on an equal footing to ensure fair competition. For this purpose, all Bidders shall be required to include in their bids the cost of all taxes, such as, but not limited to, value added tax (VAT), income tax, local taxes, and other fiscal levies and duties which shall be itemized in the bid form and reflected in the detailed estimates. Such bids, including said taxes, shall be the basis for bid evaluation and comparison.
- 27.7. If so indicated pursuant to **ITB** Clause 1.2. Bids are being invited for individual lots or for any combination thereof, provided that all Bids and combinations of Bids 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 prices quoted shall correspond to all of the requirements specified for each lot. Bid Security as required by **ITB** Clause 18 shall be submitted for each contract (lot) separately. The basis for evaluation of lots is specified in **BDS** Clause 27.3.

#### 28. Post Qualification

- 28.1. The BAC shall determine to its satisfaction whether the Bidder that is evaluated as having submitted the Lowest Calculated Bid complies with and is responsive to all the requirements and conditions specified in **ITB** Clauses 5, 12, and 13.
- 28.2. 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 <u>BDS</u>.

Failure to submit any of the post-qualification requirements on time, or a finding against the veracity thereof, shall disqualify the Bidder for award. Provided in the event that a finding against the veracity of any of the documents submitted is made, it shall cause the forfeiture of the bid security in accordance with Section 69 of the IRR of RA 9184.

- 28.3. The determination shall be based upon an examination of the documentary evidence of the Bidder's qualifications submitted pursuant to **ITB** Clauses 12 and 13, as well as other information as the Procuring Entity deems necessary and appropriate, using a non-discretionary "pass/fail" criterion, which shall be completed within a period of twelve (12) calendar days.
- 28.4. If the BAC determines that the Bidder with the Lowest Calculated Bid passes all the criteria for post-qualification, it shall declare the said bid as the LCRB, and recommend to the HoPE the award of contract to the said Bidder at its submitted price or its calculated bid price, whichever is lower, subject to **ITB** Clause 30.3.
- 28.5. A negative determination shall result in rejection of the Bidder's bid, in which event the Procuring Entity shall proceed to the next Lowest Calculated Bid, with a fresh period to make a similar determination of that Bidder's capabilities to perform satisfactorily. If the second Bidder, however, fails the post qualification, the procedure for post qualification shall be repeated for the Bidder with the next Lowest Calculated Bid, and so on until the LCRB is determined for recommendation of contract award.
- 28.6. Within a period not exceeding fifteen (15) calendar days from the determination by the BAC of the LCRB and the recommendation to award the contract, the HoPE or his duly authorized representative shall approve or disapprove the said recommendation.
- 28.7. In the event of disapproval, which shall be based on valid, reasonable, and justifiable grounds as provided for under Section 41 of the IRR of RA 9184, the HoPE shall notify the BAC and the Bidder in writing of such decision and the grounds for it. When applicable, the BAC shall conduct a post-qualification of the Bidder with the next Lowest Calculated Bid. A request for reconsideration may be filed by the Bidder with the HoPE in accordance with Section 37.1.3 of the IRR of RA 9184.

#### **29.** Reservation Clause

- 29.1. Notwithstanding the eligibility or post-qualification of a Bidder, the Procuring Entity concerned reserves the right to review its qualifications at any stage of the procurement process if it has reasonable grounds to believe that a misrepresentation has been made by the said Bidder, or that there has been a change in the Bidder's capability to undertake the project from the time it submitted its eligibility requirements. Should such review uncover any misrepresentation made in the eligibility and bidding requirements, statements or documents, or any changes in the situation of the Bidder which will affect its capability to undertake the project so that it fails the preset eligibility or bid evaluation criteria, the Procuring Entity shall consider the said Bidder as ineligible and shall disqualify it from submitting a bid or from obtaining an award or contract.
- 29.2. Based on the following grounds, the Procuring Entity reserves the right to reject any and all Bids, declare a Failure of Bidding at any time prior to the contract award, or not to award the contract, without thereby incurring any

liability, and make no assurance that a contract shall be entered into as a result of the bidding:

- (a) If there is *prima facie* evidence of collusion between appropriate public officers or employees of the Procuring Entity, or between the BAC and any of the Bidders, or if the collusion is between or among the Bidders themselves, or between a Bidder and a third party, including any act which restricts, suppresses or nullifies or tends to restrict, suppress or nullify competition;
- (b) If the Procuring Entity's BAC is found to have failed in following the prescribed bidding procedures; or
- (c) For any justifiable and reasonable ground where the award of the contract will not redound to the benefit of the GOP as follows:
  - (i) If the physical and economic conditions have significantly changed so as to render the project no longer economically, financially or technically feasible as determined by the HoPE;
  - (ii) If the project is no longer necessary as determined by the HoPE; and
  - (iii) If the source of funds for the project has been withheld or reduced through no fault of the Procuring Entity.
- 29.3. In addition, the Procuring Entity may likewise declare a failure of bidding when:
  - (a) No bids are received;
  - (b) All prospective Bidders are declared ineligible;
  - (c) All bids fail to comply with all the bid requirements, fail postqualification; or
  - (d) The Bidder with the LCRB refuses, without justifiable cause, to accept the award of contract, and no award is made in accordance with Section 40 of the IRR of RA 9184.

#### F. Award of Contract

#### **30.** Contract Award

- 30.1. Subject to **ITB** Clause 28, the HoPE or its duly authorized representative shall award the contract to the Bidder whose bid has been determined to be the LCRB.
- 30.2. Prior to the expiration of the period of bid validity, the Procuring Entity shall notify the successful Bidder in writing that its bid has been accepted, through a Notice of Award duly received by the Bidder or its representative personally or by registered mail or electronically, receipt of which must be confirmed in

writing within two (2) days by the Bidder with the LCRB and submitted personally or sent by registered mail or electronically to the Procuring Entity.

- 30.3. Notwithstanding the issuance of the Notice of Award, award of contract shall be subject to the following conditions:
  - (a) Submission of the following documents within ten (10) calendar days from receipt of the Notice of Award:
    - (i) In the case of procurement by a Philippine Foreign Service Office or Post, the PhilGEPS Registration Number of the winning foreign Bidder; or
    - (ii) Valid PCAB license and registration for the type and cost of the contract to be bid for foreign bidders when the Treaty or International or Executive Agreement expressly allows submission of the PCAB license and registration for the type and cost of the contract to be bid as a pre-condition to the Award;
  - (b) Posting of the performance security in accordance with **ITB** Clause 32;
  - (c) Signing of the contract as provided in **ITB** Clause 31; and
  - (d) Approval by higher authority, if required, as provided in Section 37.3 of the IRR of RA 9184.

#### **31.** Signing of the Contract

- 31.1. At the same time as the Procuring Entity notifies the successful Bidder that its bid has been accepted, the Procuring Entity shall send the Contract Form to the Bidder, which Contract has been provided in the Bidding Documents, incorporating therein all agreements between the parties.
- 31.2. Within ten (10) calendar days from receipt of the Notice of Award, the successful Bidder shall post the required performance security, sign and date the contract and return it to the Procuring Entity.
- 31.3. The Procuring Entity shall enter into contract with the successful Bidder within the same ten (10) calendar day period provided that all the documentary requirements are complied with.
- 31.4. The following documents shall form part of the contract:
  - (a) Contract Agreement;
  - (b) Bidding Documents;
  - (c) Winning Bidder's bid, including the Technical and Financial Proposals, and all other documents/statements submitted (*e.g.*, Bidder's response to request for clarifications on the bid), including

corrections to the bid, if any, resulting from the Procuring Entity's bid evaluation;

- (d) Performance Security;
- (e) Notice of Award of Contract; and
- (f) Other contract documents that may be required by existing laws and/or specified in the **BDS**.

#### **32.** Performance Security

- 32.1. To guarantee the faithful performance by the winning Bidder of its obligations under the contract, it shall post a performance security within a maximum period of ten (10) calendar days from the receipt of the Notice of Award from the Procuring Entity and in no case later than the signing of the contract.
- 32.2. The Performance Security shall be denominated in Philippine Pesos and posted in favor of the Procuring Entity in an amount not less than the percentage of the total contract price in accordance with the following schedule:

Form of Performance Security	Amount of Performance Security (Not less than the Percentage of the Total Contract Price)
<ul> <li>(a) Cash or cashier's/manager's check issued by a Universal or Commercial Bank.</li> </ul>	
For biddings conducted by the LGUs, the Cashier's/Manager's Check may be issued by other banks certified by the BSP as authorized to issue such financial instrument.	
(b) Bank draft/guarantee or irrevocable letter of credit issued by a Universal or Commercial Bank: Provided, however, that it shall be confirmed or authenticated by a Universal or Commercial Bank, if issued by a foreign bank.	Ten percent (10%)
For biddings conducted by the LGUs, Bank Draft/Guarantee, or Irrevocable Letter of Credit may be issued by other banks certified by the BSP as authorized to issue such	

financial instrument.	
<ul> <li>(c) Surety bond callable upon demand issued by a surety or insurance company duly certified by the Insurance Commission as authorized to issue such security.</li> </ul>	Thirty percent (30%)

32.3. Failure of the successful Bidder to comply with the above-mentioned requirement shall constitute sufficient ground for the annulment of the award and forfeiture of the bid security, in which event the Procuring Entity shall have a fresh period to initiate and complete the post qualification of the second Lowest Calculated Bid. The procedure shall be repeated until LCRB is identified and selected for recommendation of contract award. However if no Bidder passed post-qualification, the BAC shall declare the bidding a failure and conduct a re-bidding with re-advertisement, if necessary.

#### **33.** Notice to Proceed

Within seven (7) calendar days from the date of approval of the Contract by the appropriate government approving authority, the Procuring Entity shall issue the Notice to Proceed (NTP) together with a copy or copies of the approved contract to the successful Bidder. All notices called for by the terms of the contract shall be effective only at the time of receipt thereof by the successful Bidder.

#### 34. Protest Mechanism

Decision of the procuring entity at any stage of the procurement process may be questioned in accordance with Sections 55 of the IRR of RA 9184.

### Notes on the Bid Data Sheet

This Section is intended to assist the Procuring Entity in providing the specific information in relation to corresponding clauses in the ITB included in Section II, 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, the applicable rules regarding bid price and currency, and the bid evaluation criteria that will apply to the Bids. In preparing this Section, the following aspects should be checked:

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

For foreign-assisted projects, the Bid Data Sheet to be used is provided in Section X-Foreign-Assisted Projects.

## **Bid Data Sheet**

ITB Clause	
1.1	The Procuring Entity is Quezon City Government
	The name of the Contract is <b>PROPOSED UPGRADING OF</b>
	ELECTRICAL SYSTEM AT BAGO BANTAY ELEMENTARY SCHOOL,
	BARANGAY RAMON MAGSAYSAY
	The identification number of the Contract is <b>20-00068</b>
2	The Funding Source is:
	The Government of the Philippines (GOP) through Special Education
	Fund (SEF) in the amount of One Million Nine Hundred Thirty Eight
	Thousand Three Hundred Seventy One Pesos & 40/100 Centavos.
	( <del>₽</del> 1,938,371.40).
	<b>NOTE:</b> In the case of National Government Agencies, the General Appropriations Act and/or continuing appropriations; in the case of Government-Owned and/or –Controlled Corporations, Government Financial Institutions, and State Universities and Colleges, the Corporate Budget for the contract approved by the governing Boards; in the case of Local Government Units, the Budget for the contract approved by the respective Sanggunian.
	The name of the Project is <b>PROPOSED UPGRADING OF ELECTRICAL</b>
	SYSTEM AT BAGO BANTAY ELEMENTARY SCHOOL
5.1	In addition, eligible bidders shall qualify or comply with the following:
	<ol> <li>Bidders with valid Philippine Contractors Accreditation Board (PCAB) Type</li> <li>Building – Small B</li> </ol>
	2. Completed construction project(s) which is similar to the Project and which cost at least fifty percent (50%) of the ABC.
5.2	Bidding is <b>restricted to eligible bidders</b> as defined in ITB Clause 5.1.
5.4(a)	No further instructions.
5.4(b)	For this purpose, similar contracts shall refer to contracts which have the same major categories of work.
6.3	The Bidder, by the act of submitting its bid, shall be deemed to have inspected the site and shall submit site inspection report/certification.
8.1	· · ·
	Subcontracting is not allowed

8.2	Not applicable	
9.1	The <b>QC-BAC-</b> <i>Infrastructure and Consultancy</i> will hold a pre-bid conference for this Project on <i>November 11, 2020 - 1:30 P.M.</i> at 2 <sup>nd</sup> Floor, Procurement Department-Bidding Room, Finance Building, Quezon City Hall Compound or we encourage the prospective bidders to join through our Virtual Conference (ZOOM APP) Meeting ID: 89111859539 Password : 598996	
10.1	The Procuring Entity's address is:	
	QUEZON CITY GOVERNMENT	
	Quezon City Hall Compound	
	Barangay Central, Quezon City	
	ATTY. DOMINIC B. GARCIA	
	Procurement Department	
	2 <sup>nd</sup> Floor, Finance Building,	
	Quezon City Hall Compound,	
	Barangay Central, Quezon City 8988-4242 loc. 8709/8710	
	Email Add: procurement@quezoncity.qov.ph	
	Website: <u>www.quezoncity.gov.ph</u>	
12.1	<ul> <li>Additional Contract Documents relevant to the Project as required:</li> <li>1. Construction Schedule and S-curve,</li> <li>2. Manpower Schedule,</li> <li>3. Construction Methods,</li> <li>4. Equipment Utilization Schedule,</li> <li>5. PERT/CPM or other acceptable tools of project scheduling, shall be included in the submission of Technical Proposal.</li> </ul>	
12.1(a) (ii)	In the statement of all its on-going government and private contracts, including contracts awarded but not yet started shall be presented in proper sequence as they appear in the issued bid documents.	
	Each contractor shall submit Single Largest Completed Contract similar	
12.1(b)(ii.2)	to the contract to be bid. The minimum work experience requirements for key personnel are the	
	following:	
	Qty.Key PersonnelGeneral ExperienceRelevant Experience	
	1     Project Manager     3 years     3 years       1     Project Frazinger     3 years     3 years	
	1Project Engineer3 years3 years1Materials Engineer3 years3 years	
	1Materials Engineer3 years3 years1General Foreman3 years3 years	
	2 Skilled Worker 3 years 3 years	
	4 Laborer 3 years 3 years	
	In addition, the bidder must execute an affidavit of undertaking duly notarized stating that the foregoing personnel shall perform work exclusively for the project until its	
	completion. Please see attached Affidavit of Undertaking.	

12.1(b)(ii.3)	The minimum major equipment requirements are the following:	
	Equipment <u>Capacity</u> <u>Number of</u> <u>Units</u>	
	Scaffolding (H-Frame)1Jackhammer1Minor Tools1Concrete Mixer (2 bagger)1Insulation Resistance Tester1	
	In addition, the bidder must execute an affidavit of undertaking duly notarized stating that the foregoing equipment shall be used exclusively for the project until its completion. Please see attached Affidavit of Undertaking.	
12.1.(b).(iii)	The bidder's authorized signatory is the one who executes the Omnibus Sworn Statement, otherwise, a separate Special Power of Attorney (SPA) shall be attached in support of the Omnibus Sworn Statement.	
	An Affidavit of Site Inspection shall also be submitted or as part of the Omnibus Sworn Statement.	
13.1	"No additional Requirements.	
13.1(b)	<ul><li>This shall include all of the following documents:</li><li>Bid prices in the Bill of Quantities;</li></ul>	
	<ul> <li>Detailed estimates, including a summary sheet indicating the unit prices of construction materials, labor rates, and equipment rentals used in coming up with the Bid; and</li> </ul>	
	Cash flow by quarter or payment schedule.	
13.2	The ABC is <b>One Million Nine Hundred Thirty Eight Thousand Three</b> <b>Hundred Seventy One Pesos &amp; 40/100 Ctvs.</b> ( <b>P 1,938,371.40</b> ). Any bid with a financial component exceeding this amount shall not be accepted.	
14.2	No further instructions	
15.4	No further instruction	
16.1	The bid prices shall be quoted in Philippine Pesos.	
16.3	No further instructions.	
17.1	Bids will be valid until 120 calendar days from opening of bids	
	Surety Bond issued by the private insurance company shall be callable on demand, valid up to 120cd, affixed with documentary stamps, with original Official Receipt of premium payment, and accompanied by a Certificate of Authority to issue such security by the Insurance Commission. For bonds issued by the GSIS certification by the Insurance Commission and documentary stamps are not required.	
18.1	The bid security shall be in the form of a <b>Bid Securing Declaration or</b> any of the following forms and amounts:	

	<ul> <li>The amount of not less than Thirty Eight Thousand Seven Hundred Sixty Seven Pesos and 43/100 centavos ₽ 38,767.43 [2% of ABC], if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit;</li> <li>The amount of not less than Ninety Six Thousand Nine Hundred Eighteen Pesos and 38/100 ₽ 96,918.57 [5% of ABC] if bid security is in Surety Bond.</li> </ul>
18.2	The bid security shall be valid until <b>120 calendar days from opening of</b> bids.
19.3	The Bidder shall prepare and submit an original of the first and second envelopes as described in ITB Clauses 12 and 13.
21	The address for submission of bids is Bids and Awards Committee (BAC) Bidding Room, Procurement Department, 2 <sup>nd</sup> Floor, Civic Center Building F, Quezon City Hall Compound, Barangay Central, Quezon City The deadline for submission of bids is <b>9:00 AM</b> , <b>November 23, 2020</b>
22	Any bid submitted after the deadline for submission and receipt of bids prescribed by the Procuring Entity, pursuant to ITB Clause 21, shall be declared "Late" and shall not be accepted by the Procuring Entity.
24.1	The place of bid opening is at Bids and Awards Committee (BAC) <i>Bidding</i> <i>Room, Procurement Department, 2<sup>nd</sup> Floor, Civic Center Building F,</i> <i>Quezon City Hall Compound, Barangay Central, Quezon City</i> The date and time of bid opening is <i>10:00 AM, November 23, 2020</i>
24.2	No further instructions.
24.3	No further instructions.
27.3	No further instructions.
27.4	No further instructions.
28.2	No further instructions.

## Section IV. General Conditions of Contract

### Notes on the General Conditions of Contract

The GCC in Section IV, read in conjunction with the SCC in Section V and other documents listed therein, should be a complete document expressing all the rights and obligations of the parties.

The GCC herein shall not be altered. Any changes and complementary information, which may be needed, shall be introduced only through the SCC in Section V.

### **TABLE OF CONTENTS**

1.	DEFINITIONS	40
2.	INTERPRETATION	42
3.	GOVERNING LANGUAGE AND LAW	43
4.	COMMUNICATIONS	43
5.	Possession of Site	43
6.	THE CONTRACTOR'S OBLIGATIONS	44
7.	Performance Security	45
8.	SUBCONTRACTING	46
9.	LIQUIDATED DAMAGES	46
10.	. SITE INVESTIGATION REPORTS	46
11.	. THE PROCURING ENTITY, LICENSES AND PERMITS	46
12.	. CONTRACTOR'S RISK AND WARRANTY SECURITY	47
13.	. LIABILITY OF THE CONTRACTOR	49
14.	. Procuring Entity's Risk	49
15.	. INSURANCE	49
16.	. TERMINATION FOR DEFAULT OF CONTRACTOR	51
17.	. TERMINATION FOR DEFAULT OF PROCURING ENTITY	51
18.	. TERMINATION FOR OTHER CAUSES	52
19.	. PROCEDURES FOR TERMINATION OF CONTRACTS	53
20.	. Force Majeure, Release From Performance	56
21.	. RESOLUTION OF DISPUTES	56
22.	. SUSPENSION OF LOAN, CREDIT, GRANT, OR APPROPRIATION	57
23.	. PROCURING ENTITY'S REPRESENTATIVE'S DECISIONS	57
24.	. Approval of Drawings and Temporary Works by the Procuring Entity's Representative	57
25.	. ACCELERATION AND DELAYS ORDERED BY THE PROCURING ENTITY'S REPRESENTATIVE	58
26.	. EXTENSION OF THE INTENDED COMPLETION DATE	58
27.	. RIGHT TO VARY	58
	. Contractors Right to Claim	

29. DAYWORKS	
<b>30. EARLY WARNING</b>	59
31. PROGRAM OF WORK	59
32. MANAGEMENT CONFERENCES	60
33. BILL OF QUANTITIES	60
34. INSTRUCTIONS, INSPECTIONS AND AUDITS	61
<b>35. IDENTIFYING DEFECTS</b>	61
36. Cost of Repairs	61
<b>37. CORRECTION OF DEFECTS</b>	61
<b>38. UNCORRECTED DEFECTS</b>	62
<b>39.</b> Advance Payment	62
40. PROGRESS PAYMENTS	62
41. PAYMENT CERTIFICATES	63
42. RETENTION	64
43. VARIATION ORDERS	64
44. CONTRACT COMPLETION	66
45. SUSPENSION OF WORK	66
46. PAYMENT ON TERMINATION	67
47. EXTENSION OF CONTRACT TIME	67
48. PRICE ADJUSTMENT	69
49. COMPLETION	69
50. TAKING OVER	69
51. OPERATING AND MAINTENANCE MANUALS	

#### 1. Definitions

For purposes of this Clause, boldface type is used to identify defined terms.

- 1.1. The **Arbiter** is the person appointed jointly by the Procuring Entity and the Contractor to resolve disputes in the first instance, as provided for in **GCC** Clause 21.
- 1.2. **Bill of Quantities** refers to a list of the specific items of the Work and their corresponding unit prices, lump sums, and/or provisional sums.
- 1.3. The **Completion Date** is the date of completion of the Works as certified by the Procuring Entity's Representative, in accordance with **GCC** Clause 49.
- 1.4. The **Contract** is the contract between the Procuring Entity and the Contractor to execute, complete, and maintain the Works.
- 1.5 The **Contract Effectivity Date** is the date of signing of the Contract. However, the contractor shall commence execution of the Works on the Start Date as defined in GCC Clause 1.28.
- 1.6 The **Contract Price** is the price stated in the Notice of Award and thereafter to be paid by the Procuring Entity to the Contractor for the execution of the Works in accordance with this Contract
- 1.7 **Contract Time Extension** is the allowable period for the Contractor to complete the Works in addition to the original Completion Date stated in this Contract.
- 1.8 The **Contractor** is the juridical entity whose proposal has been accepted by the Procuring Entity and to whom the Contract to execute the Work was awarded.
- 1.9 The **Contractor's Bid** is the signed offer or proposal submitted by the Contractor to the Procuring Entity in response to the Bidding Documents.
- 1.10 **Days** are calendar days; months are calendar months.
- 1.11 **Dayworks** are varied work inputs subject to payment on a time basis for the Contractor's employees and Equipment, in addition to payments for associated Materials and Plant.
- 1.12 A **Defect** is any part of the Works not completed in accordance with the Contract.
- 1.13 The **Defects Liability Certificate** is the certificate issued by Procuring Entity's Representative upon correction of defects by the Contractor.
- 1.14 The **Defects Liability Period** is the one year period between contract completion and final acceptance within which the Contractor assumes the responsibility to undertake the repair of any damage to the Works at his own expense.

- 1.15 **Drawings** are graphical presentations of the Works. They include all supplementary details, shop drawings, calculations, and other information provided or approved for the execution of this Contract.
- 1.16 **Equipment** refers to all facilities, supplies, appliances, materials or things required for the execution and completion of the Work provided by the Contractor and which shall not form or are not intended to form part of the Permanent Works.
- 1.17 The **Intended Completion Date** refers to the date specified in the <u>SCC</u> when the Contractor is expected to have completed the Works. The Intended Completion Date may be revised only by the Procuring Entity's Representative by issuing an extension of time or an acceleration order.
- 1.18 **Materials** are all supplies, including consumables, used by the Contractor for incorporation in the Works.
- 1.19 The **Notice to Proceed** is a written notice issued by the Procuring Entity or the Procuring Entity's Representative to the Contractor requiring the latter to begin the commencement of the work not later than a specified or determinable date.
- 1.20 **Permanent Works** are all permanent structures and all other project features and facilities required to be constructed and completed in accordance with this Contract which shall be delivered to the Procuring Entity and which shall remain at the Site after the removal of all Temporary Works.
- 1.21 **Plant** refers to the machinery, apparatus, and the like intended to form an integral part of the Permanent Works.
- 1.22 The **Procuring Entity** is the party who employs the Contractor to carry out the Works stated in the <u>SCC</u>.
- 1.23 The **Procuring Entity's Representative** refers to the Head of the Procuring Entity or his duly authorized representative, identified in the <u>SCC</u>, who shall be responsible for supervising the execution of the Works and administering this Contract.
- 1.24 The **Site** is the place provided by the Procuring Entity where the Works shall be executed and any other place or places which may be designated in the <u>SCC</u>, or notified to the Contractor by the Procuring Entity's Representative as forming part of the Site.
- 1.25 **Site Investigation Reports** are those that were included in the Bidding Documents and are factual and interpretative reports about the surface and subsurface conditions at the Site.
- 1.26 **Slippage** is a delay in work execution occurring when actual accomplishment falls below the target as measured by the difference between the scheduled and actual accomplishment of the Work by the Contractor as established from the work schedule. This is actually described as a percentage of the whole Works.

- 1.27 **Specifications** means the description of Works to be done and the qualities of materials to be used, the equipment to be installed and the mode of construction.
- 1.28 The **Start Date**, as specified in the <u>SCC</u>, is the date when the Contractor is obliged to commence execution of the Works. It does not necessarily coincide with any of the Site Possession Dates.
- 1.29 A **Subcontractor** is any person or organization to whom a part of the Works has been subcontracted by the Contractor, as allowed by the Procuring Entity, but not any assignee of such person.
- 1.30 **Temporary Works** are works designed, constructed, installed, and removed by the Contractor that are needed for construction or installation of the Permanent Works.
- 1.31 **Work(s)** refer to the Permanent Works and Temporary Works to be executed by the Contractor in accordance with this Contract, including (i) the furnishing of all labor, materials, equipment and others incidental, necessary or convenient to the complete execution of the Works; (ii) the passing of any tests before acceptance by the Procuring Entity's Representative; (iii) and the carrying out of all duties and obligations of the Contractor imposed by this Contract as described in the <u>SCC.</u>

#### 2. Interpretation

- 2.1. In interpreting the Conditions of Contract, singular also means plural, male also means female or neuter, and the other way around. Headings have no significance. Words have their normal meaning under the language of this Contract unless specifically defined. The Procuring Entity's Representative will provide instructions clarifying queries about the Conditions of Contract.
- 2.2. If sectional completion is specified in the <u>SCC</u>, references in the Conditions of Contract to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).
- 2.3. The documents forming this Contract shall be interpreted in the following order of priority:
  - a) Contract Agreement;
  - b) Bid Data Sheet;
  - c) Instructions to Bidders;
  - d) Addenda to the Bidding Documents;
  - e) Special Conditions of Contract;
  - f) General Conditions of Contract;

- g) Specifications;
- h) Bill of Quantities; and
- i) Drawings.

#### 3. Governing Language and Law

- 3.1. This Contract has been executed in the English language, which shall be the binding and controlling language for all matters relating to the meaning or interpretation of this Contract. All correspondence and other documents pertaining to this Contract which are exchanged by the parties shall be written in English.
- 3.2. This Contract shall be interpreted in accordance with the laws of the Republic of the Philippines.

#### 4. Communications

Communications between parties that are referred to in the Conditions shall be effective only when in writing. A notice shall be effective only when it is received by the concerned party.

#### 5. **Possession of Site**

- 5.1. On the date specified in the <u>SCC</u>, the Procuring Entity shall grant the Contractor possession of so much of the Site as may be required to enable it to proceed with 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.
- 5.2. If possession of a portion is not given by the date stated in the SCC Clause 5.1, 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 shall be in accordance with GCC Clause 47.
- 5.3. The Contractor shall bear all costs and charges for special or temporary rightof-way required by it in connection with access to the Site. The Contractor shall also provide at his own cost any additional facilities outside the Site required by it for purposes of the Works.
- 5.4. The Contractor shall allow the Procuring Entity's Representative and any person authorized by the Procuring Entity's Representative access to the Site and to any place where work in connection with this Contract is being carried out or is intended to be carried out.

#### 6. The Contractor's Obligations

- 6.1. The Contractor shall carry out the Works properly and in accordance with this Contract. The Contractor shall provide all supervision, labor, Materials, Plant and Contractor's Equipment, which may be required. All Materials and Plant on Site shall be deemed to be the property of the Procuring Entity.
- 6.2. The Contractor shall commence execution of the Works on the Start Date and shall carry out the Works in accordance with the Program of Work submitted by the Contractor, as updated with the approval of the Procuring Entity's Representative, and complete them by the Intended Completion Date.
- 6.3. The Contractor shall be responsible for the safety of all activities on the Site.
- 6.4. The Contractor shall carry out all instructions of the Procuring Entity's Representative that comply with the applicable laws where the Site is located.
- 6.5. The Contractor shall employ the key personnel named in the Schedule of Key Personnel, as referred to in the <u>SCC</u>, 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.
- 6.6. If the Procuring Entity's Representative asks the Contractor to remove a member of the Contractor's staff or work force, for justifiable cause, the Contractor shall ensure that the person leaves the Site within seven (7) days and has no further connection with the Work in this Contract.
- 6.7. During Contract implementation, the Contractor and his subcontractors shall abide at all times by all labor laws, including child labor related enactments, and other relevant rules.
- 6.8. The Contractor shall submit to the Procuring Entity for consent the name and particulars of the person authorized to receive instructions on behalf of the Contractor.
- 6.9. The Contractor shall cooperate and share the Site with other contractors, public authorities, utilities, and the Procuring Entity between the dates given in the schedule of other contractors particularly when they shall require access to the Site. The Contractor shall also provide facilities and services for them during this period. The Procuring Entity may modify the schedule of other contractors, and shall notify the Contractor of any such modification thereto.
- 6.10. Should anything of historical or other interest or of significant value be unexpectedly discovered on the Site, it shall be the property of the Procuring Entity. The Contractor shall notify the Procuring Entity's Representative of such discoveries and carry out the Procuring Entity's Representative's instructions in dealing with them.

#### 7. **Performance Security**

- 7.1. 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 Contractor shall furnish the performance security in any of the forms prescribed in **ITB** Clause 32.2.
- 7.2. The performance security posted in favor of the Procuring Entity shall be forfeited in the event it is established that the Contractor is in default in any of its obligations under the Contract.
- 7.3. The performance security shall remain valid until issuance by the Procuring Entity of the Certificate of Final Acceptance.
- 7.4. The performance security may be released by the Procuring Entity and returned to the Contractor after the issuance of the Certificate of Final Acceptance subject to the following conditions:
  - (a) There are no pending claims against the Contractor or the surety company filed by the Procuring Entity;
  - (b) The Contractor has no pending claims for labor and materials filed against it; and
  - (c) Other terms specified in the <u>SCC</u>.
- 7.5. The Contractor shall post an additional performance security following the amount and form specified in **ITB** Clause 32.2 to cover any cumulative increase of more than ten percent (10%) over the original value of the contract as a result of amendments to order or change orders, extra work orders and supplemental agreements, as the case may be. The Contractor shall cause the extension of the validity of the performance security to cover approved contract time extensions.
- 7.6. In case of a reduction in the contract value or for partially completed Works under the contract which are usable and accepted by the Procuring Entity the use of which, in the judgment of the implementing agency or the Procuring Entity, will not affect the structural integrity of the entire project, the Procuring Entity shall allow a proportional reduction in the original performance security, provided that any such reduction is more than ten percent (10%) and that the aggregate of such reductions is not more than fifty percent (50%) of the original performance security.
- 7.7. Unless otherwise indicated in the <u>SCC</u>, the Contractor, by entering into the Contract with the Procuring Entity, acknowledges the right of the Procuring Entity to institute action pursuant to Act 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.

#### 8. Subcontracting

- 8.1. Unless otherwise indicated in the <u>SCC</u>, the Contractor cannot subcontract Works more than the percentage specified in **BDS** Clause 8.1.
- 8.2. Subcontracting of any portion of the Works does not relieve the Contractor of any liability or obligation under this Contract. The Contractor 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.
- 8.3. If subcontracting is allowed. The contractor may identify its subcontractor during contract implementation stage. Subcontractors disclosed and identified during the bidding may be changed during the implementation of this Contract. In either case, subcontractors must submit the documentary requirements under ITB Clause 12 and comply with the eligibility criteria specified in the **BDS**. In the event that any subcontractor is found by any Procuring Entity to be eligible, the subcontracting of such portion of the Works shall be disallowed.

#### 9. Liquidated Damages

- 9.1. The Contractor shall pay liquidated damages to the Procuring Entity for each day that the Completion Date is later than the Intended Completion Date. The applicable liquidated damages is at least one-tenth (1/10) of a percent of the cost of the unperformed portion for every day of delay. The total amount of liquidated damages shall not exceed ten percent (10%) of the amount of the contract. The Procuring Entity may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not affect the Contractor's liabilities. Once the cumulative amount of liquidated damages reaches ten percent (10%) of the amount of this Contract, the Procuring Entity may rescind or terminate this Contract, without prejudice to other courses of action and remedies available under the circumstances.
- 9.2. If the Intended Completion Date is extended after liquidated damages have been paid, the Engineer of the Procuring Entity shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment certificate.

#### **10.** Site Investigation Reports

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

#### 11. The Procuring Entity, Licenses and Permits

The Procuring Entity shall, if requested by the Contractor, assist him in applying for permits, licenses or approvals, which are required for the Works.

#### **12.** Contractor's Risk and Warranty Security

- 12.1. The Contractor shall assume full responsibility for the Works from the time project construction commenced up to final acceptance by the Procuring Entity and shall be held responsible for any damage or destruction of the Works except those occasioned by *force majeure*. The Contractor shall be fully responsible for the safety, protection, security, and convenience of his personnel, third parties, and the public at large, as well as the Works, Equipment, installation, and the like to be affected by his construction work.
- 12.2. The defects liability period for infrastructure projects shall be one year from contract completion up to final acceptance by the Procuring Entity. During this period, the Contractor shall undertake the repair works, at his own expense, of any damage to the Works on account of the use of materials of inferior quality within ninety (90) days from the time the HoPE has issued an order to undertake repair. In case of failure or refusal to comply with this mandate, the Procuring Entity shall undertake such repair works and shall be entitled to full reimbursement of expenses incurred therein upon demand.
- 12.3. Unless otherwise indicated in the <u>SCC</u>, in case the Contractor fails to comply with the preceding paragraph, 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.
- After final acceptance of the Works by the Procuring Entity, the Contractor 12.4. held responsible for "Structural Defects," shall be i.e., maior faults/flaws/deficiencies in one or more key structural elements of the project which may lead to structural failure of the completed elements or structure, or "Structural Failures," i.e., where one or more key structural elements in an infrastructure facility fails or collapses, thereby rendering the facility or part thereof incapable of withstanding the design loads, and/or endangering the safety of the users or the general public:
  - (a) Contractor Where Structural Defects/Failures arise due to faults attributable to improper construction, use of inferior quality/substandard materials, and any violation of the contract plans and specifications, the contractor shall be held liable;
  - (b) Consultants Where Structural Defects/Failures arise due to faulty and/or inadequate design and specifications as well as construction supervision, then the consultant who prepared the design or undertook construction supervision for the project shall be held liable;
  - (c) Procuring Entity's Representatives/Project Manager/Construction Managers and Supervisors – The project owner's representative(s), project manager, construction manager, and supervisor(s) shall be held liable in cases where the Structural Defects/Failures are due to his/their willful intervention in altering the designs and other specifications; negligence or omission in not approving or acting on proposed changes

to noted defects or deficiencies in the design and/or specifications; and the use of substandard construction materials in the project;

- (d) Third Parties Third Parties shall be held liable in cases where Structural Defects/Failures are caused by work undertaken by them such as leaking pipes, diggings or excavations, underground cables and electrical wires, underground tunnel, mining shaft and the like, in which case the applicable warranty to such structure should be levied to third parties for their construction or restoration works.
- (e) Users In cases where Structural Defects/Failures are due to abuse/misuse by the end user of the constructed facility and/or non-compliance by a user with the technical design limits and/or intended purpose of the same, then the user concerned shall be held liable.
- 12.5. The warranty against Structural Defects/Failures, except those occasioned on force majeure, shall cover the period specified in the <u>SCC</u> reckoned from the date of issuance of the Certificate of Final Acceptance by the Procuring Entity.
- 12.6. The Contractor shall be required to put up a warranty security in the form of cash, bank guarantee, letter of credit, GSIS or surety bond callable on demand, in accordance with the following schedule:

Form of Warranty	Amount of Warranty Security Not less than the Percentage (%) of Total Contract Price
<ul> <li>(a) Cash or letter of credit issued by Universal or Commercial bank: provided, however, that the letter of credit shall be confirmed or authenticated by a Universal or Commercial bank, if issued by a foreign bank</li> </ul>	Five Percent (5%)
<ul> <li>(b) Bank guarantee confirmed by Universal or Commercial bank: provided, however, that the letter of credit shall be confirmed or authenticated by a Universal or Commercial bank, if issued by a foreign bank</li> </ul>	Ten Percent (10%)
(c) Surety bond callable upon demand issued by GSIS or any surety or insurance company duly certified by the Insurance Commission	Thirty Percent (30%)

12.7. The warranty security shall be stated in Philippine Pesos and shall remain effective for one year from the date of issuance of the Certificate of Final Acceptance by the Procuring Entity, and returned only after the lapse of said one year period.

12.8. In case of structural defects/failure occurring during the applicable warranty period provided in GCC Clause 12.5, the Procuring Entity shall undertake the necessary restoration or reconstruction works and shall be entitled to full reimbursement by the parties found to be liable for expenses incurred therein upon demand, without prejudice to the filing of appropriate administrative, civil, and/or criminal charges against the responsible persons as well as the forfeiture of the warranty security posted in favor of the Procuring Entity.

#### **13.** Liability of the Contractor

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

#### 14. **Procuring Entity's Risk**

- 14.1. From the Start Date until the Certificate of Final Acceptance has been issued, the following are risks of the Procuring Entity:
  - (a) The risk of personal injury, death, or loss of or damage to property (excluding the Works, Plant, Materials, and Equipment), which are due to:
    - (i) any type of use or occupation of the Site authorized by the Procuring Entity after the official acceptance of the works; or
    - (ii) negligence, breach of statutory duty, or interference with any legal right by the Procuring Entity or by any person employed by or contracted to him except the Contractor.
  - (b) The risk of damage to the Works, Plant, Materials, and Equipment to the extent that it is due to a fault of the Procuring Entity or in the Procuring Entity's design, or due to war or radioactive contamination directly affecting the country where the Works are to be executed.

#### 15. Insurance

- 15.1. The Contractor shall, under his name and at his own expense, obtain and maintain, for the duration of this Contract, the following insurance coverage:
  - (a) Contractor's All Risk Insurance;
  - (b) Transportation to the project Site of Equipment, Machinery, and Supplies owned by the Contractor;
  - (c) Personal injury or death of Contractor's employees; and
  - (d) Comprehensive insurance for third party liability to Contractor's direct or indirect act or omission causing damage to third persons.
- 15.2. The Contractor shall provide evidence to the Procuring Entity's Representative that the insurances required under this Contract have been

effected and shall, within a reasonable time, provide copies of the insurance policies to the Procuring Entity's Representative. Such evidence and such policies shall be provided to the Procuring Entity's through the Procuring Entity's Representative.

15.3. The Contractor shall notify the insurers of changes in the nature, extent, or program for the execution of the Works and ensure the adequacy of the insurances at all times in accordance with the terms of this Contract and shall produce to the Procuring Entity's Representative the insurance policies in force including the receipts for payment of the current premiums.

The above insurance policies shall be obtained from any reputable insurance company approved by the Procuring Entity's Representative.

- 15.4. If the Contractor fails to obtain and keep in force the insurances referred to herein or any other insurance which he may be required to obtain under the terms of this Contract, the Procuring Entity may obtain and keep in force any such insurances and pay such premiums as may be necessary for the purpose. From time to time, the Procuring Entity may deduct the amount it shall pay for said premiums including twenty five percent (25%) therein from any monies due, or which may become due, to the Contractor, without prejudice to the Procuring Entity exercising its right to impose other sanctions against the Contractor pursuant to the provisions of this Contract.
- 15.5. In the event the Contractor fails to observe the above safeguards, the Procuring Entity may, at the Contractor's expense, take whatever measure is deemed necessary for its protection and that of the Contractor's personnel and third parties, and/or order the interruption of dangerous Works. In addition, the Procuring Entity may refuse to make the payments under **GCC** Clause 40 until the Contractor complies with this Clause.
- 15.6. The Contractor shall immediately replace the insurance policy obtained as required in this Contract, without need of the Procuring Entity's demand, with a new policy issued by a new insurance company acceptable to the Procuring Entity for any of the following grounds:
  - (a) The issuer of the insurance policy to be replaced has:
    - (i) become bankrupt;
    - (ii) been placed under receivership or under a management committee;
    - (iii) been sued for suspension of payment; or
    - (iv) been suspended by the Insurance Commission and its license to engage in business or its authority to issue insurance policies cancelled; or

(v) Where reasonable grounds exist that the insurer may not be able, fully and promptly, to fulfill its obligation under the insurance policy.

#### **16.** Termination for Default of Contractor

- 16.1. The Procuring Entity shall terminate this Contract for default when any of the following conditions attend its implementation:
  - Due to the Contractor's fault and while the project is on-going, it has incurred negative slippage of fifteen percent (15%) or more in accordance with Presidential Decree 1870, regardless of whether or not previous warnings and notices have been issued for the Contractor to improve his performance;
  - (ii) Due to its own fault and after this Contract time has expired, the Contractor incurs delay in the completion of the Work after this Contract has expired; or
  - (iii) The Contractor:
    - (i) abandons the contract Works, refuses or fails to comply with a valid instruction of the Procuring Entity or fails to proceed expeditiously and without delay despite a written notice by the Procuring Entity;
    - does not actually have on the project Site the minimum essential equipment listed on the bid necessary to prosecute the Works in accordance with the approved Program of Work and equipment deployment schedule as required for the project;
    - does not execute the Works in accordance with this Contract or persistently or flagrantly neglects to carry out its obligations under this Contract;
    - (iv) neglects or refuses to remove materials or to perform a new Work that has been rejected as defective or unsuitable; or
    - (v) sub-lets any part of this Contract without approval by the Procuring Entity.
- 16.2. All materials on the Site, Plant, Works, including Equipment purchased and funded under the Contract shall be deemed to be the property of the Procuring Entity if this Contract is rescinded because of the Contractor's default.

#### **17.** Termination for Default of Procuring Entity

The Contractor may terminate this Contract with the Procuring Entity if the works are completely stopped for a continuous period of at least sixty (60) calendar days through no fault of its own, due to any of the following reasons:

- (a) Failure of the Procuring Entity to deliver, within a reasonable time, supplies, materials, right-of-way, or other items it is obligated to furnish under the terms of this Contract; or
- (b) The prosecution of the Work is disrupted by the adverse peace and order situation, as certified by the Armed Forces of the Philippines Provincial Commander and approved by the Secretary of National Defense.

#### **18.** Termination for Other Causes

- 18.1. The Procuring Entity may terminate this Contract, in whole or in part, at any time for its convenience. The HoPE may terminate this Contract for the convenience of the Procuring Entity if he has determined the existence of conditions that make Project Implementation economically, financially or technically impractical and/or unnecessary, such as, but not limited to, fortuitous event(s) or changes in law and National Government policies.
- 18.2. The Procuring Entity or the Contractor may terminate this Contract if the other party causes a fundamental breach of this Contract.
- 18.3. Fundamental breaches of Contract shall include, but shall not be limited to, the following:
  - (a) The Contractor stops work for twenty eight (28) days when no stoppage of work is shown on the current Program of Work and the stoppage has not been authorized by the Procuring Entity's Representative;
  - (b) The Procuring Entity's Representative instructs the Contractor to delay the progress of the Works, and the instruction is not withdrawn within twenty eight (28) days;
  - (c) The Procuring Entity shall terminate this Contract if the Contractor is declared bankrupt or insolvent as determined with finality by a court of competent jurisdiction. In this event, termination will be without compensation to the Contractor, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the Procuring Entity and/or the Contractor. In the case of the Contractor's insolvency, any Contractor's Equipment which the Procuring Entity instructs in the notice is to be used until the completion of the Works;
  - (d) A payment certified by the Procuring Entity's Representative is not paid by the Procuring Entity to the Contractor within eighty four (84) days from the date of the Procuring Entity's Representative's certificate;
  - (e) The Procuring Entity's Representative gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Procuring Entity's Representative;

- (f) The Contractor does not maintain a Security, which is required;
- (g) The Contractor has delayed the completion of the Works by the number of days for which the maximum amount of liquidated damages can be paid, as defined in the GCC Clause 9; and
- (h) 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, the following:
  - (i) corrupt, fraudulent, collusive, coercive, and obstructive practices as defined in **ITB** Clause 3.1(a), unless otherwise specified in the SCC;
  - (ii) drawing up or using forged documents;
  - (iii) using adulterated materials, means or methods, or engaging in production contrary to rules of science or the trade; and
  - (iv) any other act analogous to the foregoing.
- 18.4. The Funding Source or the Procuring Entity, as appropriate, will seek to impose the maximum civil, administrative and/or criminal penalties available under the applicable law on individuals and organizations deemed to be involved with corrupt, fraudulent, or coercive practices.
- 18.5. When persons from either party to this Contract gives notice of a fundamental breach to the Procuring Entity's Representative in order to terminate the existing contract for a cause other than those listed under GCC Clause 18.3, the Procuring Entity's Representative shall decide whether the breach is fundamental or not.
- 18.6. If this Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secure, and leave the Site as soon as reasonably possible.

#### **19.** Procedures for Termination of Contracts

- 19.1. The following provisions shall govern the procedures for the termination of this Contract:
  - Upon receipt of a written report of acts or causes which may constitute ground(s) for termination as aforementioned, or upon its own initiative, the Procuring Entity shall, within a period of seven (7) calendar days, verify the existence of such ground(s) and cause the execution of a Verified Report, with all relevant evidence attached;
  - (b) Upon recommendation by the Procuring Entity, the HoPE shall terminate this Contract only by a written notice to the Contractor conveying the termination of this Contract. The notice shall state:

- (i) that this Contract is being terminated for any of the ground(s) afore-mentioned, and a statement of the acts that constitute the ground(s) constituting the same;
- (ii) the extent of termination, whether in whole or in part;
- (iii) an instruction to the Contractor to show cause as to why this Contract should not be terminated; and
- (iv) special instructions of the Procuring Entity, if any.

The Notice to Terminate shall be accompanied by a copy of the Verified Report;

- (c) Within a period of seven (7) calendar days from receipt of the Notice of Termination, the Contractor shall submit to the HoPE a verified position paper stating why the contract should not be terminated. If the Contractor fails to show cause after the lapse of the seven (7) day period, either by inaction or by default, the HoPE shall issue an order terminating the contract;
- (d) The Procuring Entity may, at anytime before receipt of the Contractor's verified position paper described in item (c) above withdraw the Notice to Terminate if it is determined that certain items or works subject of the notice had been completed, delivered, or performed before the Contractor's receipt of the notice;
- (e) Within a non-extendible period of ten (10) calendar days from receipt of the verified position paper, the HoPE shall decide whether or not to terminate this Contract. It shall serve a written notice to the Contractor of its decision and, unless otherwise provided in the said notice, this Contract is deemed terminated from receipt of the Contractor of the notice of decision. The termination shall only be based on the ground(s) stated in the Notice to Terminate; and
- (f) The HoPE may create a Contract Termination Review Committee (CTRC) to assist him in the discharge of this function. All decisions recommended by the CTRC shall be subject to the approval of the HoPE.
- 19.2. Pursuant to Section 69(f) of RA 9184 and without prejudice to the imposition of additional administrative sanctions as the internal rules of the agency may provide and/or further criminal prosecution as provided by applicable laws, the procuring entity shall impose on contractors after the termination of the contract the penalty of suspension for one (1) year for the first offense, suspension for two (2) years for the second offense from participating in the public bidding process, for violations committed during the contract implementation stage, which include but not limited to the following:

- (a) Failure of the contractor, due solely to his fault or negligence, to mobilize and start work or performance within the specified period in the Notice to Proceed ("NTP");
- (b) Failure by the contractor to fully and faithfully comply with its contractual obligations without valid cause, or failure by the contractor to comply with any written lawful instruction of the procuring entity or its representative(s) pursuant to the implementation of the contract. For the procurement of infrastructure projects or consultancy contracts, lawful instructions include but are not limited *to* the following:
  - (i) Employment of competent technical personnel, competent engineers and/or work supervisors;
  - (ii) Provision of warning signs and barricades in accordance with approved plans and specifications and contract provisions;
  - Stockpiling in proper places of all materials and removal from the project site of waste and excess materials, including broken pavement and excavated debris in accordance with approved plans and specifications and contract provisions;
  - (iv) Deployment of committed equipment, facilities, support staff and manpower; and
  - (v) Renewal of the effectivity dates of the performance security after its expiration during the course of contract implementation.
- (c) Assignment and subcontracting of the contract or any part thereof or substitution of key personnel named in the proposal without prior written approval by the procuring entity.
- (d) Poor performance by the contractor or unsatisfactory quality and/or progress of work arising from his fault or negligence as reflected in the Constructor's Performance Evaluation System ("CPES") rating sheet. In the absence of the CPES rating sheet, the existing performance monitoring system of the procuring entity shall be applied. Any of the following acts by the Contractor shall be construed as poor performance:
  - (i) Negative slippage of 15% and above within the critical path of the project due entirely to the fault or negligence of the contractor; and
  - (ii) Quality of materials and workmanship not complying with the approved specifications arising from the contractor's fault or negligence.

(e) Willful or deliberate abandonment or non-performance of the project or contract by the contractor resulting to substantial breach thereof without lawful and/or just cause.

In addition to the penalty of suspension, the performance security posted by the contractor shall also be forfeited.

#### 20. Force Majeure, Release From Performance

- 20.1. For purposes of this Contract the terms "*force majeure*" and "fortuitous event" may be used interchangeably. In this regard, a fortuitous event or *force majeure* shall be interpreted to mean an event which the Contractor could not have foreseen, or which though foreseen, was inevitable. It shall not include ordinary unfavorable weather conditions; and any other cause the effects of which could have been avoided with the exercise of reasonable diligence by the Contractor.
- 20.2. If this Contract is discontinued by an outbreak of war or by any other event entirely outside the control of either the Procuring Entity or the Contractor, the Procuring Entity's Representative shall certify that this Contract has been discontinued. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all works carried out before receiving it and for any Work carried out afterwards to which a commitment was made.
- 20.3. If the event continues for a period of eighty four (84) days, either party may then give notice of termination, which shall take effect twenty eight (28) days after the giving of the notice.
- 20.4. After termination, the Contractor shall be entitled to payment of the unpaid balance of the value of the Works executed and of the materials and Plant reasonably delivered to the Site, adjusted by the following:
  - (a) any sum to which the Contractor is entitled under GCC Clause 28;
  - (b) the cost of his suspension and demobilization;
  - (c) any sum to which the Procuring Entity is entitled.
- 20.5. The net balance due shall be paid or repaid within a reasonable time period from the time of the notice of termination.

#### 21. **Resolution of Disputes**

- 21.1. If any dispute or difference of any kind whatsoever shall arise between the parties in connection with the implementation of the contract covered by the Act and this IRR, the parties shall make every effort to resolve amicably such dispute or difference by mutual consultation.
- 21.2. If the Contractor believes that a decision taken by the Procuring Entity's Representative was either outside the authority given to the Procuring Entity's

Representative by this Contract or that the decision was wrongly taken, the decision shall be referred to the Arbiter indicated in the <u>SCC</u> within fourteen (14) days of the notification of the Procuring Entity's Representative's decision.

21.3. Any and all disputes arising from the implementation of this Contract covered by the R.A. 9184 and its IRR shall be submitted to arbitration in the Philippines according to the provisions of Republic Act No. 876, otherwise known as the "Arbitration Law" and Republic Act 9285, otherwise known as the "Alternative Dispute Resolution Act of 2004": *Provided, however*, That, disputes that are within the competence of the Construction Industry Arbitration Commission to resolve shall be referred thereto. The process of arbitration shall be incorporated as a provision in this Contract that will be executed pursuant to the provisions of the Act and its IRR: *Provided, further*, That, by mutual agreement, the parties may agree in writing to resort to other alternative modes of dispute resolution.

#### 22. Suspension of Loan, Credit, Grant, or Appropriation

In the event that the Funding Source suspends the Loan, Credit, Grant, or Appropriation to the Procuring Entity, from which part of the payments to the Contractor are being made:

- (a) The Procuring Entity is obligated to notify the Contractor of such suspension within seven (7) days of having received the suspension notice.
- (b) If the Contractor has not received sums due it for work already done within forty five (45) days from the time the Contractor's claim for payment has been certified by the Procuring Entity's Representative, the Contractor may immediately issue a suspension of work notice in accordance with GCC Clause 45.2.

#### 23. Procuring Entity's Representative's Decisions

- 23.1. Except where otherwise specifically stated, the Procuring Entity's Representative will decide contractual matters between the Procuring Entity and the Contractor in the role representing the Procuring Entity.
- 23.2. The Procuring Entity's Representative may delegate any of his duties and responsibilities to other people, except to the Arbiter, after notifying the Contractor, and may cancel any delegation after notifying the Contractor.

## 24. Approval of Drawings and Temporary Works by the Procuring Entity's Representative

- 24.1. All Drawings prepared by the Contractor for the execution of the Temporary Works, are subject to prior approval by the Procuring Entity's Representative before its use.
- 24.2. The Contractor shall be responsible for design of Temporary Works.

- 24.3. The Procuring Entity's Representative's approval shall not alter the Contractor's responsibility for design of the Temporary Works.
- 24.4. The Contractor shall obtain approval of third parties to the design of the Temporary Works, when required by the Procuring Entity.

# 25. Acceleration and Delays Ordered by the Procuring Entity's Representative

- 25.1. When the Procuring Entity wants the Contractor to finish before the Intended Completion Date, the Procuring Entity's Representative will obtain priced proposals for achieving the necessary acceleration from the Contractor. If the Procuring Entity accepts these proposals, the Intended Completion Date will be adjusted accordingly and confirmed by both the Procuring Entity and the Contractor.
- 25.2. If the Contractor's Financial Proposals for an acceleration are accepted by the Procuring Entity, they are incorporated in the Contract Price and treated as a Variation.

#### 26. Extension of the Intended Completion Date

- 26.1. The Procuring Entity's Representative shall extend the Intended Completion Date if a Variation is issued which makes it impossible for the Intended Completion Date to be achieved by the Contractor without taking steps to accelerate the remaining work, which would cause the Contractor to incur additional costs. No payment shall be made for any event which may warrant the extension of the Intended Completion Date.
- 26.2. The Procuring Entity's Representative shall decide whether and by how much to extend the Intended Completion Date within twenty one (21) days of the Contractor asking the Procuring Entity's Representative for a decision thereto after fully submitting all supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date.

#### 27. Right to Vary

- 27.1. The Procuring Entity's Representative with the prior approval of the Procuring Entity may instruct Variations, up to a maximum cumulative amount of ten percent (10%) of the original contract cost.
- 27.2. Variations shall be valued as follows:
  - (a) At a lump sum price agreed between the parties;
  - (b) where appropriate, at rates in this Contract;
  - (c) in the absence of appropriate rates, the rates in this Contract shall be used as the basis for valuation; or failing which

(d) at appropriate new rates, equal to or lower than current industry rates and to be agreed upon by both parties and approved by the HoPE.

#### 28. Contractor's Right to Claim

If the Contractor incurs cost as a result of any of the events under **GCC** Clause 13, the Contractor shall be entitled to the amount of such cost. If as a result of any of the said events, it is necessary to change the Works, this shall be dealt with as a Variation.

#### 29. Dayworks

- 29.1. Subject to GCC Clause 43 on Variation Order, and if applicable as indicated in the <u>SCC</u>, 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.
- 29.2. All work to be paid for as Dayworks shall be recorded by the Contractor on forms approved by the Procuring Entity's Representative. Each completed form shall be verified and signed by the Procuring Entity's Representative within two days of the work being done.
- 29.3. The Contractor shall be paid for Dayworks subject to obtaining signed Dayworks forms.

#### **30.** Early Warning

- 30.1. The Contractor shall warn the Procuring Entity's Representative at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of the work, increase the Contract Price, or delay the execution of the Works. The Procuring Entity's Representative may require the Contractor to provide an estimate of the expected effect of the future event or circumstance on the Contract Price and Completion Date. The estimate shall be provided by the Contractor as soon as reasonably possible.
- 30.2. The Contractor shall cooperate with the Procuring Entity's Representative in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the Procuring Entity's Representative.

#### 31. Program of Work

- 31.1. Within the time stated in the <u>SCC</u>, the Contractor shall submit to the Procuring Entity's Representative for approval a Program of Work showing the general methods, arrangements, order, and timing for all the activities in the Works.
- 31.2. An update of the Program of Work shall show the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work, including any changes to the sequence of the activities.

- 31.3. 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 <u>SCC</u>. 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 <u>SCC</u> 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.
- 31.4. The Procuring Entity's Representative's approval of the Program of Work shall not alter the Contractor's obligations. The Contractor may revise the Program of Work and submit it to the Procuring Entity's Representative again at any time. A revised Program of Work shall show the effect of any approved Variations.
- 31.5. When the Program of Work is updated, the Contractor shall provide the Procuring Entity's Representative with an updated cash flow forecast. The cash flow forecast shall include different currencies, as defined in the Contract, converted as necessary using the Contract exchange rates.
- 31.6. All Variations shall be included in updated Program of Work produced by the Contractor.

#### **32.** Management Conferences

- 32.1. Either the Procuring Entity's Representative or the Contractor may require the other to attend a Management Conference. The Management Conference shall review the plans for remaining work and deal with matters raised in accordance with the early warning procedure.
- 32.2. The Procuring Entity's Representative shall record the business of Management Conferences and provide copies of the record to those attending the Conference and to the Procuring Entity. The responsibility of the parties for actions to be taken shall be decided by the Procuring Entity's Representative either at the Management Conference or after the Management Conference.

#### **33.** Bill of Quantities

- 33.1. The Bill of Quantities shall contain items of work for the construction, installation, testing, and commissioning of work to be done by the Contractor.
- 33.2. The Bill of Quantities is used to calculate the Contract Price. The Contractor is paid for the quantity of the work done at the rate in the Bill of Quantities for each item.
- 33.3. If the final quantity of any work done differs from the quantity in the Bill of Quantities for the particular item and is not more than twenty five percent (25%) of the original quantity, provided the aggregate changes for all items do not exceed ten percent (10%) of the Contract price, the Procuring Entity's Representative shall make the necessary adjustments to allow for the changes subject to applicable laws, rules, and regulations.

33.4. If requested by the Procuring Entity's Representative, the Contractor shall provide the Procuring Entity's Representative with a detailed cost breakdown of any rate in the Bill of Quantities.

#### 34. Instructions, Inspections and Audits

- 34.1. The Procuring Entity's personnel shall at all reasonable times during construction of the Work be entitled to examine, inspect, measure and test the materials and workmanship, and to check the progress of the construction.
- 34.2. If the Procuring Entity's Representative instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a defect and the test shows that it does, the Contractor shall pay for the test and any samples. If there is no defect, the test shall be a Compensation Event.
- 34.3. The Contractor shall permit the Funding Source named in the <u>SCC</u> to inspect the Contractor's accounts and records relating to the performance of the Contractor and to have them audited by auditors appointed by the Funding Source, if so required by the Funding Source.

#### **35.** Identifying Defects

The Procuring Entity's Representative shall check the Contractor's work and notify the Contractor of any defects that are found. Such checking shall not affect the Contractor's responsibilities. The Procuring Entity's Representative may instruct the Contractor to search uncover defects and test any work that the Procuring Entity's Representative considers below standards and defective.

#### 36. Cost of Repairs

Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Liability Periods shall be remedied by the Contractor at the Contractor's cost if the loss or damage arises from the Contractor's acts or omissions.

#### **37.** Correction of Defects

- 37.1. The Procuring Entity's Representative shall give notice to the Contractor of any defects before the end of the Defects Liability Period, which is One (1) year from project completion up to final acceptance by the Procuring Entity's Representative.
- 37.2. Every time notice of a defect is given, the Contractor shall correct the notified defect within the length of time specified in the Procuring Entity's Representative's notice.
- 37.3. The Contractor shall correct the defects which he notices himself before the end of the Defects Liability Period.
- 37.4. The Procuring Entity shall certify that all defects have been corrected. If the Procuring Entity considers that correction of a defect is not essential, he can

request the Contractor to submit a quotation for the corresponding reduction in the Contract Price. If the Procuring Entity accepts the quotation, the corresponding change in the SCC is a Variation.

#### **38.** Uncorrected Defects

- 38.1. The Procuring Entity shall give the Contractor at least fourteen (14) days notice of his intention to use a third party to correct a Defect. If the Contractor does not correct the Defect himself within the period, the Procuring Entity may have the Defect corrected by the third party. The cost of the correction will be deducted from the Contract Price.
- 38.2. The use of a third party to correct defects that are uncorrected by the Contractor will in no way relieve the Contractor of its liabilities and warranties under the Contract.

#### **39.** Advance Payment

- 39.1. 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 <u>SCC</u>.
- 39.2. The advance payment shall be made only upon the submission to and acceptance by the Procuring Entity of an irrevocable standby letter of credit of equivalent value from a commercial bank, a bank guarantee or a surety bond callable upon demand, issued by a surety or insurance company duly licensed by the Insurance Commission and confirmed by the Procuring Entity.
- 39.3. The advance payment shall be repaid by the Contractor by an amount equal to the percentage of the total contract price used for the advance payment.
- 39.4. The contractor may reduce his standby letter of credit or guarantee instrument by the amounts refunded by the Monthly Certificates in the advance payment.
- 39.5. The Procuring Entity will provide an Advance Payment on the Contract Price as stipulated in the Conditions of Contract, subject to the maximum amount stated in **SCC** Clause 39.1.

#### 40. **Progress Payments**

- 40.1. The Contractor may submit a request for payment for Work accomplished. Such request for payment shall be verified and certified by the Procuring Entity's Representative/Project Engineer. Except as otherwise stipulated in the <u>SCC</u>, materials and equipment delivered on the site but not completely put in place shall not be included for payment.
- 40.2. The Procuring Entity shall deduct the following from the certified gross amounts to be paid to the contractor as progress payment:

- (a) Cumulative value of the work previously certified and paid for.
- (b) Portion of the advance payment to be recouped for the month.
- (c) Retention money in accordance with the condition of contract.
- (d) Amount to cover third party liabilities.
- (e) Amount to cover uncorrected discovered defects in the works.
- 40.3. Payments shall be adjusted by deducting therefrom the amounts for advance payments and retention. The Procuring Entity shall pay the Contractor the amounts certified by the Procuring Entity's Representative within twenty eight (28) days from the date each certificate was issued. No payment of interest for delayed payments and adjustments shall be made by the Procuring Entity.
- 40.4. The first progress payment may be paid by the Procuring Entity to the Contractor provided that at least twenty percent (20%) of the work has been accomplished as certified by the Procuring Entity's Representative.
- 40.5. Items of the Works for which a price of "0" (zero) has been entered will not be paid for by the Procuring Entity and shall be deemed covered by other rates and prices in the Contract.

#### 41. Payment Certificates

- 41.1. The Contractor shall submit to the Procuring Entity's Representative monthly statements of the estimated value of the work executed less the cumulative amount certified previously.
- 41.2. The Procuring Entity's Representative shall check the Contractor's monthly statement and certify the amount to be paid to the Contractor.
- 41.3. The value of Work executed shall:
  - (a) be determined by the Procuring Entity's Representative;
  - (b) comprise the value of the quantities of the items in the Bill of Quantities completed; and
  - (c) include the valuations of approved variations.
- 41.4. The Procuring Entity's Representative may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.

#### 42. Retention

- 42.1. The Procuring Entity shall retain from each payment due to the Contractor an amount equal to a percentage thereof using the rate as specified in GCC Sub-Clause 42.2.
- 42.2. Progress payments are subject to retention of ten percent (10%), referred to as the "retention money." Such retention shall be based on the total amount due to the Contractor prior to any deduction and shall be retained from every progress payment until fifty percent (50%) of the value of Works, as determined by the Procuring Entity, are completed. If, after fifty percent (50%) completion, the Work is satisfactorily done and on schedule, no additional retention shall be made; otherwise, the ten percent (10%) retention shall again be imposed using the rate specified therefor.
- 42.3. The total "retention money" shall be due for release upon final acceptance of the Works. The Contractor may, however, request the substitution of the retention money for each progress billing with irrevocable standby letters of credit from a commercial bank, bank guarantees or surety bonds callable on demand, of amounts equivalent to the retention money substituted for and acceptable to the Procuring Entity, provided that the project is on schedule and is satisfactorily undertaken. Otherwise, the ten (10%) percent retention shall be made. Said irrevocable standby letters of credit, bank guarantees and/or surety bonds, to be posted in favor of the Government shall be valid for a duration to be determined by the concerned implementing office/agency or Procuring Entity and will answer for the purpose for which the ten (10%) percent retention is intended, *i.e.*, to cover uncorrected discovered defects and third party liabilities.
- 42.4. On completion of the whole Works, the Contractor may substitute retention money with an "on demand" Bank guarantee in a form acceptable to the Procuring Entity.

#### 43. Variation Orders

- 43.1. Variation Orders may be issued by the Procuring Entity to cover any increase/decrease in quantities, including the introduction of new work items that are not included in the original contract or reclassification of work items that are either due to change of plans, design or alignment to suit actual field conditions resulting in disparity between the preconstruction plans used for purposes of bidding and the "as staked plans" or construction drawings prepared after a joint survey by the Contractor and the Procuring Entity after award of the contract, provided that the cumulative amount of the Variation Order does not exceed ten percent (10%) of the original project cost. The addition/deletion of Works should be within the general scope of the project as bid and awarded. The scope of works shall not be reduced so as to accommodate a positive Variation Order. A Variation Order may either be in the form of a Change Order or Extra Work Order.
- 43.2. A Change Order may be issued by the Procuring Entity to cover any increase/decrease in quantities of original Work items in the contract.

- 43.3. An Extra Work Order may be issued by the Procuring Entity to cover the introduction of new work necessary for the completion, improvement or protection of the project which were not included as items of Work in the original contract, such as, where there are subsurface or latent physical conditions at the site differing materially from those indicated in the contract, or where there are duly unknown physical conditions at the site of an unusual nature differing materially from those ordinarily encountered and generally recognized as inherent in the Work or character provided for in the contract.
- 43.4. Any cumulative Variation Order beyond ten percent (10%) shall be subject of another contract to be bid out if the works are separable from the original contract. In exceptional cases where it is urgently necessary to complete the original scope of work, the HoPE may authorize a positive Variation Order go beyond ten percent (10%) but not more than twenty percent (20%) of the original contract price, subject to the guidelines to be determined by the GPPB: *Provided, however,* That appropriate sanctions shall be imposed on the designer, consultant or official responsible for the original detailed engineering design which failed to consider the Variation Order beyond ten percent (10%).
- 43.5. In claiming for any Variation Order, the Contractor shall, within seven (7) calendar days after such work has been commenced or after the circumstances leading to such condition(s) leading to the extra cost, and within twenty-eight (28) calendar days deliver a written communication giving full and detailed particulars of any extra cost in order that it may be investigated at that time. Failure to provide either of such notices in the time stipulated shall constitute a waiver by the contractor for any claim. The preparation and submission of Variation Orders are as follows:
  - (a) If the Procuring Entity's representative/Project Engineer believes that a Change Order or Extra Work Order should be issued, he shall prepare the proposed Order accompanied with the notices submitted by the Contractor, the plans therefore, his computations as to the quantities of the additional works involved per item indicating the specific stations where such works are needed, the date of his inspections and investigations thereon, and the log book thereof, and a detailed estimate of the unit cost of such items of work, together with his justifications for the need of such Change Order or Extra Work Order, and shall submit the same to the HoPE for approval.
  - (b) The HoPE or his duly authorized representative, upon receipt of the proposed Change Order or Extra Work Order shall immediately instruct the appropriate technical staff or office of the Procuring Entity to conduct an on-the-spot investigation to verify the need for the Work to be prosecuted and to review the proposed plan, and prices of the work involved.
  - (c) The technical staff or appropriate office of the Procuring Entity shall submit a report of their findings and recommendations, together with the supporting documents, to the Head of Procuring Entity or his duly authorized representative for consideration.

- (d) The HoPE or his duly authorized representative, acting upon the recommendation of the technical staff or appropriate office, shall approve the Change Order or Extra Work Order after being satisfied that the same is justified, necessary, and in order.
- (e) The timeframe for the processing of Variation Orders from the preparation up to the approval by the Procuring Entity concerned shall not exceed thirty (30) calendar days.

#### 44. Contract Completion

Once the project reaches an accomplishment of ninety five (95%) of the total contract amount, the Procuring Entity may create an inspectorate team to make preliminary inspection and submit a punch-list to the Contractor in preparation for the final turnover of the project. Said punch-list will contain, among others, the remaining Works, Work deficiencies for necessary corrections, and the specific duration/time to fully complete the project considering the approved remaining contract time. This, however, shall not preclude the claim of the Procuring Entity for liquidated damages.

#### 45. Suspension of Work

- 45.1. The Procuring Entity shall have the authority to suspend the work wholly or partly by written order for such period as may be deemed necessary, due to *force majeure* or any fortuitous events or for failure on the part of the Contractor to correct bad conditions which are unsafe for workers or for the general public, to carry out valid orders given by the Procuring Entity or to perform any provisions of the contract, or due to adjustment of plans to suit field conditions as found necessary during construction. The Contractor shall immediately comply with such order to suspend the work wholly or partly.
- 45.2. The Contractor or its duly authorized representative shall have the right to suspend work operation on any or all projects/activities along the critical path of activities after fifteen (15) calendar days from date of receipt of written notice from the Contractor to the district engineer/regional director/consultant or equivalent official, as the case may be, due to the following:
  - (a) There exist right-of-way problems which prohibit the Contractor from performing work in accordance with the approved construction schedule.
  - (b) Requisite construction plans which must be owner-furnished are not issued to the contractor precluding any work called for by such plans.
  - (c) Peace and order conditions make it extremely dangerous, if not possible, to work. However, this condition must be certified in writing by the Philippine National Police (PNP) station which has responsibility over the affected area and confirmed by the Department of Interior and Local Government (DILG) Regional Director.

- (d) There is failure on the part of the Procuring Entity to deliver government-furnished materials and equipment as stipulated in the contract.
- (e) Delay in the payment of Contractor's claim for progress billing beyond forty-five (45) calendar days from the time the Contractor's claim has been certified to by the procuring entity's authorized representative that the documents are complete unless there are justifiable reasons thereof which shall be communicated in writing to the Contractor.
- 45.3. In case of total suspension, or suspension of activities along the critical path, which is not due to any fault of the Contractor, the elapsed time between the effectivity of the order suspending operation and the order to resume work shall be allowed the Contractor by adjusting the contract time accordingly.

# 46. Payment on Termination

- 46.1. If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Procuring Entity's Representative shall issue a certificate for the value of the work done and Materials ordered less advance payments received up to the date of the issue of the certificate and less the percentage to apply to the value of the work not completed, as indicated in the SCC. Additional Liquidated Damages shall not apply. If the total amount due to the Procuring Entity exceeds any payment due to the Contractor, the difference shall be a debt payable to the Procuring Entity.
- 46.2. If the Contract is terminated for the Procuring Entity's convenience or because of a fundamental breach of Contract by the Procuring Entity, the Procuring Entity's Representative shall issue a certificate for the value of the work done, Materials ordered, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works, and less advance payments received up to the date of the certificate.
- 46.3. The net balance due shall be paid or repaid within twenty eight (28) days from the notice of termination.
- 46.4. If the Contractor has terminated the Contract under GCC Clauses 17 or 18, the Procuring Entity shall promptly return the Performance Security to the Contractor.

# 47. Extension of Contract Time

47.1. Should the amount of additional work of any kind or other special circumstances of any kind whatsoever occur such as to fairly entitle the contractor to an extension of contract time, the Procuring Entity shall determine the amount of such extension; provided that the Procuring Entity is not bound to take into account any claim for an extension of time unless the Contractor has, prior to the expiration of the contract time and within thirty (30) calendar days after such work has been commenced or after the circumstances leading to such claim have arisen, delivered to the Procuring

Entity notices in order that it could have investigated them at that time. Failure to provide such notice shall constitute a waiver by the Contractor of any claim. Upon receipt of full and detailed particulars, the Procuring Entity shall examine the facts and extent of the delay and shall extend the contract time completing the contract work when, in the Procuring Entity's opinion, the findings of facts justify an extension.

- 47.2. No extension of contract time shall be granted the Contractor due to (a) ordinary unfavorable weather conditions and (b) inexcusable failure or negligence of Contractor to provide the required equipment, supplies or materials.
- 47.3. Extension of contract time may be granted only when the affected activities fall within the critical path of the PERT/CPM network.
- 47.4. No extension of contract time shall be granted when the reason given to support the request for extension was already considered in the determination of the original contract time during the conduct of detailed engineering and in the preparation of the contract documents as agreed upon by the parties before contract perfection.
- 47.5. Extension of contract time shall be granted for rainy/unworkable days considered unfavorable for the prosecution of the works at the site, based on the actual conditions obtained at the site, in excess of the number of rainy/unworkable days pre-determined by the Procuring Entity in relation to the original contract time during the conduct of detailed engineering and in the preparation of the contract documents as agreed upon by the parties before contract perfection, and/or for equivalent period of delay due to major calamities such as exceptionally destructive typhoons, floods and earthquakes, and epidemics, and for causes such as non-delivery on time of materials, working drawings, or written information to be furnished by the Procuring Entity, non-acquisition of permit to enter private properties or non-execution of deed of sale or donation within the right-of-way resulting in complete paralyzation of construction activities, and other meritorious causes as determined by the Procuring Entity's Representative and approved by the HoPE. Shortage of construction materials, general labor strikes, and peace and order problems that disrupt construction operations through no fault of the Contractor may be considered as additional grounds for extension of contract time provided they are publicly felt and certified by appropriate government agencies such as DTI, DOLE, DILG, and DND, among others. The written consent of bondsmen must be attached to any request of the Contractor for extension of contract time and submitted to the Procuring Entity for consideration and the validity of the Performance Security shall be correspondingly extended.

# 48. Price Adjustment

Except for extraordinary circumstances as determined by NEDA and approved by the GPPB, no price escalation shall be allowed. Nevertheless, in cases where the cost of the awarded contract is affected by any applicable new laws, ordinances, regulations, or other acts of the GoP, promulgated after the date of bid opening, a contract price adjustment shall be made or appropriate relief shall be applied on a no loss-no gain basis.

# 49. Completion

The Contractor shall request the Procuring Entity's Representative to issue a certificate of Completion of the Works, and the Procuring Entity's Representative will do so upon deciding that the work is completed.

# 50. Taking Over

The Procuring Entity shall take over the Site and the Works within seven (7) days from the date the Procuring Entity's Representative issues a certificate of Completion.

# 51. Operating and Maintenance Manuals

- 51.1. If "as built" Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates stated in the <u>SCC</u>.
- 51.2. If the Contractor does not supply the Drawings and/or manuals by the dates stated in the <u>SCC</u>, or they do not receive the Procuring Entity's Representative's approval, the Procuring Entity's Representative shall withhold the amount stated in the <u>SCC</u> from payments due to the Contractor.

# Section V. Special Conditions of Contract

# Notes on the Special Conditions of Contract

Similar to the Section III. Bid Data Sheet, 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.

The provisions of this Section 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 Section IV. General Conditions of Contract must be incorporated.
- (b) Amendments and/or supplements to provisions of Section IV. General Conditions of Contract, as necessitated by the circumstances of the specific project, must also be incorporated.

However, no special condition which defeats or negates the general intent and purpose of the provisions of Section IV. General Conditions of Contract should be incorporated herein.

For foreign-assisted projects, the Special Conditions of Contract to be used is provided in Section X-Foreign-Assisted Projects.

# 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 PRO Procuring Entity or the person drafting the Bidding Documents. They should not be included in the final Bidding Documents.



Republika ng Pilipinas Lungsod ng Quezon

CITY ENGINEERING DEPARTMENT 5th , 6th, 7th Floor, QC Civic Center Building "B" Telephone Nos. 8988-4242 Local 8538



NAME OF PROJECT:

PROPOSED UPGRADING OF ELECTRICAL SYSTEM OF BAGO BANTAY ELEMENTARY SCHOOL

LOCATION:

BARANGAY RAMON MAGSAYSAY, DISTRICT 1, QUEZON CITY

# **TECHNICAL SPECIFICATIONS**

# PART 1 - GENERAL

# 1.1 REFFERENCE

The publications listed below form a part of his specification to the extent referenced. the publications are referred to in the text by the basic designation only.

1.1.1 American Society for Testing and Materials (ASTM)

ASTM A123/A123M (2000) Zinc (Hot-dip Galvanized) Coatings On Iron and Steel Products

ASTM B1 (1995) Hard – Drawn Copper Wire

ASTM BB (1999) Concentric-Lay-Stranded Copper Conductor, Hard, Medium – Hard or Soft

1.1.2 National Electrical Manufacturers Association (NEMA)

NEMA C80.3	(1994) Electrical Metallic Tubing – zinc Coated (EMT)
NEMA c57.12.28	(1999) Pad mounted equipment-Enclosure Integrity
NEMA TC 2	(1998) Electrical Polyvinyl Chloride (PVC) Tubing (EPT) and Conduit (EPC- 40)
NEMA TC3	(1999) PVC Fittings for Use with Rigid PVC Conduit ant Tubing
NEMA WD 1	(1999) General requirements for Wiring Devices

1.1.3 National Fire Protection Association (NFPA)

NFPA 70 (2002) National Electrical Code

1.1.4 Underwriters Laboratories Inc. (UL)

UL 1242	(1996; Mar 1998) Intermediate Metal Conduit
UL 467	(1993; Rev Apr 1999) Grounding & Bonding Equipment
UL 486A	(1997; Rev Dec 1998) Wire Connection & Soldering Legs for Use with Copper Conductors

	· · · ·		
	UL 486C	(1997; Rev Aug 1998) Splicing Wire Connectors	
	UL 489	(1996; Rev thru Dec 1998) Molded-Case Circuit Breakers	
	UL 50	(1995; R 1999, Bul. 1999) Safety Enclosures for Electrical Equipment	
	UL510	(1994; R Apr 1998) Poly Vinyl Chloride Polyethylene & Rubber Insulating Tape	
	UL 514A	(1996; Rev Dec 1999) Metallic Outlet Boxes 20-00068	
	UL 797	(1993; R1997) Electrical Metallic Tubing	
	UL 83	(1998; R 1999, Bul. 1999 & 2000) Thermoplastic-Insulated Wires & Cables	
	UL 869A	(1998) Service Equipment	
1.1.5	Institute of Integrate	d Electrical Engineer (IIEE)	
	PEC	(2002) Philippine Electrical Code	
1.1.6	Philippine National S	tandard (PNS)	
	BS	(2002) Bureau of Standard	

# **1.3 SUBMITTALS**

Submit the following:

1.3.1 Shop Drawings

Panelboards

1.3.2 Product Data

Receptacles Circuit breakers Switches Enclosed Circuit breakers

# 1.3.3 Test Reports

600-volt wiring test Grounding system test

G

# **1.4 MAINTENANCE**

# 1.4.1 Electrical Systems

Submit operation and maintenance manuals for electrical systems that provide basic data relating to the design, operation, and maintenance of the electrical distribution system for the building.

This shall include:

# 20-00068

- a. Single line diagram of the "as-built" building electrical system.
- b. Manufacturers' operating and maintenance manuals on active electrical equipment.

# PART 2 - PRODUCTS

# 2.1 MATERIALS AND EQUIPMENT

Materials, equipment, and devices shall, as a minimum, meet requirements of UL, where UL standards are established for those items, and requirements of NFPA 70 and PEC.

# 2.2 CONDUIT AND FITTINGS

Shall conform to the following:

2.2.1 Rigid Nonmetallic Conduit

PVC Type EPC-40, in accordance with NEMA TC 2 and UL 651.

2.2.2 Intermediate Metal Conduit (IMC)

UL 1242, zinc-coated steel only.

- 2.2.3 Fittings for IMC threaded-type, Split couplings unacceptable.
- 2.2.4 Fittings for Rigid Nonmetallic Conduit

NEMA TC 3.

# 2.3 WIRE AND CABLES

Wires and cables shall meet applicable requirements of NFPA 70, PEC and PNS and UL for type of Insulation, jacket, and conductor specified or indicated. Wires and cables manufactured more that 12 months prior to date of deliver to sire shall not be used.

2.3.1 Conductors, shall be stranded unless specifically indicated otherwise. Conductor sizes and ampacities show are based on copper, unless indicated otherwise. All conductors shall be copper.

# 2.3.1.1 Equipment Manufacturer Requirements

When manufacturer's equipment requires copper conductors at the terminations or requires copper conductors to be provided between components, of equipment, provide copper conductors or splices, splice boxes, and other work required to satisfy manufacturer's requirements.

# 2.3.2 Color Coding

# 20-00068

Provide for service, feeder, branch, control, and signalling circuit conductors. Color shall be green for grounding conductors Color of ungrounded conductors in different voltage systems shall be as follows;

- a. 240 volt, single phase: black and red
- b. 240 volt, 3 phase: red and blue

# 2.3.3 Insulation

Unless specified or indicated otherwise or required by NFPA 70, PEC and PNS, power and lighting wires shall be 600-volt. Type THW or THHN conforming to UL 83 except that grounding wire may be type TW conforming to UL 83, Where lighting fixtures require 90-degree Centigrade (C) conductors, provide only conductors with 90-degree C insulation or better.

# 2.3.4 Bonding Conductors

ASTM B1, Solid bare copper wire for sizes 8mm<sup>2</sup> and smaller diameter, ASTM B8, Class B, stranded bare copper wire for sizes 14mm<sup>2</sup> and larger diameter.

# 2.4 SPLICES AND TERMINATION COMPONENTS

UL 486A for wire connectors and UL 510 for Insulating tapes, Connectors for 5.5 mm<sup>2</sup> and smaller diameter wires shall be insulated, pressure-type in accordance with UL 486A or UL 486C (twist-on splicing connector). Provide solderless terminal lugs on stranded conductors.

# 2.5 PANELBOARDS

UL 67 and UL 50 having a short-circuit current rating of 10,000 amperes symmetrical minimum, Panelboards for use as service disconnecting means shall additionally conform to UL 869A, Paneboards shall be circuit breaker-equipped. Design shall be such that individual breakers can be removed without disturbing adjacent units or without loosening or removing supplemental insulation supplied as means of obtaining clearances as required by UL "Specific breaker placement" is required in panelboards to match the breaker placement indicated in the panelboard schedule on the drawings, Use of \*Subfeed Breakers\* is not acceptable unless specifically indicated otherwise, Main breaker shall be \*Seperated\*mounted\*above\* branch breakers, Circuit breakers shall be bolt-on type, Where \*space only\* is indicated, make provisions for future installation of breakers. Panelboard locks shall be keyed same. Directories shall indicate load served by each circuit in panelboard, Directories shall also indicate source of service to panelboard (e.g. Panel PA served from Panel MDP), Type directories and mount in holder behind transparent protective covering. Panelboards shall be listed and labelled for their intended use, Enclosure shall be galvanized steel gauge 14. Paint coating system shall comply with NEMA C57.12.28 for galvanized steel.

8

# 2.5.1 Panelboard Buses

Support copper bus bars on bases independent of circuit breakers. Main buses and back pans shall be designed so that breakers may be changed without machining, drilling, or tapping. Provide separate ground bus identified as equipment grounding bus per UL 67 for connecting conducting bus per UL 67 form connecting grounding conductors, bond steel cabinet.

# 2.5.2 Circuit Breakers

# 20-00068

UL 489, thermal magnetic-type having a minimum short-circuit current rating equal to the short-circuit current rating of the panelboard in which the circuit breaker shall be mounted. Breaker terminals shall be UL listed as suitable for type of conductor provided. Series rated circuit breakers and plug-in circuit breakers without a self-contained bracket and not secured by a positive locking device requiring mechanical release for removal are unacceptable. Series rated circuit breakers and plug-in circuit breakers are unacceptable.

# 2.5.2.1 Multipole Breakers

Provide common trip-type with single operating handle. Breaker design shall be such that overload in one pole automatically causes all poles to open. Maintain phase sequence throughout each panel so that three adjacent breaker poles are connected to Phases A,B, and C, respectively.

# 2.6 ENCLOSED CIRCUIT BREAKERS

UL 489, Individual molded case circuit breakers with voltage and continuous current ratings, number of poles, overload trip setting, and short circuit current interrupting rating as indicated. Enclosure type as indicated.

# 2.7 GROUNDING AND BONDING EQUIPMENT

UL 467, Ground rods shall be copper-clad steel, with minimum diameter of 20 mm and minimum length of 3050 mm.

# PART 3 - EXECUTION

# 3.1 INSTALLATION

Electrical installations shall conform to requirements of NFPA 70 and PEC and to requirements specified herein.

# 3.1.1 Wiring Methods

Provide insulated conductors installed in IMC, and rigid non-metallic conduit except where specifically indicated or specified otherwise or required by NFPA 70 and PEC to be installed Otherwise, Provide insulated green equipment grounding conductor for circuit(S) installed in conduit and raceways. Minimum conduit size shall be 15mm nominal inside diameter for low voltage lighting and power circuits.

 $\varsigma$ 

# 3.1.1.2 Nonmetallic Conduit

a. Restrictions applicable to PVC Schedule 40

(1) Do not use in areas where subject to severe physical damage

(2) Do not use above grade

# 20-00068

# 3.1.1.3 Service Entrance Conduit, Underground

PVC, type-EPC 40, underground portion shall be encased in minimum of 75 mm of concrete and shall be installed minimum 460 mm below slab or grade.

# 3.1.2 Conduit Installation

Unless indicated otherwise, conceal conduit under floor slabs and within finished walls ceilings, and floors, install conduit parallel with or at night angles to ceilings, walls, and structural members where located above accessible ceilings and where conduit will be visible after completion of project.

# 3.1.2.1 Conduit through Floor Slabs

Where conduits rise through floor slabs. Curved portion of bends shall not be visible above finished slab.

# 3.1.2.2 Conduit Support

Support conduit by pipe straps, wall brackets, hangers, or ceiling trapeze. Fasten by concrete inserts or expansion bolts on concrete and by machine screws, welded threaded studs, or spring-tension clamps on steel work. Threaded C-Clamps may be used on IMC conduit only. Do not weld conduits of pipe straps to steel structures, Load applied to fasteners shall not exceed on-fourth proof test load. Fasteners attached to concrete ceiling shall be vibration resistant and shock-resistant. Holes cut to depth of more than 40 mm in reinforced concrete beams or to depth of more than 20 mm in concrete joints shall not cut main reinforcing bars. Fill unused holes. In partitions of light steel construction, use sheet metal screws. In suspended-ceiling construction, run conduit above ceiling. Do not support conduit by ceiling support system. Conduit and box systems shall be supported independently of both (a) tie wires supporting ceiling grid system, and (b) ceiling grid system into which ceiling panels are placed. Supporting means shall not be shared between electrical raceways and mechanical piping or ducts. Installation shall be coordinated with above-ceiling mechanical systems to assure maximum accessibility to all systems. Spring-steel fasteners may be used for lighting branch circuit conduit supports in suspended ceilings in dry locations.

8

# 3.1.2.3 Directional Changes in Conduit Runs

Make Changes in direction of runs with symmetrical bends or cast-metal fittings. Make field-made bends and offsets with hickey or conduit-bending machine. Do not install crushed or deformed conduits. Avoid trapped conduits. Prevent plaster, dirt, or trash from lodging in conduits, boxes, fittings, and equipment during construction. Free clogged conduits of obstructions.

20-00068

# 3.1.2.4 Pull Wire

Install pull wires in empty conduits, Pull wire shall be plastic having minimum 890-N tensile strength. Leave minimum 915 mm of slack at each end of pull wire.

# 3.1.2.5 Conduit Installed in Concrete Floor Stabs

Locate so as not to adversely affect structural strength of slabs. Install conduit within middle one-third of concrete slab. Do not stack conduits. Space conduits horizontally not closer that three diameters, except at cabinet locations. Curved portions of bends shall not be visible above finish slab. Increase slab thickness as necessary to provide minimum 25 mm cover over conduit. Where embedded conduits cross building and/or expansion joints, provide suitable watertight expansion/deflection fittings and bonding jumpers. Expansion/deflection fittings shall allow horizontal and vertical movements of raceway. Conduit larger than 22 mm trade size shall be parallel with or at right angles to main reinforcement, when at right angles to reinforcement, conduit shall be close to one of supports of slab.

# 3.1.2.6 Locknuts and Bushings

Fasten conduits to sheet metal boxes and cabinets with two locknuts where required by NFPA 70 and PEC where insulated bushings are used, and where bushings cannot be brought into firm contact with the box; otherwise, use at least minimum single locknut and bushing. Locknuts shall have sharp edges for digging into wall of metal enclosures. Install bushing on ends of conduits, and provide insulating type where required by NFPA 70 and PEC.

# 3.1.3 Boxes, Outlets, and Supports

Provide boxes in wiring and raceway systems wherever required for pulling of wires, making connections, and mounting of devices or fixtures. Boxes for metallic raceways shall be cast-metal, except that nonmetalic boxes may be used with nonmetalic conduit system. Each box shall have volume required by NFPA 70 and PEC for number of conductors enclosed in box. Boxes for mounting lighting fixtures shall be minimum 100 mm square, or octagonal, except that smaller boxes may be installed as required by fixture configurations, as approved. Provide separate boxes for flush or recessed fixtures when required by fixture terminal operating temperature; fixtures shall be readily removable for access to boxes unless ceiling access panels and provided, Support boxes and pendants for surface-mounted fixtures on suspended ceilings independently of ceiling supports, or make adequate provisions for distributing load over ceiling support members in an approved manner. Fasten boxes and supports with wood screws on wood. With bolts and expansion shields on concrete, with toggle bolts on hollow masonry units, and with machine screws or welded studs on steel.

# 3.1.4 Conductor Identification

Provide conductor identification within each enclosure where tap, splice, or termination is made.For conductor's 14mm<sup>2</sup> and smaller diameter ,color coding shall be by factory applied, color-impregnated insulation. For conductors 22m<sup>2</sup> and larger diameter, color coding shall be by plastic- coated, self-sticking markers, colored nylon cable ties and plates; or heat shrink-type sleeves.

# 3.1.5 Splices

# 20-00068

Make splices in accessible locations, make splices in conductors 5.5mm<sup>2</sup> and smaller diameter with insulated , pressure-type connector, Make splices in conductors 22m<sup>2</sup> and larger diameter with solderless connector, and cover with insulation material equipment to conductor insulation.

Seal openings around electrical penetrations through fire resistance-rated watts, partitions, floor, or ceilings.

## 3.1.6 Grounding and Bonding

In accordance with NFPA 70 and PEC. Ground exposed non-current-carrying metallic parts of electrical equipment, metallic raceway systems, grounding conductor in metallic and nonmetalic raceways, telephone system grounds. Make ground connection to driven ground rods on exterior of building. Interconnect all gounding media in or on the structure to provide a common ground potential.

## 3.1.6.1 Resistance

Maximum resistance-to-ground of grounding system shall not exceeds 5 ohms, contact Engineer for further instructions.

## 3.1.6.2 Equipment Connections

Provide power wiring for the connection of motors and control equipment under this section of the specification. Except as otherwise specifically noted or specified, automatic control wiring, control devices, and protective devices within the control circuitry are not included in the section of the specifications but shall be provided under the section specifying the associated equipment.

# 3.2 FIELD QUALITY CONTROL

Furnish test equipment and personnel and submit written copies of test result. Give the engineer five (5) working days' notice prior to each test.

## 3.2.1 600-Volt Wiring Test

Test wiring rated 600 volt and less to verify that no short circuits or accidental grounds exist. Perform insulation resistance test on wiring 14 mm<sup>2</sup> and larger diameter using

Instrument which applies voltage of approximately 500 volts on provide direct reading of resistance, Minimum resistance shall be 250,000 ohms.

3.2.2 Grounding System Test

# 20-00008

Test grounding system to ensure continuity, and that resistance to ground is not excessive. Test each ground rod for resistance to ground before making connections to rod; tie grounding system together and test for resistance to ground. Make resistance measurements in dry weather, not earlier that 48 hours after rainfall. Submit written results of each test to Engineer, and indicate location of rods as well as resistance and soil conditions at time measurements were made.

# 4.0 Concrete Works

Concrete works must be done using 2 bagger mixers with 3000 psi or 4000 psi with Grade 40 or Grade 60 reinforcing bars as specified in the plan and program of works.

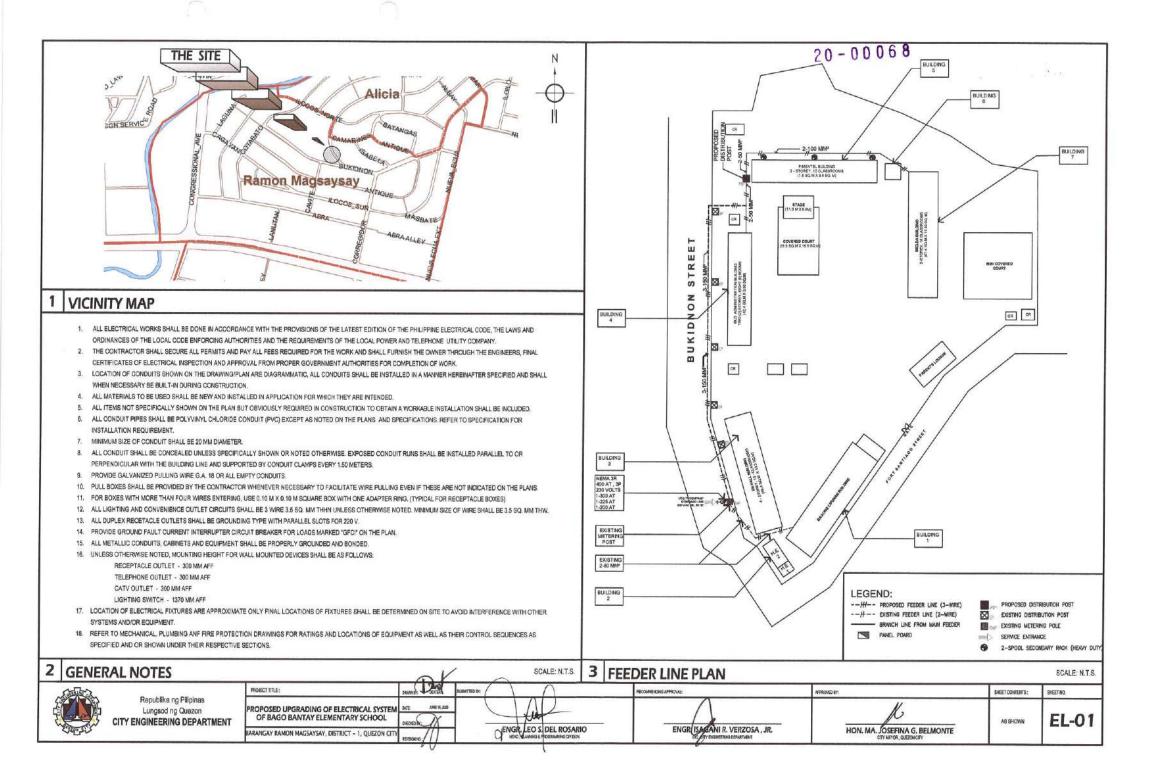
PREPARED BY:

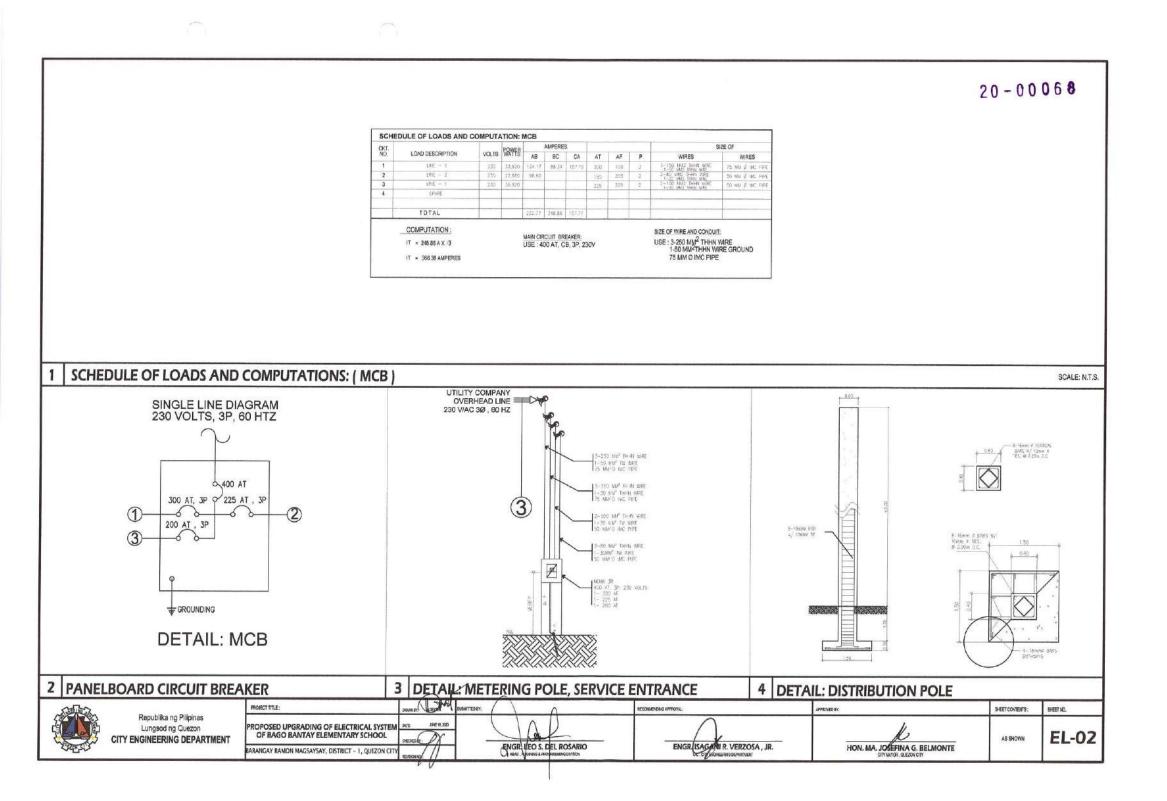
STEPHANIE D. OVIEDO Planning and Programming Division

CHECKED BY: Planning/and Programming Division

# Section VII. Drawings

Insert here a list of Drawings. The actual Drawings, including site plans, should be attached to this section or annexed in a separate folder.





	LINE		OMPUT	TION		DANOU	CIPC	ит						DA BUILDING ( 2 STORI				The second second		0.0				6	0-0	
	1	DULE OF LOADS AND C	1					<b>N</b> 1				SIZE CE		we for the of a function of a first	COMPUT	ATION		1			DEAVED			NZE OF		
<ul> <li></li></ul>	NO.	LOAD DESCRIPTION	VOLTS	WAYES				AT	AF	Р	WIRES		NO.	LOAD DESCRIPTION	UNITS	VOLT	S WATT	AMPS	5.						CONDUIT	-
<ul> <li></li></ul>	1	INELDA BUILDING (4-18)	230	28.560	124:17			200		2 3	2-8.0 UK2 JOHN SOPE	SO MY & MC FIRS	1	USHONG	17	230	1,700	7.39	-					e l		are.
	2	OLD ADVIN. BUILDING (2-8)	2,50	30,820			133,95	200	725	2 3	2-80 MM2 THHN WRE 1-35 NR2 THHN ARE		2	UCHTINC	12				_	5	2	2	5.5 MUZ THAN 34R			_
	3	PIMENTEL BUILDING (2-10)	230	16,320		70.95			225	2	2-38 MUZ THEN WRE 1-14 NHZ YHEN BEF	SO MU & BAC PIPI	3	LICHTING			_		_	5	2 2	2-3	1.5 MW2 THEN WIR	ie.	20 MM \$ PKC F	are.
	4	17AJE	230	1,920	3.34			- 49.	-			40 MV \$ 140 PP	4	LIGHTING	12	230	1,203	5.22	15	5	2 2	2-3	5. MM2. THEN WE	Æ.	20 MM & PAC 1	<b>NPE</b>
		and the second se					19.52	69		2 2	2~14 WM2 THHM WIRE	25 MV & IVC PIPE	5	LICHTING	52	2.30	1,200	5.22	9		2	2~3	5.5 U.V.2 THHN WR	ic .	20 MAN & PUE P	nit.
	6	PROPOSED 4-STOREY BUILDING	230	4,000		17,39		60	160	3 2	2-38 MIA2 THER WRE 1-14 MM2 THEN ARE	25 MV 🖉 NG FIRE	6	UCHTING	6	235	60G	2.61	1		0 2	2-3	1.5 MAY THAN WR	8	20 MM & PUC F	HPE
COMPUTATION: If + MAY RES       WAY REPORT PREAME USE: 300 AT, CB, SP, 200Y       SEE OF WRE AND COORDIT 10 WAY REPORT       SEE OF WRE AND COORDIT 11 WAY REPORT       SEE OF WRE AND COORDIT 11 WAY REPORT         If + MAY RAD       WAY REPORT PREAME (S) MAIN PREAME       SEE OF WRE AND COORDIT 12 MAIN DUE PRE       SEE OF WRE AND COORDIT 12 WAY RAD													7	CÉEDAG #38	/8	230	1,800	6.95	21	54	2	2-3	5 MMZ THHN WR	É.	20 MM & PVC P	IFE
Control Transmini       Water Results       Set of West And Control         11 * ± 302.7 k.5       UEE : 350 a.47, CB, 59, 2007         11 * ± 302.7 k.5       UEE : 350 a.47, CB, 59, 2007         EDULE OF LOADS AND COMPUTATIONS : (LINE - 1)       UEE : 350 a.47, CB, 59, 2007         EDULE OF LOADS AND COMPUTATIONS : (LINE - 1)       UEE : 350 a.47, CB, 59, 2007         EDULE OF LOADS AND COMPUTATION: LIP BECOND FLOOR       UEE : 50 a.47, CB, 59, 2007       UEE : 50, 200, 20, 20, 20, 20, 20, 20, 20, 20,		TOTAL			132.51	58.34	153.77	1						CEILING FAN	10	236	2,060	8.69	2	<u>8</u> /	6 2				20 MH & PUE P	196
If τ + BL274 K.5       USE 328 AT (CB, 3P, 2007       USE 13 AD (CB, 3P, 2007       USE 13 AD (CB, 3P, 2007         If τ + BL274 K.5       If t + BL274 K.5       USE 328 AT (CB, 3P, 2007       USE 13 AD (CB, 3P, 2007       USE 13 AD (CB, 3P, 2007         If τ + BL274 K.5       If t + BL274 K.5       USE 13 AD (CB, 3P, 2007       USE 14 BD (CB, 3P, 2007       USE 14 BD (CB, 3P, 2007       USE 14 BD (CB, 3P, 2007         If t + BL274 K.5       USE 14 BD (CB, 3P, 2007       USE 14 BD (CB, 3P, 2007       USE 12 BD (CB, 2007		COMPUTATION												CONVENENCE OURLET	ġ	230	1,820	8.69	R	30	2			·	20 MM & PVC P	397
								N/								_			_			1002				_
IT - 384.41 APPRES       75 MID MO PPE         IT - 384.41 APPRES       TOTAL       MAD MO PPE         IT - 384.41 APPRES       MAD PPE         IT - 384.41 APP       PEE         IT - 384.41 APPRES       MAD PPE         IT - 384.41 APP       MAD PPE		(T = 153,774×/3			OL . 00	10 /11, 01	0, 01 , E			US	5E : 3-150 MM <sup>2</sup> THH	IN WIRE	11	CONVENENCE DUILET	4	230	720	343	N.	51	2	2-1	2 ANG THRM SAK	Ψ.	20 MPA & PUE P	IFE
Several La original de la del de la d		IT = 266.34 AMPERES												TOTAL						_		_				
USE: 12.5 AT, CB, 2P, 200/     USE: 12.5 AT, CB,												0.70		TUTAL			14,400,30	115				-				_
SCHEDULE OF LOADS AND COMPUTATION: LPP SECOND FLOR         SCHEDULE OF LOADS AND COMPUTATION: LPP SECOND FLOR         1       Lono DESCRIPTION       MIR VLX 18       VVX 18 </th <th></th> <th>IT = 14,800 WATTS 230 VOLTS</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>USE : 2-35 M 1-14 M</th> <th>M<sup>2</sup> THHN M<sup>2</sup> THHN</th> <th>WIRE WIRE GROUN</th> <th>D</th>														IT = 14,800 WATTS 230 VOLTS									USE : 2-35 M 1-14 M	M <sup>2</sup> THHN M <sup>2</sup> THHN	WIRE WIRE GROUN	D
I         LOP / R0         13         20         1,20         2,10         2,10         2,10         2,10         2,10         1,00         2,10         1,00         2,00         1,00         2,00         1,00         2,00         1,00         2,00         1,00         2,00         1,00         2,00         1,00         5,20         1,00         5,20         1,00         5,20         1,00         5,20         1,00         5,20         1,00         1			OMPLIZA	TION	DDer	COND	51005		-									í								
a       L(b)       1/2       2/2       2/2       1/2       2/2       1/2       2/	SCHE	DULE OF LOADS AND C			OWER		CIRC	UIT BREA	20225		and a second	AALIN	SCH	EDULE OF LOADS AND	COMPUT	ATION	MDP		S					SIZE OF		
a       L(b)       1/2       2/2       2/2       1/2       2/2       1/2       2/	SCHE	EDULE OF LOADS AND CI	UNITS	VOLTS	POWER WATTS	AMPS.	CIRC AT	UIT BREA	P		WIRES		SCH CKT, NO,	EDULE OF LOADS AND	COMPUT	VOLT	S POWE	R AMPS	5. A	T A	F P		WIRES			
4       LUBITING       12       2.20       1.20       5.21       1.50       2       2-3.5 MAZ       Denti Wate       20 Mul § PXC PPE         6       LUBITING       12       2.20       1.20       5.0       2       2-3.5 MAZ       Denti Wate       20 Mul § PXC PPE         6       LUBITING       5       2.00       6.02       1.5       50       2       2-3.5 MAZ       Denti Wate       20 Mul § PXC PPE         6       LUBITING       5       2.00       6.02       2.00       5.00       2.0       2.3.5 MAZ       Denti Wate       20 Mul § PXC PPE         7       CEMING FAM       10       2.30       4.60       2.00       1.400       8.60       2.0       2.2.5.5 MAZ       Denti Wate       20 Mul § PXC PPE         8       COMPUTATION       8       2.00       1.400       8.60       2.0       2.2.5.5 MAZ       Denti Wate       20 Mul § PXC PPE	SCHE CKT. NO. 1	EDULE OF LOADS AND CO LOAD DESCRIPTION	UNITS	230	WATTS	AMPS. 7.39	CIRC AT	AF 50	<b>P</b> 2	2~3.5 M	WIRES No. Then wire	29 MM O PVC PIFE	SCH CKT, NO, 1	EDULE OF LOADS AND LOAD DESCRIPTION	COMPUT	ATION VOLT	S POWE WATT	AMPS 62.95	5. A	T A	F P 2 2		WIRES		40 MM & PVC P	
6       Liber Nt       5       230       600       2.41       15       60       2       2-3.5       Mail Since       Mail	SCHE CKT. NO. 1 2	EDULE OF LOADS AND C LOAD DESCRIPTION	UNITS 13 12	<b>VOLTS</b> 230 230	00000000000000000000000000000000000000	AMPS. 7.39 5.22	CIRC AT 15 15	AF 50 50	р 2 2	2~3.5 M	WIRES No Then Wire No Then Wire	20 MM O PVC PIPE 70 MM & PVC PIPE	SCH CKT, NO, 1	EDULE OF LOADS AND LOAD DESCRIPTION	COMPUT	ATION VOLT	S POWE WATT	AMPS 62.95	5. A	T A	F P 2 2		WIRES		40 MM & PVC P	
0       User target       5       230       000       2.41       15       50       2       255       Mag Tends were       20       Mag Feve PPE         7       CELIMP FM       6       2.20       1.000       6.65       2       225       Mag Tends were       20       Mag Feve PPE         8       CELIMP FM       10       230       2.000       6.65       2       225       Mag Tends were       20       Mag Feve PPE         9       CONVENTION contrat       9       2.00       6.65       2       225       Mag Feve PPE       20       Mag Feve PPE         10       CONVENTION contrat       9       2.00       6.65       2       225       Mag Feve PPE       20       Mag Feve PPE         11       CONVENTION contrat       8       2.00       1.40       8.60       2.0       2.00       2.00       2.00       2.00       2.00       0.00       2.00       0.00	SCHE CKT. NO. 1 2 3	EDULE OF LOADS AND CI LOAD DESCRIPTION LOAT WE LOAT WE LOAT WE LOAT WE	UNITS 13 12 12	<b>VOLTS</b> 230 235 235	COWER WATTS 1,700 1,200 1,200	AMPS. 7.39 5.22 5.22	CIRC AT 15 15 15	AF 50 50 50	P 2 2 2	2-35 M 2-35 M 2-35 M	WIRES M2 THEN WIRE M2 THEN MIRE M2 THEN MIRE	29 MM O PVC PIPE 20 MM Ø PVC PIPE 29 MM Ø PVC PIPE	SCH CKT, NO, 1	EDULE OF LOADS AND LOAD DESCRIPTION UPE (ROUND ALSOR IPE SECOND FLOOR	COMPUT	ATION VOLT 230	MDP     Powe     WATT     14,45	62.95 62.95	5. A	T A	F P 2 2		WIRES		40 MM & PVC P	
7       CELING FAR       6       200       1000       6 as       200       5 as       2       2	SCHE CKT. NO. 1 2 3 4	EDULE OF LOADS AND CO LOAD DESCRIPTION LOAT MIS LOAT MIS LOAT MIS LOAT MIS	UNITS 13 12 12 12 12 12 12 12 12 12 12 12 12 12	VOLTS 230 230 230 230 230	00000000000000000000000000000000000000	AMPS. 7.39 5.22 5.22 5.32	CIRC AT 15 15 15	AF 50 50 50 50 50	P 2 2 2	2~3.5 M 2~3.5 M 2~3.5 M 2~3.5 M	WIRES           M2         NHAN         NIRE	20 MM O PVC PIPE 20 MM Ø PVC PIPE 20 MM Ø PVC PIPE 20 MM Ø PVC PIPE	SCH CKT, NO, 1	EDULE OF LOADS AND LOAD DESCRIPTION UPP GROUND FLOOR IPP SECOND FLOOR TOTAL	COMPUT	ATION VOLT 230	MDP           S         POWE WATT           14,49           14,68           28,560	C 2 95 62 95 62 95 62 95 775	5. A 5 (3 5 ) (3	T A 5	F P 2 2		WIRES 25 MU2 11-MN with 19 MU2 11-MN 2016 25 MU2 11-MN 2016 19 MU2 11-MN 2016 19 MU2 11-MN 2016	No. of the second se	40 WH & PVC P 40 WH & PVC P	
8       CRUMP (F44)       10       130       2.00       8.64       20       10       2       2-3.5 MA2       10.0 CMA2       10.0 PMPC       20       10.0 CMA2       10.0 CMA2 <t< th=""><td>SCHE CKT. NO. 1 2 3 4 6</td><td>EDULE OF LOADS AND CR LOAD DESCRIPTION LOAT MIS LOAT MIS LOAT MIS LOAT MIS LOAT MIS LOAT MIS LOAT MIS</td><td>UNITS 13 12 12 12 12 12 12 12 12 12 12 12 12 12</td><td>VOLTS 230 230 235 235 239</td><td>COWER WATTS 1,200 1,200 1,200 1,200 1,200</td><td>AMPS. 7.39 5.22 5.22 5.22 5.22 5.22</td><td>CIRC AT 15 15 15 15</td><td>AF 50 50 50 50 50 50</td><td>P 2 2 2 2 2 2 2 2 2 2 2</td><td>2~3.5 M 2~3.5 M 2~3.5 M 2~3.5 M 2~3.5 M</td><td>WIRES           M2         REAN         RIRE           M2         REAN         RIRE</td><td>20 MM O PVC PIPE 20 MM Ø PVC PIPE</td><td>SCH CKT, NO, 1</td><td>EDULE OF LOADS AND LOAD DESCRIPTION UPP. IRRUND ALOOR IPP. SECOND ALOOR TOTAL COMPUTATION :</td><td>COMPUT</td><td>ATION VOLT 230</td><td>MDP     POWE     WATT     14,40     14,00     25,560 A     MAIN 1</td><td>R AMPS 62.95 62.95 62.95 175 175</td><td>S. A</td><td>I A</td><td>F P 1 2 2</td><td></td><td>WIRES 25 MU2 Trade an 14 MU2 Trade an 25 MU2 Trade an 25 MU2 Trade an 25 MU2 Trade an 25 MU2 Trade an SIZE OF WIRE</td><td>AND CONDU</td><td>40 ਸਮ ਕੱਸਨ ਸ 40 ਸਮ ਕੱਸਨ ਸ 40 ਸਮ ਕੱਸਨ ਸ</td><td></td></t<>	SCHE CKT. NO. 1 2 3 4 6	EDULE OF LOADS AND CR LOAD DESCRIPTION LOAT MIS LOAT MIS LOAT MIS LOAT MIS LOAT MIS LOAT MIS LOAT MIS	UNITS 13 12 12 12 12 12 12 12 12 12 12 12 12 12	VOLTS 230 230 235 235 239	COWER WATTS 1,200 1,200 1,200 1,200 1,200	AMPS. 7.39 5.22 5.22 5.22 5.22 5.22	CIRC AT 15 15 15 15	AF 50 50 50 50 50 50	P 2 2 2 2 2 2 2 2 2 2 2	2~3.5 M 2~3.5 M 2~3.5 M 2~3.5 M 2~3.5 M	WIRES           M2         REAN         RIRE	20 MM O PVC PIPE 20 MM Ø PVC PIPE	SCH CKT, NO, 1	EDULE OF LOADS AND LOAD DESCRIPTION UPP. IRRUND ALOOR IPP. SECOND ALOOR TOTAL COMPUTATION :	COMPUT	ATION VOLT 230	MDP     POWE     WATT     14,40     14,00     25,560 A     MAIN 1	R AMPS 62.95 62.95 62.95 175 175	S. A	I A	F P 1 2 2		WIRES 25 MU2 Trade an 14 MU2 Trade an 25 MU2 Trade an 25 MU2 Trade an 25 MU2 Trade an 25 MU2 Trade an SIZE OF WIRE	AND CONDU	40 ਸਮ ਕੱਸਨ ਸ 40 ਸਮ ਕੱਸਨ ਸ 40 ਸਮ ਕੱਸਨ ਸ	
$ \frac{10}{11}  CONVENDOC OUTLET & 8 & 230 & 1.460 & 8.60 & 30 & 50 & 2 & 2-3.5 MUZ TION HATE & 70 MU $\u03embed{sec: Pice Pice} \\ \frac{11}{12}  CONVENDOC OUTLET & 4 & 226 & 729 & 3.13 & 30 & 59 & 2 & 2-3.5 MUZ TION HATE & 20 MU $\u03embed{sec: Pice} \\ \frac{12}{12}  SPARE & & & & & & & & & & & & & & & & & & &$	SCHE CKT. NO. 1 2 3 4 6 6 7	EDULE OF LOADS AND CO LOAD DESCRIPTION LOAT MS LOAT MS LOAT MS LOAT MS LOAT MS LOAT MS	UNITS 13 12 12 12 12 12 12 12 15 12 12 15 12 12 15 12 12 15 12 15 12 15 12 15 15 15 15 15 15 15 15 15 15 15 15 15	VOLTS 230 230 235 239 239 239	20WER WATTS 1,200 1,200 1,200 1,200 1,200 500	AMPS. 7.39 5.22 5.22 5.22 5.22 5.22 5.22 5.22 2.61	CIRC AT 15 15 15 15 15 15	AF 50 50 50 50 50 50 50 50	P 2 2 2 2 2 2 2 2 2 2 2	2~3.5 M 2~3.5 M 2~3.5 M 2~3.5 M 2~3.5 M 2~3.5 M	WIRES           M2         REIN         RIRE	20 MM O PVC PIPE 20 MM Ø PVC PIPE 20 MM Ø PVC PIPE 20 MM Ø PVC PIPE 20 MM Ø PVC PIPE 23 MM Ø PVC PIPE 20 MM Ø PVC PIPE	SCH CKT, NO, 1	EDULE OF LOADS AND LOAD DESCRIPTION UPE IRROWN ALOAR IRR SKICHNE RUDAR TOTAL COMPUTATION : IT = 23,560 WATTS	COMPUT	ATION VOLT 230	MDP     POWE     WATT     14,40     14,00     25,560 A     MAIN 1	R AMPS 62.95 62.95 62.95 175 175	S. A	I A	F P 1 2 2		WIRES 10 MU2 Trade and 10 MU2 Trade and 25 MU2 Trade and 11 MU2 Here with SIZE OF WIRE USE : 2-80 M		40 NH & PVC P 40 NH & PVC P 40 NH & PVC P	
11       COMPLATION:       4       230       273       313       30       50       2       2-35       MAIL       20       MAIL       MAIL       MAIL       MAIL	SCHE CKT. NO. 1 2 3 4 6 6 7 8	EDULE OF LOADS AND CO LOAD DESCRIPTION LOAT 780 LOAT 780 LOAT 780 LOAT 780 LOAT 780 LOAT 780 LOAT 780 LOAT 780 CELMO FAN	UNITS 13 12 12 12 12 12 12 12 12 12 12 1 1 1 1	VOLTS 230 230 230 230 230 230 230 230	ACCESSION OF CONTRACTOR CONTRACTO	AMPS 7.38 5.22 5.22 5.22 5.22 5.22 2.61 6.85	CIRC AT 15 15 15 15 15 15 20	AF 59 59 59 50 50 50 50 50 50	P 2 2 2 2 2 2 2 2 2 2 2 2 2	2-35 M 2-35 M 2-35 M 2-35 M 2-35 M 2-35 M 2-35 M 2-35 M 2-35 M	WRES           M2         Redult Supp.           M3         Redult Supp.	20 MM O PVC PIPE 20 MM Ø PVC PIPE	SCH CKT, NO, 1	EDULE OF LOADS AND LOAD DESCRIPTION UPE GROWN ALOOR IPE SECOND FLOOR TOTAL COMPUTATION : IT = _23,500 WATTS _230 WOLTS	COMPUT	ATION VOLT 230	MDP     POWE     WATT     14,40     14,00     25,560 A     MAIN 1	R AMPS 62.95 62.95 62.95 175 175	S. A	I A	F P 1 2 2		WIRES 25 MU2 Trady and 19 MU2 trady and 20 MU2 Trady and 21 MU2 trady and SIZE OF WIRE, USE : 2-80 M 1-22 M		40 MM & PVC P 40 MM & PVC P 40 MM & PVC P 11 11 11 11 11 11 11 11 11 11 11 11 11	
I2     SPARE       TOTAL     14.080 SeNTS       COMPUTATION :     MAIN CIRCUIT BREAKER:       IT =     14.080 WATTS       USE : 125 AT, CB, 2P, 230V     USE : 2.38 MM <sup>2</sup> THHN WIRE       1:14 MM <sup>2</sup> THHN WIRE	SCHE CKT. NO. 1 2 3 4 5 6 7 8 9	EDULE OF LOADS AND CO LOAD DESCRIPTION LOAT MIS LOAT MIS LOAT MIS LOAT MIS LOAT MIS CELING FAN CELING FAN CELING FAN CELING FAN	UNITS 13 12 32 52 52 5 6 6 10 9	VCL18 230 230 230 230 230 230 230 230 230 230	ACCEPTION CONTRACTOR 1,200 1,200 1,200 1,200 1,200 1,200 1,200 1,200 1,000 2,000 1,520	AMPS. 7.39 5.22 5.22 5.22 5.22 2.61 6.95 8.69 8.69	CIRC AT 15 15 15 15 15 15 20 20 30	AF           50           50           50           50           50           50           50           50           50           50           50           50           50           50           50	P 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2-35 M 2-35 M 2-35 M 2-35 M 2-35 M 2-35 M 2-35 M 2-35 M 2-35 M	WRES           M2         Renk 2002	20 MM O PAC PIPE 20 MM Ø PAC PIPE	SCH CKT, NO, 1	EDULE OF LOADS AND LOAD DESCRIPTION UPE GROWN ALOOR IPE SECOND FLOOR TOTAL COMPUTATION : IT = _23,500 WATTS _230 WOLTS	COMPUT	ATION VOLT 230	MDP     POWE     WATT     14,40     14,00     25,560 A     MAIN 1	R AMPS 62.95 62.95 62.95 175 175	S. A	I A	F P 1 2 2		WIRES 25 MU2 Trady and 19 MU2 trady and 20 MU2 Trady and 21 MU2 trady and SIZE OF WIRE, USE : 2-80 M 1-22 M		40 MM & PVC P 40 MM & PVC P 40 MM & PVC P 11 11 11 11 11 11 11 11 11 11 11 11 11	
TOTAL     14.080 (sents)       COMPUTATION :     MAIN CIRCUIT BREAKER:     Size of wire and conduit:       IT =     14.080 WATTS     USE : 125 AT, CB, 2P, 230V     USE : 2.38 MAI2 THAN WIRE       IT =     230 VOLTS     1.14 MM2 THAN WIRE	SCHE CKT. NO. 1 2 3 4 6 6 7 8 9 10	EDULE OF LOADS AND CO LOAD DESCRIPTION LOATING LOATING LOATING LOATING LOATING LOATING CELING FAN GELING FAN GELING FAN CERING FAN CERING FAN CERING FAN	UNITS 13 12 12 12 12 12 12 12 12 12 14 10 1 9 8	VCL18 230 230 230 230 230 230 230 230 230 230	COWER         COWER           1,700         1,200           1,200         1,200           1,200         0,000           1,200         0,000           1,200         0,000           1,200         0,000           1,200         0,000           1,200         0,000           1,200         0,000           1,200         0,000           1,200         0,000           1,200         0,000           1,200         0,000           1,200         0,000	AMPS. 7,39 5,22 5,22 5,22 5,22 5,22 5,22 2,61 6,95 8,69 8,69 8,69 8,69	CIRC AT 15 15 15 15 15 15 20 20 30 30	AF           50           50           50           50           50           50           50           50           50           50           50           50           50           50           50           50           50           50	P 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2-35 M 2-35 M	WRES           M2         Hell MIRE	20 MM O PVC PIPE 20 MM Ø PVC PIPE	SCH CKT, NO, 1	EDULE OF LOADS AND LOAD DESCRIPTION UPE GROWN ALOOR IPE SECOND FLOOR TOTAL COMPUTATION : IT = _23,500 WATTS _230 WOLTS	COMPUT	ATION VOLT 230	MDP     POWE     WATT     14,40     14,00     25,560 A     MAIN 1	R AMPS 62.95 62.95 62.95 175 175	S. A	I A	F P 1 2 2		WIRES 25 MU2 Trady and 19 MU2 trady and 20 MU2 Trady and 21 MU2 trady and SIZE OF WIRE, USE : 2-80 M 1-22 M		40 MM & PVC P 40 MM & PVC P 40 MM & PVC P 11 11 11 11 11 11 11 11 11 11 11 11 11	
COMPUTATION :     MAIN CIRCUIT BREAKER:     SIZE OF WIRE AND CONDUIT:       IT = 14,080 WATTS     USE : 125 AT, CB, 2P, 230V     USE : 2.38 MM <sup>2</sup> THAN WIRE       230 VOLTS     1.14 MM <sup>2</sup> THAN WIRE	SCHE CKT. NO. 1 2 3 4 5 6 6 7 7 8 9 10 11	EDULE OF LOADS AND CO LOAD DESCRIPTION LOAT WE LOAT WE LOAT WE LOAT WE LOAT WE LOAT WE CELINE FAN CELINE FAN CELINE FAN CELINE FAN CELINE FAN CELINE FAN CELINE FAN CELINE FAN CELINE FAN CELINE FAN	UNITS 13 12 12 12 12 12 12 12 12 12 14 10 1 9 8	VCL18 230 230 230 230 230 230 230 230 230 230	COWER         COWER           1,700         1,200           1,200         1,200           1,200         0,000           1,200         0,000           1,200         0,000           1,200         0,000           1,200         0,000           1,200         0,000           1,200         0,000           1,200         0,000           1,200         0,000           1,200         0,000           1,200         0,000           1,200         0,000	AMPS. 7,39 5,22 5,22 5,22 5,22 5,22 5,22 2,61 6,95 8,69 8,69 8,69 8,69	CIRC AT 15 15 15 15 15 15 20 20 30 30	AF           50           50           50           50           50           50           50           50           50           50           50           50           50           50           50           50           50           50	P 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2-35 M 2-35 M	WRES           M2         Hell MIRE	20 MM O PVC PIPE 20 MM Ø PVC PIPE	SCH CKT, NO, 1	EDULE OF LOADS AND LOAD DESCRIPTION UPE GROWN ALOOR IPE SECOND FLOOR TOTAL COMPUTATION : IT = _23,500 WATTS _230 WOLTS	COMPUT	ATION VOLT 230 230	MDP     POWE     WATT     14,40     14,00     25,560 A     MAIN 1	R AMPS 62.95 62.95 62.95 175 175	S. A	I A	F P 1 2 2		WIRES 25 MU2 Trady and 19 MU2 trady and 25 MU2 Trady and 27 MU2 trady and 27 MU2 trady and 3 MU2 trady and SIZE OF WIRE, USE : 2-80 M 1-22 M		40 MM & PVC P 40 MM & PVC P 40 MM & PVC P 11 11 11 11 11 11 11 11 11 11 11 11 11	
IT = 14,080 WATTS USE : 125 AT, CB, 2P, 230V USE : 2,38 MM <sup>2</sup> THINN WIRE 230 VOLTS 1.14 MM <sup>2</sup> THINN WIRE	SCHE CKT. NO. 1 2 3 4 5 6 6 7 7 8 9 10 11	EDULE OF LOADS AND CO LOAD DESCRIPTION LOAT WE LOAT WE LOAT WE LOAT WE LOAT WE LOAT WE CELINE FAN CELINE FAN CELINE FAN CELINE FAN CELINE FAN CELINE FAN CELINE FAN CELINE FAN CELINE FAN CELINE FAN	UNITS 13 12 12 12 12 12 12 12 12 12 14 10 1 9 8	VCL18 230 230 230 230 230 230 230 230 230 230	COWER         COWER           1,700         1,200           1,200         1,200           1,200         0,000           1,200         0,000           1,200         0,000           1,200         0,000           1,200         0,000           1,200         0,000           1,200         0,000           1,200         0,000           1,200         0,000           1,200         0,000           1,200         0,000           1,200         0,000	AMPS. 7,39 5,22 5,22 5,22 5,22 5,22 5,22 2,61 6,95 8,69 8,69 8,69 8,69	CIRC AT 15 15 15 15 15 15 20 20 30 30	AF           50           50           50           50           50           50           50           50           50           50           50           50           50           50           50           50           50           50	P 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2-35 M 2-35 M	WRES           M2         Hell MIRE	20 MM O PVC PIPE 20 MM Ø PVC PIPE	SCH CKT, NO, 1	EDULE OF LOADS AND LOAD DESCRIPTION UPE GROWN ALOOR IPE SECOND FLOOR TOTAL COMPUTATION : IT = _23,500 WATTS _230 WOLTS	COMPUT	ATION VOLT 230 230	MDP     POWE     WATT     14,40     14,00     25,560 A     MAIN 1	R AMPS 62.95 62.95 62.95 175 175	S. A	I A	F P 1 2 2		WIRES 25 MU2 Trady and 19 MU2 trady and 25 MU2 Trady and 27 MU2 trady and 27 MU2 trady and 3 MU2 trady and SIZE OF WIRE, USE : 2-80 M 1-22 M		40 MM & PVC P 40 MM & PVC P 40 MM & PVC P 11 11 11 11 11 11 11 11 11 11 11 11 11	
IT = 14,080 WATTS USE : 125 AT, CB, 2P, 230V USE : 2,38 MM <sup>2</sup> THINN WIRE 230 VOLTS 1.14 MM <sup>2</sup> THINN WIRE	SCHE CKT. NO. 1 2 3 4 5 6 6 7 7 8 9 10 11	EDULE OF LOADS AND CO LOAD DESCRIPTION LOAT MIS LOAT MIS LOAT MIS LOAT MIS LOAT MIS LOAT MIS CELIMIC FAIN CELIMIC FAIN	UNITS 13 12 12 12 12 12 12 12 12 12 14 10 1 9 8	VOLTS 230 230 230 239 239 239 230 230 230 230 230 230	WATTS           1,200           1,200           1,200           1,200           1,200           1,200           1,200           500           1,200           500           1,200           500           1,200           500           1,200           500           1,200           500           1,200           500           1,200           500           1,200           500           1,200           500           1,200           500           1,200           1,400           723	AMPS 7.39 5.22 5.22 5.22 2.61 6.95 8.69 8.69 8.69 8.69 8.69 3.13	CIRC AT 15 15 15 15 15 15 20 20 30 30	AF           50           50           50           50           50           50           50           50           50           50           50           50           50           50           50           50           50           50	P 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2-35 M 2-35 M	WRES           M2         Refit         MRE	20 MM O PVC PIPE 20 MM Ø PVC PIPE	SCH CKT, NO, 1	EDULE OF LOADS AND LOAD DESCRIPTION UPE GROWN ALOOR IPE SECOND FLOOR TOTAL COMPUTATION : IT =	COMPUT	ATION VOLT 230 230	MDP     POWE     WATT     14,40     14,00     25,560 A     MAIN 1	R AMPS 62.95 62.95 62.95 175 175	S. A	I A	F P 1 2 2		WIRES 25 MU2 Trady and 19 MU2 trady and 25 MU2 Trady and 27 MU2 trady and 27 MU2 trady and 3 MU2 trady and SIZE OF WIRE, USE : 2-80 M 1-22 M		40 MM & PVC P 40 MM & PVC P 40 MM & PVC P 11 11 11 11 11 11 11 11 11 11 11 11 11	
230 VOLIS 1-14 MM <sup>4</sup> THHN WIRE	SCHE CKT. NO. 1 2 3 4 5 6 6 7 7 8 9 10 11	EDULE OF LOADS AND CH LOAD DESCRIPTION LOAT WE LOAT WE LOAT WE LOAT WE LOAT WE LOAT WE LOAT WE CELWE FAN CELWE FAN C	UNITS 13 12 12 12 12 12 12 12 12 12 14 10 1 9 8	VOLTS 230 230 230 230 230 230 230 230 230 230	WATTS 1,200 1,200 1,200 1,200 600 1,200 600 1,005 2,005 1,605 1,605 2,005 1,620 1,620 1,446 725 82, whttp: 80, whitp:	AMPS. 7.39 5.22 5.22 5.22 5.22 2.61 6.95 8.69 8.69 8.69 8.15 9.315 9.	CIRC AT 15 15 15 15 15 20 20 20 30 30 30 30	AF           50           50           50           50           50           50           50           50           50           50           50           50           50           50           50           50           50           50	P 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2~35 M 2~35 M	WIRES           M2 Brefit Amer.           M3 Brefit Amer.           M3 Brefit Amer.           M3 Brefit Amer.           M3 Brefit Amer.	20 MM Ο PVC PIPE 20 MM Ø PVC PIPE	SCH CKT, NO, 1	EDULE OF LOADS AND LOAD DESCRIPTION UPE GROWN ALOOR IPE SECOND FLOOR TOTAL COMPUTATION : IT =	COMPUT	ATION VOLT 230 230	MDP     POWE     WATT     14,40     14,00     25,560 A     MAIN 1	R AMPS 62.95 62.95 62.95 175 175	S. A	I A	F P 1 2 2		WIRES 25 MU2 Trady and 19 MU2 trady and 25 MU2 Trady and 27 MU2 trady and 27 MU2 trady and 3 MU2 trady and SIZE OF WIRE, USE : 2-80 M 1-22 M		40 MM & PVC P 40 MM & PVC P 40 MM & PVC P 11 11 11 11 11 11 11 11 11 11 11 11 11	
IT = 61.22 AMPERES 40 MM O PVC PIPE	SCHE CKT. NO. 1 2 3 4 5 6 6 7 7 8 9 10 11	EDULE OF LOADS AND CO LOAD DESCRIPTION LOAT MIG LOAT MIG LOAT MIG LOAT MIG LOAT MIG LOAT MIG CELING TAN CELING TAN	UNITS 13 12 12 12 12 12 12 12 12 12 14 10 1 9 8	VOLTS 230 235 235 236 236 230 230 230 230 230 230 230 236 230 236 230 236 230 236 230 236 236	COWER WATTS 1,200	AMPS 7.39 5.22 5.22 5.22 5.22 2.61 6.95 8.69 8.69 8.69 8.69 8.69 8.69 8.69 8.69	CIRC AT 15 15 15 15 20 20 30 30 30 30 30 30	SQ         SQ<	P 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2~35 M 2~35 M	WIRES           M2 Breidt 2002           M2 Breidt 2003           M2 Breidt 2003           M2 Breidt 2004	20 MM O PVC PIFE 20 MM ダ PvC PIFE	SCH CKT, NO, 1	EDULE OF LOADS AND LOAD DESCRIPTION UPE GROWN ALOOR IPE SECOND FLOOR TOTAL COMPUTATION : IT =	COMPUT	ATION VOLT 230 230	MDP     POWE     WATT     14,40     14,00     25,560 A     MAIN 1	R AMPS 62.95 62.95 62.95 175 175	S. A	I A	F P 1 2 2		WIRES 25 MU2 Trady and 19 MU2 trady and 25 MU2 Trady and 27 MU2 trady and 27 MU2 trady and 3 MU2 trady and SIZE OF WIRE, USE : 2-80 M 1-22 M		40 MM & PVC P 40 MM & PVC P 40 MM & PVC P 11 11 11 11 11 11 11 11 11 11 11 11 11	
	SCHE CKT. NO. 1 2 3 4 5 6 6 7 7 8 9 10 11	EDULE OF LOADS AND CI LOAD DESCRIPTION LOAT WE LOAT WE LOAT WE LOAT WE LOAT WE LOAT WE LOAT WE LOAT WE LOAT WE CELING FAN CELING FAN FAN FAN FAN FAN FAN FAN FAN FAN FAN	UNITS 13 12 12 12 12 12 12 12 12 12 14 10 1 9 8	VOLTS 230 235 235 236 236 230 230 230 230 230 230 230 236 230 236 230 236 230 236 230 236 236	COWER WATTS 1,200	AMPS 7.39 5.22 5.22 5.22 5.22 2.61 6.95 8.69 8.69 8.69 8.69 8.69 8.69 8.69 8.69	CIRC AT 15 15 15 15 20 20 30 30 30 30 30 30	SQ         SQ<	P 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2~35 M 2~35 M	WIRES           M2 Brieff Amer           M2 Brieff Amer           M2 Brieff Amer           M2 Brieff Amer           M2 Drieff Amer           M3 Drieff Amer           M4 Drieff Amer           M4 M42 Trieff	20 MM 0 PVC PIFE 20 MM ダ PvC PIFE	SCH CKT, NO, 1	EDULE OF LOADS AND LOAD DESCRIPTION UPE GROWN ALOOR IPE SECOND FLOOR TOTAL COMPUTATION : IT =	COMPUT	ATION VOLT 230 230	MDP     POWE     WATT     14,40     14,00     25,560 A     MAIN 1	R AMPS 62.95 62.95 62.95 175 175	S. A	I A	F P 1 2 2		WIRES 25 MU2 Trady and 19 MU2 trady and 25 MU2 Trady and 27 MU2 trady and 27 MU2 trady and 3 MU2 trady and SIZE OF WIRE, USE : 2-80 M 1-22 M		40 MM & PVC P 40 MM & PVC P 40 MM & PVC P 11 11 11 11 11 11 11 11 11 11 11 11 11	
	SCHE CKT. NO. 1 2 3 4 5 6 6 7 7 8 9 10 11	EDULE OF LOADS AND CI LOAD DESCRIPTION LOAT NO LOAT NO LOAT NO LOAT NO LOAT NO LOAT NO CELING FAN GELING FAN G	UNITS 13 12 12 12 12 12 12 12 12 12 14 10 1 9 8	VOLTS 230 235 235 236 236 230 230 230 230 230 230 230 236 230 236 230 236 230 236 230 236 236	COWER WATTS 1,200	AMPS 7.39 5.22 5.22 5.22 5.22 2.61 6.95 8.69 8.69 8.69 8.69 8.69 8.69 8.69 8.69	CIRC AT 15 15 15 15 20 20 30 30 30 30 30 30	SQ         SQ<	P 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2~35 M 2~35 M	WIRES           M2 Brieff Amer           M2 Brieff Amer           M2 Brieff Amer           M2 Brieff Amer           M2 Drieff Amer           M3 Drieff Amer           M4 Drieff Amer           M4 M42 Trieff	20 MM 0 PVC PIFE 20 MM ダ PvC PIFE	SCH CKT, NO, 1	EDULE OF LOADS AND LOAD DESCRIPTION UPE GROWN ALOOR IPE SECOND FLOOR TOTAL COMPUTATION : IT =	COMPUT	ATION VOLT 230 230	MDP     POWE     WATT     14,40     14,00     25,560 A     MAIN 1	R AMPS 62.95 62.95 62.95 175 175	S. A	I A	F P 1 2 2		WIRES 25 MU2 Trady and 19 MU2 trady and 25 MU2 Trady and 27 MU2 trady and 27 MU2 trady and 3 MU2 trady and SIZE OF WIRE, USE : 2-80 M 1-22 M		40 MM & PVC P 40 MM & PVC P 40 MM & PVC P 11 11 11 11 11 11 11 11 11 11 11 11 11	
	SCHE CKT. NO. 1 2 3 4 5 6 6 7 7 8 9 10 11	EDULE OF LOADS AND CI LOAD DESCRIPTION LOAT NO LOAT NO LOAT NO LOAT NO LOAT NO LOAT NO CELING FAN GELING FAN G	UNITS 13 12 12 12 12 12 12 12 12 12 14 10 1 9 8	VOLTS 230 235 235 236 236 230 230 230 230 230 230 230 236 230 236 230 236 230 236 230 236 236	COWER WATTS 1,200	AMPS 7.39 5.22 5.22 5.22 5.22 2.61 6.95 8.69 8.69 8.69 8.69 8.69 8.69 8.69 8.69	CIRC AT 15 15 15 15 20 20 30 30 30 30 30 30	SQ         SQ<	P 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2~35 M 2~35 M	WIRES           M2 Brieff Amer           M2 Brieff Amer           M2 Brieff Amer           M2 Brieff Amer           M2 Drieff Amer           M3 Drieff Amer           M4 Drieff Amer           M4 M42 Trieff	20 MM 0 PVC PIFE 20 MM ダ PvC PIFE	SCH CKT, NO, 1	EDULE OF LOADS AND LOAD DESCRIPTION UPE GROWN ALOOR IPE SECOND FLOOR TOTAL COMPUTATION : IT =	COMPUT	ATION VOLT 230 230	MDP     POWE     WATT     14,40     14,00     25,560 A     MAIN 1	R AMPS 62.95 62.95 62.95 175 175	S. A	I A	F P 1 2 2		WIRES 25 MU2 Trady and 19 MU2 trady and 25 MU2 Trady and 27 MU2 trady and 27 MU2 trady and 3 MU2 trady and SIZE OF WIRE, USE : 2-80 M 1-22 M		40 MM & PVC P 40 MM & PVC P 40 MM & PVC P 11 11 11 11 11 11 11 11 11 11 11 11 11	
	SCHE CKT. NO. 1 2 3 4 5 6 6 7 7 8 9 10 11	EDULE OF LOADS AND CI LOAD DESCRIPTION LOAT NO LOAT NO LOAT NO LOAT NO LOAT NO LOAT NO CELING FAN GELING FAN G	UNITS 13 12 12 12 12 12 12 12 12 12 14 10 1 9 8	VOLTS 230 235 235 236 236 230 230 230 230 230 230 230 236 230 236 230 236 230 236 230 236 236	COWER WATTS 1,200	AMPS 7.39 5.22 5.22 5.22 5.22 2.61 6.95 8.69 8.69 8.69 8.69 8.69 8.69 8.69 8.69	CIRC AT 15 15 15 15 20 20 30 30 30 30 30 30	SQ         SQ<	P 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2~35 M 2~35 M	WIRES           M2 Brieff Amer           M2 Brieff Amer           M2 Brieff Amer           M2 Brieff Amer           M2 Drieff Amer           M3 Drieff Amer           M4 Drieff Amer           M4 M42 Trieff	20 MM 0 PVC PIFE 20 MM ダ PvC PIFE	SCH CKT, NO, 1	EDULE OF LOADS AND LOAD DESCRIPTION UPE GROWN ALOOR IPE SECOND FLOOR TOTAL COMPUTATION : IT =	COMPUT	ATION VOLT 230 230	MDP     POWE     WATT     14,40     14,00     25,560 A     MAIN 1	R AMPS 62.95 62.95 62.95 175 175	S. A	I A	F P 1 2 2		WIRES 25 MU2 Trady and 19 MU2 trady and 25 MU2 Trady and 27 MU2 trady and 27 MU2 trady and 3 MU2 trady and SIZE OF WIRE, USE : 2-80 M 1-22 M		40 MM & PVC P 40 MM & PVC P 40 MM & PVC P 11 11 11 11 11 11 11 11 11 11 11 11 11	
	SCHE CKT. NO. 1 2 3 4 5 6 6 7 8 9 10 11 11 12	EDULE OF LOADS AND CI           LOAD DESCRIPTION           LOAT MG           CELING FAN           CENTER           SPARE           TO TAL           COMPUTATION :           IT = 14,060 WATTS           IT = 61,22 AMPERES	UNITS 15 15 12 12 12 5 5 8 10 9 4 4	VCL18 230 230 230 230 230 230 230 230	2000 Control C	AMPS, - 7.39 5.22 5.22 5.22 2.61 6.95 8.69 8.69 8.69 8.69 8.69 8.69 8.69 8.69	CIRK AT 15 15 15 15 15 15 15 20 20 20 30 30 30 30 30 30 30 20 8 8 8 9 20 20 20 20 20 20 20 20 20 20 20 20 20	UIT BREA AF 50 50 50 50 50 50 50 50 50 50	P 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2-35 M 2-35 M	WIRES           N2 BHH ARE           N3 BHH ARE           N4 BHH ARE           N4 BHH ARE           N1 BHE           N1 B	20 MM 0 PVC PIFE 20 MM ダ PvC PIFE	SCH CKT, NO, 1	EDULE OF LOADS AND LOAD DESCRIPTION UPE GROWN ALOOR IPE SECOND FLOOR TOTAL COMPUTATION : IT =	COMPUT	ATION VOLT 230 230	MDP     POWE     WATT     14,40     14,00     25,560 A     MAIN 1	R AMPS 62.95 62.95 62.95 175 175	S. A	I A	F P 1 2 2		WIRES 25 MU2 Trady and 19 MU2 trady and 25 MU2 Trady and 27 MU2 trady and 27 MU2 trady and 3 MU2 trady and SIZE OF WIRE, USE : 2-80 M 1-22 M		40 MM & PVC P 40 MM & PVC P 40 MM & PVC P 11 11 11 11 11 11 11 11 11 11 11 11 11	
EDULE OF LOADS AND COMPUTATIONS : (LINE - 1)	SCHE CKT. NO. 1 2 3 4 5 6 6 7 8 9 10 11 11 12	EDULE OF LOADS AND CI           LOAD DESCRIPTION           LOAT MG           CELING FAN           CENTER           SPARE           TO TAL           COMPUTATION :           IT = 14,060 WATTS           IT = 61,22 AMPERES	UNITS 15 15 12 12 12 5 5 8 10 9 4 4	VCL18 230 230 230 230 230 230 230 230	2000 Control C	AMPS, - 7.39 5.22 5.22 5.22 2.61 6.95 8.69 8.69 8.69 8.69 8.69 8.69 8.69 8.69	CIRK AT 15 15 15 15 15 15 15 20 20 20 30 30 30 30 30 30 30 20 8 8 8 9 20 20 20 20 20 20 20 20 20 20 20 20 20	UIT BREA AF 50 50 50 50 50 50 50 50 50 50	P 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2-35 M 2-35 M	WIRES           M2 Breidt 2002           M2 Breidt Amer           M3 Breidt Amer	20 MM 0 PVC PIFE 20 MM ダ PvC PIFE	SCH CKT, NO, 1	EDULE OF LOADS AND LOAD DESCRIPTION UPE GROWN ALOOR IPE SECOND FLOOR TOTAL COMPUTATION : IT =	COMPUT	ATION VOLT 230 230	MDP     POWE     WATT     14,40     14,00     25,560 A     MAIN 1	R AMPS 62.95 62.95 62.95 175 175	S. A	I A	F P 1 2 2		WIRES 25 MU2 Trady and 19 MU2 trady and 25 MU2 Trady and 27 MU2 trady and 27 MU2 trady and 3 MU2 trady and SIZE OF WIRE, USE : 2-80 M 1-22 M		40 MM & PVC P 40 MM & PVC P 40 MM & PVC P 11 11 11 11 11 11 11 11 11 11 11 11 11	
	SCHE CKT. NO. 1 2 3 4 5 6 6 7 8 9 10 11 11 12	EDULE OF LOADS AND CI           LOAD DESCRIPTION           LOAT MG           CELING FAN           CELING FAN           CELING FAN           CENING FOULT           CONVENTION COULT           COMPUTATION :           IT = 14,080 WATTS           IT = 61.22 AMPERES	UNITS 13 12 12 12 12 5 8 10 0 8 4 - - - - - - - - - - - - -	VCL18 230 230 230 230 230 230 230 230 230 14 14	1,200 1,200	AMPS, - 7.39 5.22 5.22 5.22 2.61 6.95 8.69 8.69 8.69 8.69 8.69 8.69 8.69 8.69	CIRK AT 15 15 15 15 15 15 15 20 20 20 30 30 30 30 30 30 30 20 8 8 8 9 20 20 20 20 20 20 20 20 20 20 20 20 20	UIT BREA AF 50 50 50 50 50 50 50 50 50 50	P 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2-35 M 2-35 M	WIRES           M2 Breidt 2002           M2 Breidt Amer           M3 Breidt Amer	20 MM 0 PVC PIPE 20 MM \$ PvC PIPE \$ PvC PIPE 2	SCH CKT, NO, 1	EDULE OF LOADS AND LOAD DESCRIPTION (PP GROUND ALGOR TO TAL COMPUTATION : IT = 23,600 WATTS 230 VOLTS IT = 124,17 AMPERES	COMPUT	ATION VOLT 230 230	MDP     POWE     WATT     14,40     14,00     25,560 A     MAIN 1	AMPS 62.95 62.35 1175 200 AT,	5 A 5 (1) 6 15 8REAK 7, CB, 2	I A	F P 1 2 2		WIRES 25 MU2 Trady and 19 MU2 trady and 25 MU2 Trady and 27 MU2 trady and 27 MU2 trady and 3 MU2 trady and SIZE OF WIRE, USE : 2-80 M 1-22 M	AND CONDU IM <sup>2</sup> THHN IM <sup>2</sup> THHN 10 IMC PIF	40 (JU) & P-C P 40 (JU) & P-C P JIT: WIRE I WIRE PE	
Republika ng Pilipinas I Ungredi ng Cilipinas PROPOSED UPGRADING OF ELECTRICAL SYSTEM Life Julianzo II (Julianzo III) (Julia	SCHE CKT. NO. 1 2 3 4 5 6 7 7 8 9 10 10 11 11 12 12	EDULE OF LOADS AND CI LOAD DESCRIPTION LOAT WE LOAT WE LOAT WE LOAT WE LOAT WE LOAT WE CELWE FAN SELWE FAN	UNITS 15 15 12 12 12 12 12 12 12 12 12 12 10 8 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	VCLTS 330 230 330 230 230 230 230 230 230 230	2000 1,200 1,200 1,200 1,200 1,200 1,200 1,200 1,200 8,000 1,200 8,000 1,200 8,000 1,400 7,20 8,000 1,400 7,20 8,000 1,400 7,20 8,000 1,400 7,20 8,000 1,400 1,400 1,400 1,200 8,000 1,200	AMPS. 7.39 5.22	CIRC AT 15 15 15 15 20 20 30 30 30 30 30 30 30 20 20 30 30 30 30 20 20 30 30 30 20 20 30 30 20 20 30 30 20 20 30 30 20 20 30 30 20 20 20 20 30 20 20 20 20 20 20 20 20 20 20 20 20 20	UIT BREA AF 50 50 50 50 50 50 50 50 50 50	P 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2-35 M 2-35 M 2-	WIRES           N2 Brefit Zane;           NA Brefit Zane;	20 MM 0 PVC PIPE 20 MM \$ PvC PIPE \$ PvC PIPE 2	SCH CKT, NO, 1	EDULE OF LOADS AND LOAD DESCRIPTION (PP GROUND ALGOR TO TAL COMPUTATION : IT = 23,600 WATTS 230 VOLTS IT = 124,17 AMPERES	COMPUT	ATION VOLT 230 230	MDP     POWE     WATT     14,40     14,00     25,560 A     MAIN 1	AMPS 62.95 62.35 1175 200 AT,	5 A 5 (1) 6 15 8REAK 7, CB, 2	I A	F P 1 2 2		WIRES 25 MU2 Trady and 19 MU2 trady and 25 MU2 Trady and 27 MU2 trady and 27 MU2 trady and 3 MU2 trady and SIZE OF WIRE, USE : 2-80 M 1-22 M	AND CONDU IM <sup>2</sup> THHN IM <sup>2</sup> THHN 10 IMC PIF	40 IAN & PCC P 40 IAN & PCC P JIT: WIRE WIRE PE	296

#### PIMENTEL BUILDING ( 2 STOREY, 10 CLASSROOMS ):

SCHEDULE OF LOADS AND COMPUTATION: LPP UNITS VOLTS POWER AMPS. CIRCUIT BREAKER SIZE OF CKT. LOAD DESCRIPTION AT AF P WIRES CONDUIT 1 11 230 1,100 4,78 15 50 2-35 UNE THEN WRE 20 MM 0 PVC PIPE 2 12 230 1,200 5.21 15 55 2 . LIGHTING 2-35 MU2 THEN WRE 20 MM & PVC PIPE 3 LIGHTING 12 230 1,200 5.21 15 50 2 2-3.5 MH2 THHN WARE 20 MM & PVC PIPE 4 LIGHTING ő 230 630 2.61 75 50 2 2-15 MM2 THEN WHE 2 MM & PVC PIPE 
 900
 3.91
 15
 50
 2

 1,200
 5,21
 15
 50
 2
 5 LIGHTING 9 230 2-3.5 MM2 THEEN SARE 20 MM ∮ PVC PIPE 6 LIGHTING 12 230 2-3.5 MM2 THIN WRE 20 MM & EVC PIPE 12 LIGHTING 50 2 7 1,200 5.21 15 20 MM & PVC PIPE 2-3.5 MM2 THEY WRE 
 6
 230
 650
 2;61
 15
 vir

 10
 230
 2,000
 8:69
 26
 50
 1

 10
 230
 2,000
 8:59
 20
 50
 2

 10
 230
 2,050
 8:59
 20
 50
 2

 5
 200
 9:54
 3:91
 20
 50
 2

 4
 9:36
 1,286
 5:48
 30
 50
 2
 8 LIGHTING 2-3.5 RM2 THEN SHIE 20 MM # PVC PIPE 9 CEILING FAN 2-3.5 MM2 THHEE WIRE 20 NM & PVC PIPE 10 CELLING FAIL 2-35 MM2 THHN WRE 2-35 MM2 THHN WRE 20 MM & PVC PIPE 11 CONVENENCE OUTLET ZO MM \$ PVC PIPE 2-35 MMZ THEN WRE 12 CONVENIENCE OUTLET 20 MM & PVC FIPE 2-3.5 MM2 THHN HERE 13 CONVERSE DUTLET 5 530 966 3,91 33 50 2 50 2 20 MM & PVC PIPE CONVENIENCE DUTLET 230 1,260 2-35 MAG THAN WAR 14 2.48 50 10 MM & PVC PIPE TOTAL 16,320 WATE COMPUTATION MAIN CIRCUIT BREAKER: SIZE OF WIRE AND CONDUIT: USE : 125 AT, CB, 2P, 230 V IT = 16,320 WATTS 230 VOLTS USE : 2-38 MM<sup>2</sup> THHN WIRE 1-14 MM<sup>2</sup> THHN WIRE IT = 70.95 AMPERES 40 MM Ø IMC PIPE

# SCHEDULE OF LOADS AND COMPUTATIONS : ( LINE - 1 )

CKT.	LOAD DESCRIPTION	UNITS	VOLTS	POWER	AMPS.	CIR	UIT BREA	AKER	SIZE OF	
NO.		Onito	- OLIO	WATTS	Dame: 44	AT	AF	P	WIRES	CONDUIT
1	ABCON.		230	2,760	12.03	30	30	2	2-5.5 ASM2 THEON WIRE 1-3.5 UR2 THEON WIRE	20 MH 0 PVC PIE
2	AIECON		232	2.760	12.00	70	50	2	2-5.5 MM2 THEN WIRE	20 KM & PVC PIPI
3	AIRCON.		235	1,840	8.00	20	36	2	2-5.5 Mbd2 THEM WRE	20 MM # PNC PIPE
4	ARCON		230	1,840	6.00	30	50	2	2 - 5.5 MM2 TUPA with - 1. 095 THE SHE 2 - 5.5 MM2 THEN SHE - 3.5 MM2 THEN WITH 2 5.5 MM2 THEN WITH 2 5.5 MM2 THEN WITH - 5.5 MM2 THEN WITH	35 MM & PXC PIPI
5	ARCON		230	1,840	8,00	30	30	Z	2 5.5 M02 1994 985 1-3.5 M02 1998 #RC	20 MM \$ PVC PIP
-+	TOTAL		9	1980 WATT	5					
	COMPUTATION : π = 11,040 WATTS 230 VOLTS π = 46.00 AMPERES			MAIN CIR USE : 10			30V		SIZE OF WIRE AND CO USE : 2-30 MM <sup>2</sup> TH 1-14 MM <sup>2</sup> TH 32 MM O PV	HN WIRE HN WIRE GROUND

CRCUID FLOOR IPP         210         9,850         42,95         70         100         2         27,25         100         71         210         71         100         2         27,25         100         71         100         71         100         71 <th>KT.</th> <th>LOAD DESCRIPTION</th> <th>UNITS</th> <th>VOLTS</th> <th>POWER</th> <th>AMPS.</th> <th>in the second</th> <th>CUIT BRE</th> <th>2.000</th> <th>SIZE OF</th> <th>1</th>	KT.	LOAD DESCRIPTION	UNITS	VOLTS	POWER	AMPS.	in the second	CUIT BRE	2.000	SIZE OF	1
ARICON         230         11,040         46,00         100         2         2,30         UM2 (H-R) system         57 MH /           TOTAL         50,800         #ARTS			192 Materi	0.000.0000			AT	AF	P	WIRES	CONDUIT
ARICON         230         11,040         46,00         100         2         2,30         UM2 (H-R) system         57 MH /           TOTAL         50,800         #ARTS	1				210202					2-22 UV2 THEN HIRE 1-5.5 MM2 THEN SIRE	32 MM & PVC PIP
TOTAL SUBSOL PARTS COMPUTATION : MAIN CIRCUIT BREAKER: SIZE OF WIRE AND CONDUIT:	2					and provident division				2-22 RM2 THEN MRE 1-55 MA2 THUN ARE	32 MM ∯ PVC PIP
COMPUTATION : MAIN CIRCUIT BREAKER: SIZE OF WIRE AND CONDUIT:	3	ARCON		250	(1,040	48.00	100	108	12	2-30, MM2 THEM WIRE 1-14 MM2 THEM SIRE	52 MH & PVC PIP
	+	TOTAL		5	1.800 P.MT	\$		1			
IT         = 30,800 WATTS         USE : 200 AT, CB, 2P, 230 V         USE : 2.80 MM <sup>2</sup> / <sub>2</sub> THHN WIRE           230 VOLTS         1-22 MM         THHN WIRE GR           IT         = 133,85 AMPERES         50 MM Ø IMC PIPE		T = - 30,800 WATTS						!30V		USE : 2-80 MM <sup>2</sup> TH 1-22 MM <sup>2</sup> TH	HN WIRE IHN WIRE GROUND

#### OLD ADMIN. BUILDING ( 2 STOREY, 8 CLASSROOMS ):

CKT. NO.	LOAD DESCRIPTION	UNITS	VOLTS	POWER	AMPS.	CIR	CUIT BREA	AKER	SIZE OF	
NO.	LOND DECOMPTION	Units	VOLIS	WATTS	AMP G.	AT	AF	P	WIRES	CONDUIT
1	_IGHTING	6	230	600	2.61	15	50	.2	2-3.5 MU2 1444 WIRE	20 MM # PVC PPE
2	.500045	16	230	1,600	6.95	15	50	2	2-3.5 MU2 THIN YRE	20 MM & PVC PIPE
3	. IGHT MG	16	230	1,600	8.95	15	50	2	2-3.5 MUZ THHY MIRE	20 MM 2 PVC PIPE
4	CEILING FAN	E	230	1,600	6.98	20	50	72	2-35 MM2 THEN WRU	20 MM # PVC PIPE
5	CELLAR FAN	.#:	235	1,630	6.95	20	50	2	2-3.5 MW2 THHN MIRE	20 MM & PVC PIPE
6	CONVENIENCE OUTLET	÷.	.230	1,440	6.26	30	:00	.2	2-35 MW2 THHM WRE	20 HM & PKC PIPE
7	CONDEMENCE (2011ET	8	230	1,640	6.28	30	50	2	2-3.5 MM2 THEN ARE	20 MM & PVC PIPE
8	SPARE									
	TOTAL	_	4	.880 WAT	5					
	COMPUTATION : IT = 9,880 WATTS 230 VOLTS IT = 42.95 AMPERES				Cuit Bre ) AT, CB,		0∨		SIZE OF WIRE AND CO USE : 2-22 MM <sup>2</sup> TH 1-8.0 MM 0 PV0 32 MM 0 PV0	HN WIRE HHN WIRE GROUND



# 20-00038

# 20-00088

#### PROPOSED DPWH BUILDING ( 4 STOREY, 8 CLASSROOMS ):

CKT.	LOAD DESCRIPTION	UNITS	VOLTS	POWER	AMPS.	CIR	CUITBREA	AKER	SIZE OF	
CKT. NO.	LOAD DESCRIPTION	UNITS	VOLIS	POWER WATTS	AMES.	AT	AF	P	WIRES	CONDUIT
1	LIGHTING	7	230	760	3.04	15	50	2	2-3.5 MM2 THHN WRE	20 MM Ø PVC PIPI
2	LIGHTING	16	236	1.660	6.95	15	50	2	2-3.5 MM2 THHS WIRE	20 MM \$ PVC PIPI
3	CELLING FAM	4	230	003	3.45	20	50	2	2-35 MM2 THEM WISE	20 MM 셸 PYE PIPI
4	CONVENIENCE OUTLET	5	230	900	3:91	Nộ.	50	2	2-3.5 HBM2 THERN WIRE	20 MM 🕺 PVC PIP
	TOTAL			LOGG MAT	5					
	COMPUTATION : IT = 4.000 WATTS 230 VOLTS IT = 17.39 AMPERES				CUIT BRI 0 AT, CB		0V		SIZE OF WIRE AND CO USE : 2-14 MM <sup>2</sup> T 1-8.0 MM <sup>2</sup> T 32 MM 0 PV	HN WIRE HHN WIRE GROUN

KT.	LOAD DESCRIPTION	UNITS	VOLTS	POWER	AMPS.	CIR	CUIT BREA	KER	SIZE OF	
NO.	LUAU DESUMPTION	UNITS	VULIA	WATTS	Ampo.	AT	AF	P	WIRES	CONDUIT
1	GROUND FLOOR		2.30	4,000	17.39	40	50	2	2-14 MM2 THHN HIRE 1-8.0 MM2 THOM WIRE	32 MU ∮ MC P.PE
2	SECOND FLOOR		236	4,000	17.39	45	50	2	2-14 MM2 THHN ATRE 1-80 MM2 THHN ATRE	32 MM & MC PIPE
3	THIRD FLEOR		230	4,000	17.39	40	50	2	2-14 MM2 THNN MM2 1-80 UM2 THNN WRE	32 WW & THE PIPE
4	FOURTH FLOOR	-	230	4,000	17:59	40	80	2	2-14 MM2 THIN WRL 1-80 VM2 THIN WRL	32 MW Ø MC PPE
-										
	TOTAL		1	6,000 WAT	6					
	COMPUTATION : IT = 16,000 WATTS 230 VOLTS IT = 69.56 AMPERES				ICUIT ERE 25 AT, C		30V		SIZE OF WIRE AND CO USE : 2-38 MM <sup>2</sup> TF 1-14 MM <sup>2</sup> TI 32 MM O IMO	IHN WIRE IHN WIRE GROUND

# 1 SCHEDULE OF LOADS AND COMPUTATIONS : ( LINE - 1 )

SCHEDULE OF LOADS AND COMPUTATIONS : (LINE - 1)

Republika ng Pilipinas

Lungsod ng Quezon

CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

2

#### PIMENTEL BUILDING ( 2 STOREY, 10 CLASSROOMS ):

CKT.	LOAD DESCRIPTION	UNITS	VOLTS	POWER	AMPS.	CIRI	CUITBREA	KER	SIZE OI	
NO.	LOAD DESCRIPTION	ONHS	VOLIS	WATTS	AMPS.	AT	AF	P	WIRES	CONDUIT
1	LIGHTING	11	230	1,100	4.75	15	50	2	2-3.5 MM2 THHN WRE	20 MM O PVC PIPE
2	LIGHTING	12	230	1,200	3.21	15	50	2	2-3.5 MM2 THEN \$65E	20 MM ∳ PVC PIFE
3	LIGHTING	12	230	1,260	4.21	12	50	2	2-3.5 MM2 THHN WIRE	20 MM & PVC PPE
4	LIGHT/NG	6	230	600	2.61	15	50	2	2+3.5 MM2 THHN WRE	20 MM & PVC PIPE
5	LIGHTING	9	230	900	3.93	15	50	2	2-3.5 MM2 THHN WIRE	20 MM § EVC PIPE
6	LIGHTING	12	230	1,200	3.21	15	50	2	2-35 MM2 THEN WRE	20 MM & PVD PPE
7	LIGHTING	12	230	1,200	5.21	35	50	2:	2-3.5 MM2 THHN WIRE	20 NM & PVD PIPE
8	URHING	6	236	600	2.61	33	ЭŬ	2	2-3.5 MN2 THEN GRE	28 MM & PVC PIPE
9	CEREND FAN	10	230	2,005	8.09	20-	50	2	2-35 MM2 THEN WRE	20 MM & EVO PIPE
10	CERNÓ FAN	te	230	2.000	8.63	20	50	2	2-3.5 MM2 THEN WRE	20 MM & PVC RIPE
11	CONVENIENCE DUTLET	5	235	969	3.91	53	50	2	2-13 MM2 THEN WISE	20 MM & PVE FIFE
12	CONVEMENCE OUTLET	7	236	1,262	5,48	33	50	2	2-3.5 MM2 THEN WRE	20 NM & PVC PIPE
13	CONVENIENCE OUTLET	6	230	9.00	3,91	30	50	2	2-3.5 MM2 THEN WIRE	20 NM \$ PVC PIPE
14	CONCEMENCE OUTLET	7)	2.90	1,260	5,48	55	50	2	2+3.5 M842 1991N 2006	20 MM & PVC PIPE
-	TOTAL	1	16	.320 'satt	5					
	COMPUTATION :			MAIN CIR	CUIT BR	EAKER			SIZE OF WIRE AND O	
	IT = 18,320 WATTS 230 VOLTS			USE:1	25 AT, C	B, 2P, 2	30 V		USE : 2-38 MM 2 T 1-14 MM 2 T	HHN WIRE

PROPOSED UPGRADING OF ELECTRICAL SYSTEM

OF BAGO BANTAY ELEMENTARY SCHOOL

BARANGAY RAMON MAGSAYSAY, DISTRICT - 1, QUEZON CI

(D

W star

mol ()

AVE 18,2020

INPE

SUBMITTED BY:

ENGR. LEO S. DEL ROSARIO

#### OLD ADMIN. BUILDING ( 2 STOREY, 8 CLASSROOMS ): SCHEDULE OF LOADS AND COMPUTATION: LPP ( TYPICAL GROUND FLOOR AND SECOND FLOOR) CIRCUIT BREAKER SIZE OF UNITS VOLTS POWER AMPS. CKT NO. LOAD DESCRIPTION AT AF P WIRES CONDUIT 8 250 600 2.41 15 55 2 2-5.5 MAZ Hint APE 16 2.55 1.600 6.05 15 50 2 2-5.5 MAZ Hint APE 16 2.50 1.600 6.05 15 50 2 2-5.5 MAZ Hint APE 15 2.30 1.600 6.05 15 50 2 2-3.5 MAZ Hint APE 8 2.30 1.600 6.05 20 53 2 2-3.5 MAZ Hint APE 8 2.30 1.600 6.05 20 53 2 2-5.5 MAZ Hint APE 8 2.30 1.600 6.95 20 59 2 2-5.5 MAZ Hint APE 8 2.30 1.600 6.76 30 59 2 2-5.5 MAZ Hint APE 9 20 MM & PVC PIPE 1 LIGHNING 20 MM & PVC PIPE 2 LIGHTING 20 Mit Ø PYC PIPE LIG-RING 3 20 MM ∯ RVC FiPE 4 CELING FAN 30 MM ∯ PVC PPE 5 CERING FAN 6 20 MM & PWC PIPE CONVENIENCE OUTLET 2-35 MAZ THEN MARE 3 230 1,440 6.26 30 50 2 20 MM & FVD PIPE 7 CONVENIENCE OUTLET 8 SPARE TOTAL 9,950 3641 COMPUTATION : MAIN CIRCUIT BREAKER: SIZE OF WIRE AND CONDUIT: USE : 70 AT, CB, 2P, 230V USE : 2-22 MM<sup>2</sup> THHN WIRE 1-8.0 MM<sup>2</sup> THHN WIRE GROUND IT = 9,880 WATTS 230 VOLTS 32 MM Ø PVC PIPE IT = 42.95 AMPERES SHEET CONTENTS : SHEET NO. COMMENCING APPROVAL: AFPROVED BY **EL-05** AS SHOWN

HON. MA. JOSEFINA G. BELMONTE

ENGR. IS GANI R. VERZOSA , JR.

# 20-00068

CKT. NO.	LOAD DESCRIPTION	UNITS	VOLTS	POWER	AMPS.	CIR	CUIT BREA	AKER	SIZE OF	
NO.	EOND DESCRIPTION	ONING	VOLIS	WATTS	PAGE 3.	AT	AF	Р	WIRES	CONDUIT
1	PRE-FAB BUILDING (3-ROOUS)		230	4,580	6.52	20	50	2	2-14 MM2 THHN WRE L-B.O WM2 THHN WRE	25 MU & IMC PIPE
2	H.E BULDING (2-STOREY)		230	4,760	6.52	20	50	2	2-11 MMC THAN WRE 1-8.0 WW2 THAN WRE	25 MM & IMC PIPS
3	PRE-FAB BUILDING (1-ROOM)		230	1,920	5.22	20	50	2	2-8.0 MM2 THON WIFE	25 MM & IMC PIPS
4	PROPOSED (4-STORET BUILDING)		230	8,160	1.50	30	50	.2	2-33 BB22 THEN WRE 1-8.0 VM2 THEN WRE	32 MM Ø INC PIPS
	TOTAL		5	3.840 WAT	s					
	COMPUTATION : IT =				RCUIT BRI 00 AT, C		230∨		SIZE OF WIRE AND CC USE : 2-80 MM <sup>2</sup> TI 1-30 MM <sup>2</sup> T 50 MM Ø IMI	HHN WIRE HHN WIRE GROUND

TWO	STOREY	H.E BUILDING:	

I         Likelitäini         B         230         840         3.48         15         50         2         2-3.5         MICE         Device         Device <thdevice< th="">         Device</thdevice<>	CKT.	LOAD DESCRIPTION	UNITS	VOLTS	POWER	AMPS.	CIR	CUIT BRE	AKER	SIZE OF	
2         LOHTING         8         236         200         5.48         15         50         2         2-3.5         MMC         700         94.0	CKT. NO.	LUAD DESURIPTION	UNITS	VOLIS	WATTS	AMP-0.	AT	AF	P	WIRES	CONDUIT
3         Light MAC         6         2.82         1.060         4.39         15         50         2         2-3.5         MM2         Teles         20         MM ≠ PrC         7           4         CELING F/W         6         132         1.060         4.39         25         50         2         2-3.5         MM2         Teles         20         MM ≠ PrC         7         SPRE         20         MM ≠ PrC         8.00         20         50         2         2-3.5         MM2         Teles         20         MM ≠ PrC         7         SPRE         1         230         1.600         4.35         35         50         2         2-3.5         MM2         Teles         20         MM ≠ PrC         7         SPRE         20         MM ≠ PrC         7         50         2         2-3.5         MM2         Teles         20         MM ≠ PrC         7         20         MM ≠ PrC         7         50         50         2         2-3.5         MM2         Teles         20         MM ≠ PrC         7	1	LEHING	8	230	800	3.48	15	50	2	2-3.5 MM2 THEN WRE	20 MM \$ PVC PIPE
4         CELING FAN         6         320         1.080         4.39         20         50         2         2-3.5 MM2 THEM WITE         20 MM ≠ POL S           5         CELING FAN         1         2.93         1.840         8.00         20         50         2         2-3.5 MM2 THEM WITE         20 MM ≠ POL S           6         CELING FAN         1         2.93         1.840         8.00         20         50         2         2-3.5 MM2 THEM WITE         20 MM ≠ POL S           8         CEMAR MERCE CHILET         1         2.00         1.000         4.35         30         50         2         2-3.5 MM2 THEM WITE         20 MM ≠ POL S           7         SPRRE         1         2.00         1.000         4.35         30         50         2         2-3.5 MM2 THEM WITE         20 MM ≠ POL S	2	LXGHTING	.8	230	800	3:48	15	50	2	2-3.5 MMS THHN WRE	20 MM Ø PVC PIPE
5         CELLAG FAN         1         230         1.840         8.50         20         50         2         2~3.5         MM2         THEM         20.941         Ø PC F           6         COMASMENT FUNCTION         1         2.30         1.000         4.35         35         58         2         2~3.5         MM2         THEM         20.941         Ø PC F           7         SPRAE                   20.941         Ø PC F <t< td=""><td>3</td><td>LIGHTIK</td><td>6</td><td>230</td><td>1.080</td><td>4.89</td><td>15</td><td>50</td><td>2</td><td>2-3,5 MM2 THEN WRE</td><td>20 UM Ø PVC FIPE</td></t<>	3	LIGHTIK	6	230	1.080	4.89	15	50	2	2-3,5 MM2 THEN WRE	20 UM Ø PVC FIPE
6         CONVENENCE DUTIET         1         230         1.000         4.35         36         50         2         2×3.5 MM2 THOM PPE         20 MM # PXC #           7         SPRAC                  2×3.5 MM2 THOM PPE         20 MM # PXC #	4	CEILING FAM	ń.,	230	1.080	4,39	20	50	2	2-3.5 MM2 THEN WIRE	20 VM \$ PVC FIFE
Construction         Construction<	5	(EILMS FAN	11	230	1.840	8.90	20	50	- 2	2~3.5 MH2 THHN WRE	20 YM \$ PXC RPE
	8	CONVENENCE DUILET	E	230	1,000	4.35	30	50	2	2-3.5 MM2 THHM WRE	20 MM Ø PAC SIPE
8 SPAR	7	SPARE									
	8	SPARE									
TOTAL 4,765 WATE	-+	TOTAL		0	4,760 WAT	15					

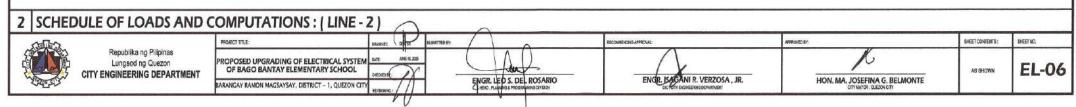
# 1 SCHEDULE OF LOADS AND COMPUTATIONS : ( LINE - 2 )

#### PRE-FAB BUILDING ( 3- CLASSROOMS )

CKT.	LCAD DESCRIPTION	UNITS	VOLTS	POWER	AMPS.	CIR	UIT BRE	KER	SIZE	DF
NO.	LOAD DEBUNIFTION	UNITS	VULIO	WATTS	MMPO.	AT	AF	Р	WIRES	CONDUIT
1	LICETING	18	230	1,850	7.82	15	50	2	Z-35 MM2 THEN WIRE	20 MM & PVC PIPE
2	CONVEMENCE OUTLET	ē.	230	1,200	5.22	20	50	2	2-3.5 KM2 THERE WIRE	20 Mid pt PVC PHPL
3	CONVENIENCE CORLET	G:	230	1,085	4.69	30	50	2	2-3.5 MM2 THEN HARE	20 ApJ & PVC PIPE
4	SPARE									
	TOTAL			1.080 W411	5					
	COMPUTATION : IT =				RCUIT BRI 0 AT, CB		0V		SIZE OF WIRE AND USE : 2-14 MM <sup>2</sup> 1-8.0 MM <sup>2</sup> 25 MM 0 IN	THHN WIRE THHN WIRE GROUI

#### PRE-FAB BUILDING ( 1- CLASSROOM )

CRC.         LOAD DESCRIPTION         UNITS         VOLTS         POWER         AMPS.         CIRCUIT BREAKER         Silze OF           1         USe/11/0         8         2/30         8/0         1/3         10         0         2         2-35.1M2         10H KRE         2000 KR # P C PIEL           2         CDUNG FM         2         2/39         4/20         1.74         15         5/2         2         2-35.1M2         10H KRE         2/9 KR # # P/C PIEL           3         CORVENENCE DUTES         4         220         7/20         3.13         5/0         5/2         2         2-35.1M2         10H KRE         2/9 KR # # P/C PIEL           3         CORVENENCE DUTES         4         200         7/20         3.13         5/0         5/2         2         2-35.1M2         10H KRE         2/9 KR # # P/C PIEL           1         1/920 KRLIS         4         2000         7/20         3/13         5/0         5/2         2         2-35.1M2         1/9 KRE         4/9 KRE         1/9 KRE         4/9 KRE         1/9	CKT.	LOAD DESCRIPTION	UNITS		POWER	AMPS.	CIR	UIT BRE	AKER	SIZE (	DF	
2         CDUNG FAN         2         220         420         1.74         15         30         2         2-35         M2         THE ARE         20 MA 2 FROM THE           3         CORVENENCE DUTET         4         230         720         3.13         30         50         2         2-35         M32         THE ARE         20 MA 2 FROM THE           TO TAL         1.920         MAIN DIRCUT BREAKER:         SIZE OF WIRE AND CONDUTE:         INFERING         SIZE OF WIRE AND CONDUTE:         USE : 40 AT, CB, 2P, 230V         USE : 2-8.0 MAZ         THEN WIRE GROUND         THEN WIRE GROUND         THE AND CONDUTE:         USE : 40 AT, CB, 2P, 230V         USE : 2-8.0 MAZ         THEN WIRE GROUND         THE AND CONDUTE:         USE : 40 AT, CB, 2P, 230V         USE : 2-8.0 MAZ         THEN WIRE GROUND         THE AND CONDUTE:         1.820 MAT         THEN WIRE GROUND         THE AND CONDUTE:         USE : 2-8.0 MAZ         THEN WIRE GROUND         25 MM 0 MAC PIPE         30 MAR         25 MM 0 MAC PIPE         30 MAR         30	NO.	LOAD DESURIPTION	UNITS	VULIS	POWER WATTS	AMPS.	AT	AF	P	WIRES	CONDUIT	
3         CONTRACT SUPER         4         20         720         2.13         30         50         2         2-35         1937         1948         NRC         20         MAI & PAC         MAIL           TOTAL         1         9/20         52/13         30         50         2         2-35         1937         1948         NRC         20         MAI & PAC         MAIL           TOTAL         1         9/20         52/15	1	UGHTING	8	230	860	3,48	15	50	2	2~5.3 MM2 THEN STREE	20 MM # PVC PIP	E
TOTAL         1920 trains         Size of wire and conducts           TOTAL         1920 trains         Size of wire and conducts           IT         =         1,920 trains         USE : 40 AT, CB, 2P, 230V         USE : 2-8,0 MA2 THEN WIRE GROUND           IT         =         1,920 trains         USE : 40 AT, CB, 2P, 230V         USE : 2-8,0 MA2 THEN WIRE GROUND           IT         =         1,920 trains         USE : 40 AT, CB, 2P, 230V         USE : 2-8,0 MA2 THEN WIRE GROUND           IT         =         8,35 AMPERES         25 MM Ø IMC PIPE         18,0 MA2 THEN WIRE GROUND	2	CEUNG FAM	2	270	460	1.74	15	50	3		25 MM \$ PVC PF	ŧ
COMPUTATION :     MAIN DIRCUIT BREAKER:     SIZE OF WIRE AND CONDUIT:       IT =     1,920 WATTS     USE : 40 AT, CB, 2P, 230V     USE : 2-8.0 MM <sup>2</sup> THHN WIRE       IT =     230 VOLTS     14.0 MM <sup>2</sup> THHN WIRE GROUND       IT =     8.35 AMPERES     25 MM 0 IMC PIPE	3	CONVENIENCE DUILET	4	230	720	3.13	30	50	2	2-15 KM2 THEN AND	20 MM & PVC PIP	£
COMPUTATION :     MAIN CIRCUIT BREAKER:     SIZE OF WIRE AND CONDUIT:       IT =     1,920 WATTS     USE : 40 AT, CB, 2P, 230V     USE : 2-8.0 MM <sup>2</sup> IT =     230 VOLTS     1-8.0 MM <sup>2</sup> THHN WIRE GROUND       IT =     8.35 AMPERES     25 MM 0 IMC PIPE		TOTAL			400.520	5						
RECOMBURING APPROVED BY: BHEET NO.		n - elas Ampereo									Kito di Maste	
RECOMBINES APPONE: APPONE SHEET CONTERFS: BHEET NO.												
RECOMBUCIES APPROVE: APPROVE: SHEET CONTENTS: SHEET NO.												
RECOMBLEMS APPROVAL: APPROVAL: SHEET NO.												
RECOMBLERS APPROVE: APPROVES BY SHEET CONTENTS: SHEET NO.												
RECOMPICING JAPPICINE APPROVED IN SHEET CONTENTS: SHEET NO.												
	REC	DMIRECONS APPROVAL:				APPROVE	587				SHEET CONITENTS:	SHEET NO.



# 20-00008

SCHE	OULE OF LOADS AND C	OMPUTA	TION:	MDP						
CKT. NO.	LOAD DESCRIPTION	UNITS	VOLTS	POWER	AMPS.	CIRC	CUIT BREA	AKER	SIZE (	XF
NO.	LOND DESCRIPTION	00013	VGLIS	WATTS	ANF G.	AT	AF	P	WIRES	CONDUIT
1	LPP GROUND FLOOR		230	3,650	35.61	60	60	2	2-14 MB2 THEN MRE 1-8.0 MM2 THEN MRE	32 MM ∮ FVE FIPE
2	UPP SECOND FLOOR	11	230	9,580	41.65	60	60		2-14 MU2 THEN GRE 1-80 MU2 THEN WRE	32 MM 🖉 FYC FIPE
3	LPP DHRD FLOCK		230	9.880	38.61	60	60	- 2	2-14 1202 THEN STRE 1-8 0 MU2 THEN STRE	30 MU ∳ PVC FIPE
4	LPP FOORTH FLOOR	-	230	9,580	41.6ő	66	60	2	2-14 MU2 THER WRE 1-8.8 MU2 HHR WRE	32 MM & RVC PIPE
	TOTAL		-31	5.920 <i>R</i> AFI	5					
	COMPUTATION : IT = <u>36,820 WATTS</u> 230 VOLTS IT = 160.52 AMPERES				CUIT BR 25 AT, C		230V		SIZE OF WIRE AND USE : 2-100 MM 1-30 MM 50 MM O II	THHN WIRE THHN WIRE GROUND

CKT. NO.	LOAD DESCRIPTION	UNITS	VOLTS	POWER WATTS	AMPS.	CIR	CUIT BREA	AKER	SIZE OF	OF		
a la construcción de la construc		10000000	VOLIS	WATTS	AMPS.	AT	AF	P	WIRES	CONDUIT		
1	LIGHUNG	12	230	1,200	5.21	15	50	2.	2-3.5 MW2 THEN WRE	2) MA \$ PVC FIPE		
2	LIGHTING	3	230	800	3.98	15	50	2	2-3.5 MW2 THEN WIRE	25 Mil & PVC PIPI		
3	LIGHTING	з	230	500	5.48	15	50	2	2-3.5 MW2 THHM WIRE	20 MM & PVC PIPE		
4	LIGHTING	8	230	800	3.48	15	50	2	2-3.5 MW2 THHY WRE	20 MM \$ PVC PIPE		
5	LIGHTING	3	235	900	3.48	15	50	2	2-35 WWZ THHM WIRE	20 Mit ∳ PCC PIPE		
6	CELING TAN	4	230	800	1.91	26	50	2.	2+3.5 MV2 THEY WRE	का भग हूँ हुए। सम		
7	CELING FAN	1	230	800	1.91	26	50	25	2-3.5 M.V2 THEN WHE	20 MM & EVC PIPE		
8	CONVENIENCE OUTLET	3	230	1,440	6.26	20	50	2	2-3.5 MUZ THEN WRE	20 MM & PUC PIPE		
9	CONVENIENCE OUTLET	- 3	23.9	1,640	5.25	30	5G	2	2-3.5 MW2 THHEY WIRE	20 MAR & PVC PIPE		
10	SPARE											
	TOTAL	-		.880 WAT	5							

# 1 SCHEDULE OF LOADS AND COMPUTATIONS : ( LINE - 3 )

	CKT	LOAD DESCRIPTION	10070	110170	POWER	41400	CIRC	UIT BREA	AKER	SIZE OI				
	CKT. NO.	LOAD DESCRIPTION	UNITS	VOLTS	POWER WATTS	AMPS.	AT	AF	P	WIRES	CONDUIT			
	1	UGHTIKS	12	230	700	3.04	15	50	2.	2-3.5 MM2 TH-IN WIFE	20 MM & PVC PIPE			
	2	UGHTIKS	8	230	830	3.48	15	50	2	2-3,5 KMA2 THAN WARE	20 NM & PVC PIPE			
	3	UGRITING	ă:	230	800	3.48	15	56	20	2-3.5 MMZ THEN WRE	20 Het & PVC PIPE			
	4	LIGHTING	8	230	800	3.48.	15	-65	(現)	2=3.5 MM2 1H4N WIRE	20 MM & PVC PUPE			
	5	USHING	8	230	800	3.48	15	56	2	2-3.5 MM2 DHAN WRIT	20 MM & PVC PIPE			
	6	UGHTING	6	230	600	3.48	15	85	2	2-3.5 MM2 THEN WIRE	20 MM & PVC PIPE			
	7	CERING FAN	*	2.50.	860	3.45	20	56	2	2-3.5 MM2 THHE WRE	20 MM # FVC PIPE			
	8	CERING FUN	4	2.30	1,200	3.21	20	50	25	2-3.5 MM2 THEN WRE	20 DAM 🖗 PAC PIPE			
	9	CONVENIENCE OUTLET	8	230	1.442	6.26	30	茨	8	2-3.5 MM2 THER WRE	20 MM ∯ PVC PIPE			
	10	DONVEMENCE OVALET	8	230	1,440	6.26	30	12	2	2-3.5 MM2 THER WIRE	20 MM & PAC PIPE			
		TOTAL		- <u>#</u> 2	680 RATI	5								
		COMPUTATION : IT = 8,680 WATTS 230 VOLTS IT = 41.65 AMPERES				OAT, CE	EAKER: 3, 2P, 23	0V		SIZE OF WIRE AND O USE : 2-14 MM <sup>2</sup> T 1-8.0 MM <sup>2</sup> T 32 MM O PV	HHN WIRE HHN WIRE GROUND			
SCHEDULE OF LOADS AND (		INE - 3)	BUGNITTED	sr: /	7		0			RECOMMENTING APPROVAL:		APPROVED BY:	SHEET CONTENTS :	S-EET NO.
Republika ng Pilipinas Lungsod ng Quezon	PROPOSED UPGRADING OF ELECTRIC OF BAGO BANTAY ELEMENTARY S		<u>n</u>		1	FOS. D	h		_		GANI R. VERZOSA , JR.	HON, MA. JOSEFINA G. BELMONTE	AS SHOWN	EL-07

# 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 (refer to **GCC** Clause 8) 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.

## **BILL OF QUANTITIES**

## (Building Construction/Rehabilitation Project)

## PROJECT TITLE : PROPOSED UPGRADING OF ELECTRICAL SYSTEM OF BAGO BANTAY ELEMENTARY SCHOOL

LOCATION	: Barangay Ramon Magsaysay, District 1, Quezon City
PROJECT NO.	: 20 - 00068
DURATION	: Ninety (90) Calendar Days

#### SCOPE OF WORK:

- 1. Upgrading of Main Electrical Service Entrance
- 2. Installation of Main Circuit Breaker Protection
- 3. Wiring and installation of Electrical Feeder Line Wire
- 4. Construction of Concrete Distribution Post
- 5. Certification of Insulation Resistance Test

EM IO.	WORK DESCRIPTION & SCOPE OF WORKS	UNIT	QTY.	UNIT COST	TOTAL COST
Α.	GENERAL REQUIREMENT				
	Temporary lighting & water facilities	days	90	₽	P
	Steel Barricade with Caution tape (rental)	each	4		
	Billboard	рс	1		
	Construction Safety and Health				
	Safety Helmet	pcs	10		
	Safety Shoes	pcs	10		
	Safety Gloves	pcs	10		
	Vest	pcs	10		
	Face Mask	pcs	10		
	Harness	pcs	2		
	Goggles	pcs	10		
-				Direct Cost	A P
•	INSTALLATION OF ELECTRICAL SYSTEM Roughing-ins				
	90mmØ Entrance Cap Diecast (US)	pcs	2		
	75mmØ Entrance Cap Diecast (US)	pcs	2		
	75mmØ x 10' IMC Pipe	pcs	2		
	60mmØ x 10' IMC Pipe	pcs	2		
	75mmØ Locknut & Bushing	pcs	2		
	60mmØ Locknut & bushing	pcs	2		
	3"Ø x 3/8'Ø U-bolt w/ nut & washer	pcs	2		
	2-1/2"Ø x 3/8'Ø U-bolt w/ nut & washer	pcs	2		
	Secondary Rack w/ 3 spool heavy duty "Beta type"	pc	7		
	Secondary Rack w/ 2 spool heavy duty "Beta type"	pcs	9		
	5/8' Ø x 3" Expansion Shield w/ Lug screw & washer	pcs	39		
	1/2' x 2" Expansion Shield w/ Lug screw & washer	pairs	10		
	500 MCM Solderless connection w/ two bolt	pairs	6		
	350 MCM Solderless Connector w/ two bolt	pairs	12		
	200 MCM Solderless Connector w/ two bolt	pairs	8		
	4/0 Solderless connector split type	pairs	2		
	3/0 Solderless connector split type	pcs	2		
	2/0 Solderless connector split type	pcs	2		

TEM NO.	WORK DESCRIPTION & SCOPE OF WORKS	UNIT	QTY.	UNIT COST	TOTAL COST
	Wires & Cables				
	250mm <sup>2</sup> THHN WIRE	lm	30		
	150mm <sup>2</sup> THHN WIRE	lm	420		
	100mm <sup>2</sup> THHN WIRE	lm	200		
	80mm <sup>2</sup> THHN WIRE	lm	30		
	50mm <sup>2</sup> THHN WIRE	lm	20		
	30mm <sup>2</sup> THHN WIRE	lm	20		
	3.5mm <sup>2</sup> THHN WIRE	rolls	2		
	Panel board				
	Moulded Case Circuit Breaker 400 AT, 3P, 230V w/ 3 Branches 1-300AT, 3P,230V,1- 225AT,3P, 230V, & 1-200AT, 3P 230V w/ Ground Terminal Enclosure Weatherproof Type in NEMA 12	set	1		
	Miscellaneous & Consumables				
	Rubber Tape	rolls	15		
	Electrical tape	rolls	10		
	Masking Tape	rolls	1		
	Vulcaseal	qrt	1		
	Hacksaw Blade	set	1		
	5/8"Ø Masonry bit (SDS)	рс	1		
	1/2"Ø Steel bit	pcs	2		
				Materials Cost	₽
				Labor Cost	
				Direct Cost B	P
C.	SITE WORKS				
	Excavation	cu.m	2.5		
				Direct Cost C	P
D.	CONSTRUCTION OF CONCRETE DISTRIBUTION POST				
	Cement	bags	16		
	Sand	cu.m.	1.5		
	Gravel	cu.m.	2.5		
	Assorted RSB	kgs	170		
	G.I. Tie Wire Gr.16	kgs	4		
	Assorted CWN	kgs	4		
	2"x4"x12" Form Lumber	bd.ft	4		
	1/2" x 4" x 8" Form Plywood	pcs	2		
				Materials Cost	₽
				Labor Cost	
				Direct Cost D	P

ITEM NO.	WORK DESCRIPTION & SCOPE OF WORKS	UNIT	QTY.	UNIT COST	TOTAL COST
Ε.	INSULATION RESISTANCE TEST				
	Certification of Insulation Resistance Test	lot	1		
				Direct Cost E	P
				Total Direct Cost	₽
				OCM	
				Profit	
				VAT	
				PROJECT COST	P

## SUMMARY

Α.	GENERAL REQUIREMENT	₽	
В.	INSTALLATION OF ELECTRICAL SYSTEM		
C.	SITE WORKS		
D.	CONSTRUCTION OF CONCRETE DISTRIBUTION POST		
E.	INSULATION RESISTANCE TEST		
	TOTAL DIRECT COST	P	
	OCM		
	PROFIT		
	PROFIT VAT		

# Name of Project: PROPOSED UPGRADING OF ELECTRICAL SYSTEM OF BAGO BANTAY<br/>ELEMENTARY SCHOOLLocation: Barangay Ramon Magsaysay, District 1, Quezon CityProject No.: 20 - 00068

Duration : Ninety (90) Calendar Days

# BREAKDOWN OF COST

	Item of Work (Description)	MATERIALS COST	LABOR COST	INDIRECT COST	AGGREGATE COST
Α.	GENERAL REQUIREMENT				₽
В.	INSTALLATION OF ELECTRICAL SYSTEM				
C.	SITE WORKS				
D.	CONSTRUCTION OF CONCRETE DISTRIBUTION POST				
E.	INSULATION RESISTANCE TEST				

TOTAL <u>P</u>\_\_\_\_\_

TOTAL LUMP SUM IN WORDS :

Contractor :

Bid Form

# Section IX. Bidding Forms

# **TABLE OF CONTENTS**

Bid Form	77
Form of Contract Agreement	79
Omnibus Sworn Statement	81
Bid Securing Declaration	84
Affidavit of Undertaking	86
Net Financial Contracting Capacity	87
Single Largest Completed Contract Similar to the Contract to be Bid	88
List of All On-Going Government and Private Contracts	89
List of All Awarded But Not Yet Started Government and Private Contract	s90
List of Major Equipment to be used for the Project	91
List of Key Construction Personnel to be Assigned to the Project	92

**Bid Form** 

Date: \_\_\_\_\_\_ IB<sup>3</sup> N<sup>o</sup>: \_\_\_\_\_

To: [name and address of PROCURING ENTITY] Address: [insert address]

We, the undersigned, declare that:

- (a) We have examined and have no reservation to the Bidding Documents, including Addenda, for the Contract *[insert name of contract]*;
- (b) We offer to execute the Works for this Contract in accordance with the Bid and Bid Data Sheet, General and Special Conditions of Contract accompanying this Bid;

The total price of our Bid, excluding any discounts offered below is: *[insert information]*;

The discounts offered and the methodology for their application are: *[insert information]*;

- (c) Our Bid shall be valid for a period of *[insert number]* days from the date fixed for the Bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (d) If our Bid is accepted, we commit to obtain a Performance Security in the amount of *[insert percentage amount]* percent of the Contract Price for the due performance of the Contract;
- (e) Our firm, including any subcontractors or suppliers for any part of the Contract, have nationalities from the following eligible countries: *[insert information]*;
- (f) We are not participating, as Bidders, in more than one Bid in this bidding process, other than alternative offers in accordance with the Bidding Documents;
- (g) Our firm, its affiliates or subsidiaries, including any subcontractors or suppliers for any part of the Contract, has not been declared ineligible by the Funding Source;
- (h) We understand that this Bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal Contract is prepared and executed; and

<sup>&</sup>lt;sup>3</sup> If ADB, JICA and WB funded projects, use IFB.

- (i) We understand that you are not bound to accept the Lowest Calculated Bid or any other Bid that you may receive.
- (j) We likewise certify/confirm that the undersigned, is the duly authorized representative of the bidder, and 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 the [Name of Project] of the [Name of the Procuring Entity].
- (k) We acknowledge that failure to sign each and every page of this Bid Form, including the Bill of Quantities, shall be a ground for the rejection of our bid.

Name:
In the capacity of:
Signed:
Duly authorized to sign the Bid for and on behalf of:
Date:

# Form of Contract Agreement

THIS AGREEMENT, made this [insert date] day of [insert month], [insert year] between [name and address of PROCURING ENTITY]\_(hereinafter called the "Entity") and [name and address of Contractor] (hereinafter called the "Contractor").

WHEREAS, the Entity is desirous that the Contractor execute [name and identification number of contract] (hereinafter called "the Works") and the Entity has accepted the Bid for [insert the amount in specified currency in numbers and words] by the Contractor for the execution and completion of such Works and the remedying of any defects therein.

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

- 1. In this Agreement, words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
- 2. The following documents shall be attached, deemed to form, and be read and construed as integral part of this Agreement, to wit:
  - (a) General and Special Conditions of Contract;
  - (b) Drawings/Plans;
  - (c) Specifications;
  - (d) Invitation to Bid;
  - (e) Instructions to Bidders;
  - (f) Bid Data Sheet;
  - (g) Addenda and/or Supplemental/Bid Bulletins, if any;
  - (h) Bid form, including all the documents/statements contained in the Bidder's bidding envelopes, as annexes, and all other documents submitted (e.g., Bidder's response to request for clarifications on the bid), including corrections to the bid, if any, resulting from the Procuring Entity's bid evaluation;
  - (i) Eligibility requirements, documents and/or statements;
  - (j) Performance Security;
  - (k) Notice of Award of Contract and the Bidder's conforme thereto;
  - (l) Other contract documents that may be required by existing laws and/or the Entity.
- 3. In consideration of the payments to be made by the Entity to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Entity to execute and complete the Works and remedy any defects therein in conformity with the provisions of this Contract in all respects.

4. The Entity hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects wherein, the Contract Price or such other sum as may become payable under the provisions of this Contract at the times and in the manner prescribed by this Contract.

IN WITNESS whereof the parties thereto have caused this Agreement to be executed the day and year first before written.

Signed, sealed, delivered by \_\_\_\_\_\_ the \_\_\_\_\_ (for the Entity)

Signed, sealed, delivered by \_\_\_\_\_\_ the \_\_\_\_\_(for the Contractor).

Binding Signature of Procuring Entity

Binding Signature of Contractor

[Addendum showing the corrections, if any, made during the Bid evaluation should be attached with this agreement]

# 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] [insert "as shown in the attached duly notarized Special Power of Attorney" for the authorized representative];

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], accompanied by the duly notarized Special Power of Attorney, Board/Partnership Resolution, or Secretary's Certificate, 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;
- 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 following responsibilities as a Bidder:
  - a) Carefully examine all of the Bidding Documents;
  - b) Acknowledge all conditions, local or otherwise, affecting the implementation of the Contract;
  - c) Made an estimate of the facilities available and needed for the contract to be bid, if any; and
  - d) Inquire or secure 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.

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

Bidder's Representative/Authorized Signatory

**SUBSCRIBED AND SWORN** to before me this \_\_\_\_ day of [month] [year] at [place of execution], Philippines. Affiant/s is/are personally known to me and was/were identified by me through competent evidence of identity as defined in the 2004 Rules on Notarial Practice (A.M. No. 02-8-13-SC). Affiant/s exhibited to me his/her [insert type of government identification card used], with his/her photograph and signature appearing thereon, with no. \_\_\_\_\_ and his/her Community Tax Certificate No. \_\_\_\_\_ issued on \_\_\_\_\_ at \_\_\_\_.

Witness my hand and seal this \_\_\_\_ day of [month] [year].

# NAME OF NOTARY PUBLIC

Serial No. of Commission	on
Notary Public for	until
Roll of Attorneys No.	
PTR No [date i	ssued], [place issued]
IBP No [date i	ssued], [place issued]

Doc. No. \_\_\_\_\_ Page No. \_\_\_\_\_ Book No. \_\_\_\_\_ Series of \_\_\_\_\_

\* This form will not apply for WB funded projects.

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

**Invitation to Bid** [Insert reference 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 accept that: (a) I/we will be automatically disqualified from bidding for any 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 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 9184; without prejudice to other legal action the government may undertake.
- 3. 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;
  - c. I am/we are declared as 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'S AUTHORIZED REPRESENTATIVE] [Insert signatory's legal capacity]

Affiant

**SUBSCRIBED AND SWORN** to before me this \_\_\_\_\_ day of [month] [year] at [place of execution], Philippines. Affiant/s is/are personally known to me and was/were identified by me through competent evidence of identity as defined in the 2004 Rules on Notarial Practice (A.M. No. 02-8-13-SC). Affiant/s exhibited to me his/her [insert type of government identification card used], with his/her photograph and signature appearing thereon, with no.

Witness my hand and seal this \_\_\_\_ day of [month] [year].

# NAME OF NOTARY PUBLIC

Serial No. of Commission \_\_\_\_\_\_ Notary Public for \_\_\_\_\_ until \_\_\_\_\_ Roll of Attorneys No. \_\_\_\_ PTR No. \_\_, [date issued], [place issued] IBP No. \_\_, [date issued], [place issued] Doc. No. \_\_\_\_ Page No. \_\_\_\_ Book No. \_\_\_\_ Series of \_\_\_\_.

# REPUBLIC OF THE PHILIPPINES)

\_\_\_\_\_ ) S. S.

# AFFIDAVIT OF UNDERTAKING

I,		, of	legal	age,	Filipino,	OFFICER O	) <u>R</u>
REPRESENTAT	<u>[VE]</u>						
with office addr	ess at					aft	er
				volun	tary depose and st		CI
-			-				
	•	-			e of Bidder	to execute th	ıis
undertal	king as evidenced	by Secretary's Co	ertificat	e and	Board Resolution.		
That	[Name of Bidder	r]bidding for t	he (Nar	ne of I	Project)		
that the		ise and the key pe	ersonnel	l to be	<u>e of Bidder]</u> hen assign shall exclus		d
	•				the foregoing and i public bidding of	-	
	NESS HEREOF, at		0	ed m	y name below t	his da	ay
AFFIAN	T FURTHER SAY	ΈΤΗ NAUGHT.					
					Affiant		
CURCCI		ODN TO BEFOR			dana a f		
500501		JAN IO BEFORI			day of		
affiant exhibiti	8	is/her				issued	at
	on						
Doc. No.							
Page No.							
Book No. 5 Series of 2020							
501105 01 2020				ז	Notary Public		
				1	Notary i ublic		

# COMPUTATION OF NET FINANCIAL CONTRACTING CAPACITY (NFCC)

NAME OF BIDDER:

CURRENT	ASSETS*		РНР	
(LESS) CUI	RRENT LIABILITIES*	(LESS)	PHP	
NETWORT	ГН		РНР	
NETWORT	ΓΗ x 15	x 15	PHP	
(LESS) VAI CONTRAC	LUE OF ALL OUTSTANDING ON-GOING TS**	(LESS)	РНР	
	LUE OF ALL AWARDED BUT NOT YET CONTRACTS AS OF DATE**	(LESS)	РНР	
NET FIN	ANCIAL CONTRACTING CAPACITY		PHP	
NOTES:	* CURRENT ASSETS AND LIABILITIES PRECEDING CALENDAR YEAR SUE		_	
	** BASED ON LIST OF ON-GOING AN SUBMITTED	D AWRDI	ED BUT	NOT YEY STARTED CONTRACTS

#### SINGLE LARGEST COMPLETED CONTRACT SIMILAR TO THE CONTRACT TO BE BID

NAME OF CONTRACTOR:

# PROJECT TITLE: \_\_\_\_\_

PROJECT TITLE (Name of the Contract) & EXACT PROJECT LOCATION	DATE OF CONTRACT	CONTRACT DURATION	PROJECT OWNER & POSTAL ADDRESS	NATURE OF WORK	CONTRACTOR'S ROLE (SOLE CONTRACTOR, SUBCONTRACTOR, PARTHNER IN A JV) and PERCENTAGE OF PARTICIPATION	TOTAL CONTRACT VALUE AT AWARD	DATE OF COMPLETION or ESTIMATED COMPLETIONTIME	TOTAL CONTRACT VALUE AT COMPLETION IF APPLICABLE

## PHOTOCOPY ADDITIONAL FORMS, IF NECESSARY

Page\_\_\_\_of \_\_\_\_

### LIST OF ALL ON-GOING GOVERNMENT AND PRIVATE CONTRACTS

# NAME OF CONTRACTOR:

PROJECT TITLE			CONTRACTOR'S ROLE TOTAL DATE OF TOTAL CONTRACTOR, SUBCONTRACTOR, S		PERCE	NTAGE					
(Name of the Contract) & EXACT PROJECT LOCATION	DATE OF CONTRACT	CONTRACT DURATION	PROJECT OWNER & POSTAL ADDRESS	NATURE OF WORK	ODE CONTRACTOR, SOLOMINACTOR, PARTHNER IN A JV)         CONTRACT         COMPLETION or           and PERCENTAGE OF PARTICIPATION         VALUE AT         ESTIMATED           COMPLETION TIME         COMPLETION TIME		CONTRACT VALUE AT COMPLETION IF APPLICABLE	ACTUAL ACCOMPLISHMENT	PLANNED ACCOMPLISHMENT	VALUE OF OUTSTANDING WORKS (IN PHP)	
									TOTAL AMOUNT OUTSTANDING W		

## PHOTOCOPY ADDITIONAL FORMS, IF NECESSARY

Page\_\_\_\_of \_\_\_\_

# LIST OF <u>ALL AWARDED BUT NOT YET STARTED</u> GOVERNMENT AND PRIVATE CONTRACTS OF THE BIDDER

NAME OF CONTRACTOR: \_\_\_\_\_

# PROJECT TITLE: \_\_\_\_\_

PROJECT TITLE & EXACT LOCATION	MAJOR SCOPE OF WORKS & DATE STARTED	NAME AND ADDRESS OF PROJECT OWNER	CONTRACT PRICE (PHP) AS AWARDED	DATE OF SCHEDULED COMPLETION	ROLE OF BIDDER <u>IN THE</u> <u>CONTRACT SOLE</u> <u>CONTRACTOR / SUB-</u> CONTRACTOR/PARTNER IN A
		TOTAL AMOUNT OF CONTRACT (Php)			

# LIST OF MAJOR EQUIPMENT TO BE USED FOR THE PROJECT

NAME OF CONTRACTOR:

# PROJECT TITLE: \_\_\_\_\_

ТҮРЕ	DESCRIPTION / CAPACITY	SERIAL NO.	YEAR ACQUIRED	PRESENT LOCATION (SPECIFIC ADDRESS)	STATUS OF AVAILABILITY (OWNED/LEASED)

## PHOTOCOPY ADDITIONAL FORMS, IF NECESSARY

Page\_\_\_\_of \_\_\_\_

# A. LIST OF KEY CONSTRUCTION PERSONNEL TO BE ASSIGNED TO THE PROJECT

NAME OF CONTRACTOR:

PROJECT TITLE: \_\_\_\_\_

NAME	POSITION	AGE	EDUCATIONAL ATTAINMENT	TYPE OF CONSTRUCTION EXPERIENCE	NO.OF YEARS WITH THE CONTRACTOR	PROFESSION	PRC NO.

PHOTOCOPY ADDITIONAL FORMS, IF NECESSARY

Page\_\_\_\_of \_\_\_\_

