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Bid Notice Abstract

Invitation to Bid (ITB)

Reference Number	11004981
Procuring Entity	CARLOS HILADO MEMORIAL STATE UNIVERSITY
Title	Upgrading of Electrical Main Line System (Phase 2) - Alijis Campus
Area of Delivery	Negros Occidental

Solicitation Number:	CHMSU 24-026-0701-I
Trade Agreement:	Implementing Rules and Regulations
Procurement Mode:	Public Bidding
Classification:	Civil Works
Category:	Electrical Systems and Lighting Components
Approved Budget for the Contract:	PHP 1,000,000.00
Delivery Period:	60 Day/s
Client Agency:	
Contact Person:	Ma. Lorena Fernandez Jugos Administrative Assistant II Mabini Street, Brgy Zone 1 Talisay City Negros Occidental Philippines 6115 63-34-7120005 Ext.142 63-939-9296624 bac.sec@chmsu.edu.ph

Status	**Pending**
Associated Components	8
Bid Supplements	0
Document Request List	0
Date Published	02/07/2024
Last Updated / Time	01/07/2024 16:04 PM
Closing Date / Time	23/07/2024 08:30 AM

Description

CARLOS HILADO MEMORIAL STATE UNIVERSITY
BIDS AND AWARDS COMMITTEE
TALISAY CITY, NEGROS OCCIDENTAL

INVITATION TO BID
FOR THE UPGRADING OF ELECTRICAL MAIN LINE SYSTEM
(PHASE 2) – ALIJIS CAMPUS
CHMSU 24-026-0701-I

1. The Carlos Hilado Memorial State University, through the Corporate Budget for the Contract of 2024 approved by the governing Board (INCOME/STF), intends to apply the sum of ONE MILLION PESOS & 00/100 (Php 1,000,000.00) being the Approved Budget for the Contract (ABC) to payments under the contract for the UPGRADING OF ELECTRICAL MAIN LINE SYSTEM (PHASE 2) - ALIJIS CAMPUS. Bids received in excess of the ABC shall be automatically rejected at bid opening.

2. The Carlos Hilado Memorial State University now invites bids for the above Procurement Project. Completion of the Works is required within Sixty (60) calendar days after receipt of Notice to Proceed. Bidders should have completed a contract similar to the Project. The description of an eligible bidder is contained in the Bidding Documents, particularly, in Section II (Instructions to Bidders).

3. Bidding will be conducted through open competitive bidding procedures using the non-discretionary "pass/fail" criterion as specified in the 2016 revised Implementing Rules and Regulations (IRR) of Republic Act (RA) No. 9184.

4. Interested bidders may obtain further information from CARLOS HILADO MEMORIAL STATE UNIVERSITY and inspect the Bidding Documents at the address given below from 8:00 A.M. to 5:00 P.M.

5. A complete set of Bidding Documents may be acquired by interested bidders on July 2 - 23, 2024 (8:30A.M.) from given address and website/s below and upon payment of the applicable fee for the Bidding Documents, pursuant to the latest Guidelines issued by the GPPB, in the amount of One Thousand Pesos (Php 1,000.00). The Procuring Entity shall allow the bidder to present its proof of payment for the fees.

6. The CHMSU will hold a Pre-Bid conference on 9:00 A.M., July 9, 2024 at Bidding Room, 2/F Supply and Property Management Bldg., Brgy. Zone 1, Mabini St., Talisay City, Negros Occidental and or through video conferencing or webcasting via Zoom Meeting with ID No. 797 389 7583, Meeting Password 070924, which shall be open to prospective bidders.

7. Bids must be duly received by the BAC Secretariat through (i) manual submission at the office address as indicated below, (ii) online or electronic submission as indicated below, or (iii) both on or before 8:30 A.M., July 23, 2024. Late bids shall not be accepted.

Bids may be submitted through electronic mail to bac.sec@chmsu.edu.ph provided that the bidding documents are compressed into two (2) separate archived folders (zip or rar format) and which each folder shall be labelled as "First Envelope_Name of Company_Project Reference Number" and "Second Envelope_Name of Company_Project Reference Number" and each is uniquely password-protected;

Bidders must submit the printed copies (Original, Copy 1 and Copy 2) of their bidding documents within 3 calendar days from bid opening.

8. All Bids must be accompanied by a bid security in any of the acceptable forms and in the amount stated in ITB Clause 16.

9. Bid opening shall be on 9:00 A.M., July 23, 2024 at the Bidding Room, 2/F Supply and Property Management Bldg., Brgy. Zone 1, Mabini St., Talisay City, Negros Occidental and/or through Zoom Meeting ID No. 797 389 7583, Meeting Password 072324. Bids will be opened in the presence of the bidders' representatives who choose to attend the activity.

10. The Carlos Hilado Memorial State University reserves the right to reject any and all bids, declare a failure of bidding, or not award the contract at any time prior to contract award in accordance with Sections 35.6 and 41 of the 2016 revised Implementing Rules and Regulations (IRR) of RA No. 9184, without thereby incurring any liability to the affected bidder or bidders.

11. For further information, please refer to:

MISS LIGAYA E. FUENTES
Head, BAC Secretariat
Carlos Hilado Memorial State University
Bidding Room, 2/F Supply and Property Management Bldg.
Brgy. Zone 1, Mabini St.,
Talisay City, Negros Occidental
Email Add.: bac.sec@chmsu.edu.ph
Telephone Nos.: (034) 454-0529; 454-0584 local 142
Mobile No.: 0939-9296624
Website: chmsu.edu.ph

12. You may visit the following websites:

For downloading of Bidding Documents: chmsu.edu.ph

For online bid submission: bac.sec@chmsu.edu.ph

ANDREW EUSEBIO S. TAN, Ph.D.
BAC Chairperson

Line Items

Item No.	Product/Service Name	Description	Quantity	UOM	Budget (PHP)
1	ONE (1) LOT	Upgrading of Electrical Main Line System (Phase 2) - Alijis Campus	1	Lot	1,000,000.00

Pre-bid Conference

Date	Time	Venue
09/07/2024	9:00:00 AM	Bidding Room, 2/F Supply and Property Management Bldg., Brgy. Zone 1, Mabini St., Talisay City, Negros Occidental and or through video conferencing or webcasting via Zoom Meeting with ID No. 797 389 7583, Meeting Password 070924

Created by Rowena De la Vida Prado

Date Created 01/07/2024

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Bids and Awards Committee

INVITATION TO BID
FOR THE UPGRADING OF ELECTRICAL MAIN LINE SYSTEM
(PHASE 2) – ALIJIS CAMPUS
CHMSU 24-026-0701-I

1. The *Carlos Hilado Memorial State University*, through the *Corporate Budget for the Contract of 2024 approved by the governing Board (INCOME/STF),* intends to apply the sum of **ONE MILLION PESOS & 00/100 (Php 1,000,000.00)** being the Approved Budget for the Contract (ABC) to payments under the contract for the **UPGRADING OF ELECTRICAL MAIN LINE SYSTEM (PHASE 2) - ALIJIS CAMPUS**. Bids received in excess of the ABC shall be automatically rejected at bid opening.

2. The *Carlos Hilado Memorial State University* now invites bids for the above Procurement Project. Completion of the Works is required within **Sixty (60) calendar days after receipt of Notice to Proceed.** Bidders should have completed a contract similar to the Project. The description of an eligible bidder is contained in the Bidding Documents, particularly, in Section II (Instructions to Bidders).

3. Bidding will be conducted through open competitive bidding procedures using the non-discretionary "pass/fail" criterion as specified in the 2016 revised Implementing Rules and Regulations (IRR) of Republic Act (RA) No. 9184.

4. Interested bidders may obtain further information from CARLOS HILADO MEMORIAL STATE UNIVERSITY and inspect the Bidding Documents at the address given below from 8:00 A.M. to 5:00 P.M.

5. A complete set of Bidding Documents may be acquired by interested bidders on **July 2 - 23, 2024 (8:30A.M.)** from given address and website/s below and upon payment of the applicable fee for the Bidding Documents, pursuant to the latest Guidelines issued by the GPPB, in the amount of **One Thousand Pesos (Php 1,000.00)**. The Procuring Entity shall allow the bidder to present its proof of payment for the fees.

6. The CHMSU will hold a **Pre-Bid conference** on **9:00 A.M., July 9, 2024** at **Bidding Room, 2/F Supply and Property Management Bldg., Brgy. Zone 1, Mabini St., Talisay City, Negros Occidental** and or through video conferencing or webcasting via **Zoom Meeting with ID No. 797 389 7583, Meeting Password 070924**, which shall be open to prospective bidders.

7. Bids must be duly received by the BAC Secretariat through (i) manual submission at the office address as indicated below, (ii) online or electronic submission as indicated below, or (iii) both on or before **8:30 A.M., July 23, 2024.** Late bids shall not be accepted.

   Bids may be submitted through electronic mail to bac.sec@chmsu.edu.ph provided that the bidding documents are compressed into two (2) separate archived folders (zip or rar format) and which each folder shall be labelled as "First Envelope_Name of Company_Project Reference Number" and "Second Envelope_Name of Company_Project Reference Number" and each is uniquely password-protected;

   Bidders must submit the printed copies (Original, Copy 1 and Copy 2) of their bidding documents within 3 calendar days from bid opening.

8. All Bids must be accompanied by a bid security in any of the acceptable forms and in the amount stated in **ITB** Clause 16.

9. Bid opening shall be on **9:00 A.M., July 23, 2024** at the **Bidding Room, 2/F Supply and Property Management Bldg., Brgy. Zone 1, Mabini St., Talisay City, Negros Occidental** and/or through **Zoom Meeting ID No. 797 389 7583, Meeting Password 072324**. Bids will be opened in the presence of the bidders' representatives who choose to attend the activity.

10. The Carlos Hilado Memorial State University reserves the right to reject any and all bids, declare a failure of bidding, or not award the contract at any time prior to contract award in accordance with Sections 35.6 and 41 of the 2016 revised Implementing Rules and Regulations (IRR) of RA No. 9184, without thereby incurring any liability to the affected bidder or bidders.

11. For further information, please refer to:

MISS LIGAYA E. FUENTES
Head, BAC Secretariat
Carlos Hilado Memorial State University
Bidding Room, 2/F Supply and Property Management Bldg.
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Email Add.: bac.sec@chmsu.edu.ph
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For online bid submission: bac.sec@chmsu.edu.ph

ANDREW EUSEBIO S. TAN, Ph.D.
BAC Chairperson

Section II. Instructions to Bidders

Notes on the Instructions to Bidders

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

1. Scope of Bid

The Procuring Entity, **CARLOS HILADO MEMORIAL STATE UNIVERSITY** invites Bids for the **UPGRADING OF ELECTRICAL MAIN LINE SYSTEM (PHASE 2) - ALIJIS CAMPUS**, with Project Identification Number **CHMSU 24-026-0701-I.**

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

2. Funding Information

2.1. The GOP through the source of funding as indicated below for 2024 in the amount of ***ONE MILLION PESOS & 00/100 (PHP 1,000,000.00).***

2.2. The source of funding is:

a. Special Trust Fund.

3. Bidding Requirements

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

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

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

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

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

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

5. Eligible Bidders

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

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

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

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

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

6. Origin of Associated Goods

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

7. Subcontracts

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

The Procuring Entity has prescribed that:

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

7.1. The Bidder must submit together with its Bid the documentary requirements of the subcontractor(s) complying with the eligibility criterial stated in **ITB** Clause 5 in accordance with Section 23.4 of the 2016 revised IRR of RA No. 9184 pursuant to Section 23.1 thereof.

7.2. The Supplier may identify its subcontractor during the contract implementation stage. Subcontractors identified during the bidding may be changed during the implementation of this Contract. Subcontractors must submit the documentary

requirements under Section 23.1 of the 2016 revised IRR of RA No. 9184 and comply with the eligibility criteria specified in **ITB** Clause 5 to the implementing or end-user unit.

7.3. Subcontracting of any portion of the Project does not relieve the Contractor of any liability or obligation under the Contract. The Supplier will be responsible for the acts, defaults, and negligence of any subcontractor, its agents, servants, or workmen as fully as if these were the Contractor's own acts, defaults, or negligence, or those of its agents, servants, or workmen.

8. Pre-Bid Conference

The Procuring Entity will hold a pre-bid conference for this Project on the specified date and time and either at its physical address **Bidding Room, 2/F Supply and Property Management Bldg., Brgy. Zone 1, Mabini St., Talisay City, Negros Occidental or through Zoom Meeting ID No. 797 389 7583 Meeting Password 070924** as indicated in paragraph 6 of the **IB.**

1. Clarification and Amendment of Bidding Documents

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

2. Documents Comprising the Bid: Eligibility and Technical Components

10.1. The first envelope shall contain the eligibility and technical documents of the Bid as specified in **Section IX. Checklist of Technical and Financial Documents.**

10.2. If the eligibility requirements or statements, the bids, and all other documents for submission to the BAC are in foreign language other than English, it must be accompanied by a translation in English, which shall be authenticated by the appropriate Philippine foreign service establishment, post, or the equivalent office having jurisdiction over the foreign bidder's affairs in the Philippines. For Contracting Parties to the Apostille Convention, only the translated documents shall be authenticated through an apostille pursuant to GPPB Resolution No. 13-2019 dated 23 May 2019. The English translation shall govern, for purposes of interpretation of the bid.

10.3. A valid PCAB License is required, and in case of joint ventures, a valid special PCAB License, and registration for the type and cost of the contract for this Project. Any additional type of Contractor license or permit shall be indicated in the **BDS.**

10.4. A List of Contractor's key personnel (e.g., Project Manager, Project Engineers, Materials Engineers, and Foremen) assigned to the contract to be bid, with their

complete qualification and experience data shall be provided. These key personnel must meet the required minimum years of experience set in the **BDS**.

10.5. A List of Contractor's major equipment units, which are owned, leased, and/or under purchase agreements, supported by proof of ownership, certification of availability of equipment from the equipment lessor/vendor for the duration of the project, as the case may be, must meet the minimum requirements for the contract set in the **BDS**.

3. Documents Comprising the Bid: Financial Component

11.1. The second bid envelope shall contain the financial documents for the Bid as specified in **Section IX. Checklist of Technical and Financial Documents**.

11.2. Any bid exceeding the ABC indicated in paragraph 1 of the **IB** shall not be accepted.

11.3. For Foreign-funded procurement, a ceiling may be applied to bid prices provided the conditions are met under Section 31.2 of the 2016 revised IRR of RA No. 9184.

4. Alternative Bids

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

5. Bid Prices

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

6. Bid and Payment Currencies

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

14.2. *Payment of the contract price shall be made in:*

a. Philippine Pesos.

7. Bid Security

15.1. The Bidder shall submit a Bid Securing Declaration or any form of Bid Security in the amount indicated in the **BDS**, which shall be not less than the percentage of the ABC in accordance with the schedule in the **BDS**.

15.2. The Bid and bid security shall be valid until **November 20, 2024** ***(120 calendar days upon the date of bid opening)***. Any bid not accompanied by an acceptable bid security shall be rejected by the Procuring Entity as non-responsive.

8. Sealing and Marking of Bids

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

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

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

9. Deadline for Submission of Bids

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

10. Opening and Preliminary Examination of Bids

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

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

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

11. Detailed Evaluation and Comparison of Bids

19.1. The Procuring Entity's BAC shall immediately conduct a detailed evaluation of all Bids rated "*passed*" using non-discretionary pass/fail criteria. The BAC shall consider the conditions in the evaluation of Bids under Section 32.2 of 2016 revised IRR of RA No. 9184.

19.2. If the Project allows partial bids, all Bids and combinations of Bids as indicated in the **BDS** shall be received by the same deadline and opened and evaluated simultaneously so as to determine the Bid or combination of Bids offering the lowest calculated cost to the Procuring Entity. Bid Security as required by **ITB** Clause 16 shall be submitted for each contract (lot) separately.

19.3. In all cases, the NFCC computation pursuant to Section 23.4.2.6 of the 2016 revised IRR of RA No. 9184 must be sufficient for the total of the ABCs for all the lots participated in by the prospective Bidder.

12. Post Qualification

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

13. Signing of the Contract

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

Section III. Bid Data Sheet

Notes on the Bid Data Sheet (BDS)

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

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

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

a. Information that specifies and complements provisions of the ITB must be incorporated.

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

Bid Data Sheet

<table>
<tr><th>ITB Clause</th><th></th></tr>
<tr><td>5.2</td><td>For this purpose, contracts similar to the Project refer to contracts which have the same major categories of work, which shall be:
1. Connection and Installation of 3 Phase Electrical Distribution line from new MDP to Feeders
2. New Electrical Post installation
3. Installation of lighting fixtures, exhaust fan, and exhaust pipe for generator
4. Installation of Current Transformer and Lightning Arrester</td></tr>
<tr><td>7.1</td><td>Subcontracting is not allowed</td></tr>
<tr><td>10.3</td><td>Minimum PCAB Registration/ PCAB License

Trade/E – Small A (up to 1 Million)</td></tr>
<tr><td>10.4</td><td>The key personnel must meet the required minimum years of experience set below:
<table>
<tr><th>Key Personnel</th><th>General Experience</th><th>Relevant Experience(years)</th></tr>
<tr><td>1. Project Manager</td><td>Professional Electrical Engineer</td><td>3</td></tr>
<tr><td>2. Project Engineer</td><td>Registered Electrical Engineer</td><td>3</td></tr>
<tr><td>3. Construction Safety and Health Personnel</td><td>With HSE/COSH Training</td><td>3</td></tr>
<tr><td>4. Materials Engineer</td><td>Registered Materials Engineer</td><td>3</td></tr>
<tr><td>5. Foreman</td><td>High school graduate</td><td>2</td></tr>
</table></td></tr>
<tr><td>10.5</td><td>The minimum major equipment requirements are the following:

<table>
<tr><th>Equipment</th><th>Capacity</th><th>Number of Units</th></tr>
<tr><td>Service Vehicle</td><td></td><td>1</td></tr>
<tr><td>Welding Machine</td><td></td><td>1</td></tr>
<tr><td>Hand Drill</td><td></td><td>1</td></tr>
<tr><td>Grinder</td><td></td><td>2</td></tr>
<tr><td>Wiring compression tools</td><td></td><td>1</td></tr>
<tr><td>Megger tester</td><td></td><td>1</td></tr>
<tr><td>Multi Tester</td><td></td><td>1</td></tr>
</table></td></tr>
<tr><td>12</td><td>The Approved Budget for the Contract (ABC) is ONE MILLION PESOS & 00/100 (PhP 1,000,000.00).

Any bid with a financial component exceeding this amount shall not be</td></tr>
</table>

	accepted.
15.1	The bid security shall be in the form of a Bid Securing Declaration or any of the following forms and amounts: a. The amount of not less than **PhP 20,000.00 (2% of ABC)**, if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit; b. The amount of not less than **PhP 50,000.00 (5% of ABC)** if bid security is in Surety Bond.
19.2	Partial bids are not allowed.
20	No further Instructions.
21	Additional contract documents relevant to the Project: 1) Construction Schedule/GANTT Chart (MS Project Format) & S-curve 2) Manpower Schedule 3) Construction Methods 4) Equipment Utilization Schedule 5) Construction Safety and Health Program (approved by the DOLE) 6) PERT/CPM 7) Statement of Cash Flow & Payment Schedule 8) Soft Copy of all submitted documents in PDF File (Submit in USB Flash Drive)

Section IV. General Conditions of Contract

Notes on the General Conditions of Contract

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

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

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

1. Scope of Contract

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

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

2. Sectional Completion of Works

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

3. Possession of Site

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

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

4. The Contractor's Obligations

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

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

5. Performance Security

5.1. Within ten (10) calendar days from receipt of the Notice of Award from the Procuring Entity but in no case later than the signing of the contract by both parties, the successful Bidder shall furnish the performance security in any of the forms prescribed in Section 39 of the 2016 revised IRR.

5.2. The Contractor, by entering into the Contract with the Procuring Entity, acknowledges the right of the Procuring Entity to institute action pursuant to RA No. 3688 against any subcontractor be they an individual, firm, partnership, corporation, or association supplying the Contractor with labor, materials and/or equipment for the performance of this Contract.

6. Site Investigation Reports

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

7. Warranty

7.1. In case the Contractor fails to undertake the repair works under Section 62.2.2 of the 2016 revised IRR, the Procuring Entity shall forfeit its performance security, subject its property(ies) to attachment or garnishment proceedings, and perpetually disqualify it from participating in any public bidding. All payables of the GOP in his favor shall be offset to recover the costs.

7.2. The warranty against Structural Defects/Failures, except that occasioned-on force majeure, shall cover the period from the date of issuance of the Certificate of Final Acceptance by the Procuring Entity. Specific duration of the warranty is found in the **SCC**.

8. Liability of the Contractor

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

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

9. Termination for Other Causes

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

10. Dayworks

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

11. Program of Work

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

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

12. Instructions, Inspections and Audits

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

13. Advance Payment

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

14. Progress Payments

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

15. Operating and Maintenance Manuals

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

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

Section V. Special Conditions of Contract

Notes on the Special Conditions of Contract

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

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

a. Information that complements provisions of the GCC must be incorporated.

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

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

Special Conditions of Contract

<table>
<tr><th>GCC Clause</th><th></th></tr>
<tr><td>2</td><td>The Intended Completion Date is

60 calendar days upon receipt of the Notice to Proceed
NOTE: The contract duration shall be reckoned from the start date and not from contract effectivity date.</td></tr>
<tr><td>4.1</td><td>The CHMSU shall give possession of all parts of the Site to the Contractor upon receipt of Notice to Proceed by the latter.</td></tr>
<tr><td>6</td><td>No further instruction</td></tr>
<tr><td>7.2</td><td>[In case of semi-permanent structures, such as buildings of types 1, 2, and 3 as classified under the National Building Code of the Philippines, concrete/asphalt roads, concrete river control, drainage, irrigation lined canals, river landing, deep wells, rock causeway, pedestrian overpass, and other similar semi-permanent structures:] Five (5) years.</td></tr>
<tr><td>8</td><td>The Contractor shall employ the following Key Personnel as stated in the BDS.

1. Project Engineer
2. Construction Safety and Health personnel
3. Materials Engineer
4. Foreman

The contractor must ensure that nominated and duly approved key personnel will not be demobilized from site unless replacement is duly evaluated and approved.

The non-availability of the following key personnel from the project site will be subject to penalty/deduction from the next billing:

<table>
<tr><th>No.</th><th>Key Personnel</th><th>Amount of Deduction per Day of Non-appearance</th></tr>
<tr><td>2.</td><td>Project Engineer</td><td>P800</td></tr>
<tr><td>3.</td><td>Construction Safety and Health Personnel</td><td>P700</td></tr>
<tr><td>4.</td><td>Foreman</td><td>P500</td></tr>
</table>
The following condition will be ground for withholding of payment for the next billing.
1. Poor supervision and inaction of the concerned contractor to the items and points included on Site Observation Reports</td></tr>
</table>

	(SOR's), Official Letters and other form of instructions and reports related to any observed non-conformity and non-compliance to the relevant clauses of the contract and the technical specifications – P500/ point. 2. Prescribed (PPE's) Personal Protective Equipment 3.a No safety hats – P500/worker/day of occurrence 3.b No safety shoes – P500/worker/day of occurrence 3.c Non- availability or improper use of the body harness and other life-saving equipment on site – P500/worker/day of occurrence. 3.d. Non wearing of face mask – P500/worker/day of occurrence. 3. Non-conformance to the Construction Safety Guidelines for the implementation of all DPWH Infrastructure Projects During the COVID-19 Public Health Crisis (DPWH DO. 35 s.2020) – P2,500/day of occurrence. 4. Non-conformance to school guidelines especially the non-smoking policy – P500/day of occurrence. 5. Implementation of critical works without permit such as concrete pouring, installation of devices, wires and conduits without prior samples and approval and other forms of work – Php5,000.00/point. 6. Non-submission of reports such as but not limited to, the Daily Reports and Look Ahead Schedules– Php. 500.00/day of occurrence and delay. 7. Non-submission of brochures and samples of materials prior to installation at site and installation of unapproved materials – Php. 5,000/point. 8. Non-availability of pledged equipment and manpower at site. – Php. 500.00/day of occurrence. 9. Non-Compliance to the college rules and regulations especially on the non-smoking policy – P500.00/occurrence.
10	a. No day works are applicable to the contract.
11.1	The Contractor shall submit the Program of Work to the Procuring Entity's Representative within 7 days of delivery of the Notice of Award.
11.2	The period of Program of Work updates is every fifteen (15) days. The amount to be withheld for late submission of an updated Program of Work is FIFTEEN THOUSAND PESOS (Php15,000.00) only. Other

	relevant rules and regulations as well as communication protocol shall be discussed during the pre-bid conference and shall form part of the contract. Copy of which given to the contractor on the date for the conduct of the pre-construction conference.
13	No advance payment will be given to the contractor.
14	*No further instructions*
15.1	The date by which operating and maintenance manuals are required during the commissioning of each of the equipment to be installed by the contractor. The date by which "as built" drawings are required will be before the processing of the occupancy permit or fifteen (15) calendar days from the final handing over whichever comes earlier.
15.2	The amount to be withheld for failing to produce "as built" drawings and/or operating and maintenance manuals by the date required is TWENTY-FIVE THOUSAND PESOS (Php25,000.00) ONLY for each requirement.

ELECTRICAL WORKS

SCOPE OF WORK

The work under this Division consist of furnishing all material, equipment, tools labors and all other services necessary to complete and make ready for operations the Electrical Power and Lighting System described below and or indicated in the Electrical Plans in accordance with the latest edition of the Philippine Electrical Code and this Specification and General Condition of the Contract.

I. CONSTRUCTION REQUIREMENTS

1. Furnishing and installation of underground service entrance, conduits and conductors, and all items required by local utility power company's policy, rules and regulations.
2. Furnishing and installation of panel boards at location indicated on the plan and electrical riser layout, including all accessories required.
3. Furnishing and installation of feeder and branch circuit conductors with the necessary conduits, approved type of fittings and devices as indicated in the electrical plans.
4. Furnishing and installation of all types of utilization devices, outlets and wall switches with properly installed cover plate.
5. Furnishing of all lighting fixtures, conduits, including service entrance duct, terminal cabinet and utility boxes.

II. CODES, REGULATIONS AND STANDARDS

The installation and equipment shall conform to good engineering practices and in particular comply with the requirements laid down in the following documents or its equivalent which are mandatory and modified only by specific agreement.

i. Philippine Electrical Code ---------- PEC
ii. Underwriter's Laboratory, Inc. ------- UL
iii. National Electrical Manufacturers
iv. Association ---------- NEMA
v. Local Utility Power Company --------- LUPC

In addition to the requirements of these Codes and the Utility Power Company's requirements, local government regulations and suppliers Specifications if any, shall be followed.

III. DRAWINGS AND SPECIFICATIONS

1. The drawings and Specifications are meant to be complementary to each other, and what is called for by one shall be binding as if called for both.
2. Any apparent conflict between the drawings and specifications, and any controversial or unclear points in either should be referred to the supervising Project Management Team for final interpretation and decisions.
3. On one copy of the plans, have a record showing all deviations that happened during the construction.
4. Upon completion of work as described herein, the Contractor at his own expense shall furnish the Owner 6 copies of the "As Built" plan for future references and maintenance purposes.

IV. CORRELATION OF WORK

1. The Electrical Contractor shall confer with the General Contractor and Architect to determine how and where his work fits with that of other crafts, after familiarizing himself with the plans and specifications.

2. This shall be done at the beginning of construction. Should there be any existing doubts at any point, ruling shall be secured from the supervising Architect or Engineer who shall be given time to inspect the work covering this point and to prepare a detail in the form of drawings and written instructions as required.

V. PERMITS AND INSPECTION

1. The Contractor shall obtain at his own expense, all the necessary permits and certificate Of Electrical Inspection from the proper government authorities required for both the performance of his work involved and the proper operation of the system upon completion of the work.

2. The Contractor shall at his expense reproduce the electrical plans for his work to the necessary scale and complete those with the information and requirements as required by the government authorities concerned in issuing permits and Certificate of Electrical Inspection.

VI. EXAMINATION OF PREMISES

1. Prospective bidders are required to examine the architectural, structural, and electrical plans of the project, to visit the site and carefully take note of all the conditions thereat to have personally informed under which the electrical work is to be done.

2. No allowance will subsequently be made in his behalf of any error on his part. He will be deemed to have done this before submitting his proposal and no subsequent claims on the grounds of inadequate or inaccurate information will be entertained.

VII. LAYOUT OF WORK

1. Electrical system layout indicated on the drawings are generally diagrammatic and the location of outlets, devices, apparatus and equipment are only approximate.

2. The exact routing of conduits, location of outlets, devices, apparatus and equipment shall be governed by structural and architectural conditions and limitations.

3. For the exact location, consult the supervising Architect or Engineer. This does not mean permitting redesigning of the systems. All outlets are to be interconnected as indicated in the drawings.

4. The Owner reserves the right to make any reasonable changes in the location of the outlet and equipment prior to rough-in, without involving additional expenses.

5. The Contractor shall be responsible and pay charges for cutting and patching for piping lines where sleeves or slots were not installed or where incorrectly located.

VIII. MATERIALS AND WORKMANSHIP

1. All materials to be installed shall be unused, brand new and shall conform to the standards being set. In every case where such a standard has been established for the particular type of materials to be used.

2. Only the skilled workmen using proper tools and equipment shall be employed during the entire course of installation work.

3. All workmanship shall be of the best practices of the trade involved. The same job foreman shall be assigned and maintained at the job site during the entire course of the job.

IX. UNDERGROUND SERVICE ENTRANCE

1. The Electrical Contractor shall furnish and install 220-volt current rating, 3-Phase line underground service entrance connection.

2. The service entrance conductors shall be thermoplastic type THW standard copper conductors, stranded, whose number and size are indicated on the plans and electrical riser diagram.

3. The underground service shall then be encased with concrete at least 8 centimeters thick.

X. SERVICE METERING FACILITIES

1. The Contractor shall furnish and install a concrete pedestal pole size 30cm x 30cm x 5.50m in the location shown in the plan and electrical diagram including line accessories and hardware in accordance with the local power company's standards.

2. It shall be the duty of the Contractor to request the local power company to install a proper type and size of service metering instruments and all other necessary accessories, materials, equipment, devices and fittings.

XI. PANELBOARDS

1. The Contractor shall furnish and install the necessary panel boards multi-breaker type including the breakers as indicated in the drawings.

2. Circuit breakers shall be tropical of the magnetic thermal type with ratings and number of poles as indicated in the drawings.

3. All panel boards to be used shall be flush mounted when located in areas that are visible to the general public and may be surface mounted when located in machine room or areas where they are not visible to the public.

4. All panel boards shall be set plumb and symmetrical with the surrounding objects. Panel boards shall be installed in a perfectly fit cabinet of appropriate size provided with a stop in-door trim and good quality cylinder lock.

XII. CONDUIT WORK

1. Standard PVC conduit pipe system is required for this project.

2. Conduit runs shall be concealed in droop ceiling and or embedded in concrete structure where concealment is not possible.

3. No conduit of less than 15mm normal diameter shall be installed for this project. Two or more conduits shall not be installed in leg.

4. Conduit run shall be continuous from outlet and no running thread shall be in any conduit run. Conduit shall be cut squared and properly reamed.

5. All joints shall be screwed enter knockouts of conduit boxes, pull boxes, panels and cabinet squarely. Lock-nuts shall be screwed tight to ensure continuity of raceway grounding.

6. Bonds and offset shall be avoided where possible, but where necessary it shall be made with approved conduit bending apparatus.

7. Conduits which have been deformed or crushed in any manner should not be installed.

8. The Contractor shall plug with lead or closed with approved pipe caps the ends of all conduits which are to be left empty within the cabinets and conduit boxes so as to prevent the entrance of white ants and dirt within the conduit system.

9. This lead or cap shall be placed that can be easily removed when so desired and at the same time serve the purpose intended.

10. Pull wire shall be inserted in the empty ducts before they are closed with lead or caps and shall be left therein for future use.

11. When not shown on the plans, conduit sizes shall correspond to the conduit sizes on tables of the Philippine Electrical Code latest edition.

XIII. FEEDERS AND FEEDER DUCTS

1. Feeder shall be laid out in accordance with the on-line diagram shown in the drawings.

2. Unless otherwise specified or shown on the drawings, Type THW wires shall be used for feeder runs. The wires and conduit shown in the drawings shall be the minimum size to be used for feeder runs.

XIV. WIRING METHODS

1. Wiring for all systems shall be THW or TW conductors using plastic conduit pipes other types of conductor shall be as indicated in the drawings.

2. Conduit shall be embedded in columns, walls and toppings of floors slabs to allow flush connections and lighting system which may be exposed between joints in case a drop ceiling is installed.

3. Proper fittings shall be provided at ends of conduits. Wiring installations through wooden double partitions shall be in standard PVC conduits, and in all cases, the wiring installation shall be concealed from view.

4. All conduit and conduit fittings shall be PVC and shall conform with the U.S. Underwriter's Laboratories Inc. Standard and Codes.

5. The minimum size of Conduit to be used shall be 13 mm diameter. Sizes larger shall be indicated in the drawings.

6. Smallest size of conductor to be used shall be 2.0 mm^2, type TW or THW. TW wire shall be indicated in the drawings.

7. Circuit homeruns for lighting shall be 3.5 mm^2, for the power or otherwise indicated on the plans.

8. All splices, tape and junctions for all systems using conductors up to 14mm^2 shall be accomplished by using electrical friction or rubber tapes.

9. Proper type of connections shall be employed to accommodate all splices and solderless type terminals to be used for connection to Busbar.

10. Taps and splices shall be properly protected with both plastic and friction electrical tapes to proper insulation and protection for 600 volts.

11. Wiring from ceiling outlets to light fixtures recessed in dropped ceilings shall be done using type TW conductors in RS or PVC conduits.

12. Proper size of boxes shall be used for switch and outlet receptables.

13. Necessary fittings such as bushing, locknuts anti-short fiber bushing shall be used at proper places so required.

14. When not shown on the Plans, conduit sizes shall correspond to the conduit sizes as prescribed in the Philippine Electrical Code table for "Size of Conduit Pipes".

XV. OUTLETS AND SWITCHES

1. All boxes for outlets and switches shall be PVC or galvanized iron approved products of reputable manufacturers.

2. Enamel coating used in lieu of zinc coating shall not be permitted.

3. All ceiling outlet boxes intended for lighting outlets shall be of the 10 cm octagonal box. Larger boxes when required shall be 5.3 cm deep.

4. Convenience and wall switch outlet boxes shall be of the 10 cm by 5.3 cm rectangular deep flush type or 100 square cm junction box with gang raised cover as required to accommodate the wires therein.

5. All junction boxes, pull boxes and blank boxes shall be fitted with standard flat metal or plastic box cover.

6. All boxes including junction and pull boxes shall be of sufficient size to provide free space for all conductors enclosed in the box, in addition to the fittings such as switch mechanism and receptables that may be placed therein.

XVI. WALL SWITCHES AND RECEPTABLES

1. Suitable single pole, two-gang, three-gang and three-way switches of the flush number type and receptables with proper Bakelite cover plates shall be furnished and installed as indicated in the drawings.

2. Wall switches intended to control lights on the 230 volts system shall be rated 15 amp. 250 volts.

3. Convenience outlets shall be flushed duplex type rated 20 amperes 230 volts 60 Hz., AC.

XVII. ROUNDING INSTALLATION

1. The Contractor shall furnish and install all ground cables, connection ground rods and all other materials required to provide a permanent effective grounding system.
2. Grounding, in general, shall conform with the provisions of the National Electrical Code and as recommended by the equipment manufacturer.
3. All enclosures for electrical equipment regardless of voltage shall be grounded, including metal frames of switchboard, motors, generators and steel poles. Each shall be grounded in a separate grounding system.
4. Grounding cables shall be bare, copper of suitable size and of the approved type. Ground rods shall be copper clad steel with diameter of 16mm and length of 2.0 m.
5. Ground clamps shall be of high compression, solderless cast design frame of high copper alloy bronze with minimum thickness of 4.7 mm and hardware made from silicon bronze.
6. The clamps shall be of a shape and size to fit the points of application and type of application and type of connection to be made from cable to rod, pipe and curved or flat surfaces. Connectors shall be suitable for direct burial without danger of corrosion.

Page 5

XVIII. LIGHTING OUTLETS

All ceiling outlets shall be 10 cm x 5 cm octagonal boxes. Connection from fixtures to boxes shall be accomplished by using type TW conductors on a flexible conduit.

XIX. LIGHTING FIXTURES

All lighting fixtures shall be furnished and installation by the contractor. They shall be as shown on the drawings or specified on the schedule of lighting fixtures. For other details as to the types and model, consult the Architect or the Engineer.

XX. TEST AND GUARANTEE

1. The Contractor shall furnish all apparatus to be used in making tests of all wiring system for shorts and grounds after the electrical work is completed.

2. The Contractor guarantees all work installed under the Contract to be free from all defects for a period of one year after acceptance of the works. The Contractor also agrees to repair and make at his own expense any and all defects which may develop in his work during the time if said defects arise due to poor workmanship.

XXI. POWER LOAD CENTER

This item shall consist of furnishing and installation of the power load centre unit substation or low voltage switchgear and distribution panel boards at the location shown on the Plans complete with the transformer, circuit breakers, cabinets and all accessories, completely wired and ready for service.

1. Material Requirements

All materials shall be brand new an shall be of the approved type. It shall conform with the requirements of the Philippine Electrical Code and shall bear the Philippine Standard Agency (PSA) mark.

2. Power Load Center Unit Substation

The Contractor shall furnish and install an indoor type power load center unit substation at the location shown on the approved Plans if required. It shall be totally metal enclosed, deadfront and shall consist of the following coordinated component parts.

High Voltage Primary incoming line section consisting of the following parts and related accessories.
One air filled interrupter Switch, 2-position (open-close) installed in a suitable air filled metal enclosure and shall have sufficient interrupting capacity to carry the electrical load.
It shall be provided with key interlock with the cubicle for the power fuses to prevent access to the fuses unless the switch is open.
Three (3) power fuses mounted in separate compartments within the switch housing and accessible by hinged door.
One set of high voltage potheads or 3-conductor cable or three single conductor cables. Lightning arresters shall be installed at the high voltage cubicle if required.*Note: Item 1 and 2 could be substituted with a power circuit breaker with the correct rating and capacity.*

3. Transformer Section

The Transformer section shall consist of a power transformer with ratings and capacities as shown on the Plans.

It shall be oil liquid filled non-flammable type and designed in accordance with the latest applicable standards.

The transformer shall be provided with four (4) approximately 2.5% rated KVA taps on the primary winding in most cases one above and 3 below rated primary voltage to be changed by means of externally gang-operated manual tap changer only when the transformer is energized.

The following accessories shall be provided with the transformer, namely: drain valve, sampling device, filling connection, oil liquid level gauge, ground pad, top filter press connection, lifting lugs, diagrammatic nameplate, relief valve, thermometer and other necessary related accessories.

The high voltage and low voltage bushing transition flange shall be properly coordinated to field connection to the incoming line section and low voltage switchboard section, respectively.

4. The Low Voltage Switchboard Section

Switchboard Housing – shall be heavy gauge steel sheet, dead front type gray enamel finish complete with frame supports, steel bracings, steel sheet panelboard, removable rear plates, copper busbars, and all other necessary accessories to insure sufficient mechanical strength and safety. It shall be provided with grounding bolts and clamps.

Secondary metering sections – shall consist of one ammeter AC, indicating type; one ammeter transfer switch for 3-phase; one voltmeter transfer switch for 3-phase; and current transformers of suitable rating and capacity. The above instruments shall be installed in one compartment above the main breaker and shall be complete with all necessary accessories completely wired ready for use.

Main Circuit Breaker – The main circuit breaker shall be draw-out type, manually or electrically operated as required with ratings and capacity as shown on the Plans. The main breaker shall include insulation control switch if electrically operated, manual tip button, magnetic tripping devices, adjustable time overcurrent protection and instantaneous short circuit trip and all necessary accessories to insure safe and efficient operation.

Feeder Circuit Breaker – There shall be as many feeder breakers as are shown on the single line diagram or schematic riser diagram and schedule of loads and computations on the Plans.

The circuit breakers shall be draw out or moulded case as required. The circuit breakers shall each have sufficient interrupting capacity and shall be manually operated complete with trip devices and all necessary accessories to insure safe and efficient operation. The number, ratings, capacities of the feeder branch circuit breakers shall be as shown on the approved plan.

Circuit breakers shall each be of the indicating type, providing "ON" and "OFF" and "TRIP" positions of the operating handles and shall each be provided with nameplate for branch circuit designation.
Circuit breaker shall be so designed that an overload or short on one pole automatically causes all poles to open.

Low Voltage Switchgear – (For projects requiring low voltage switchgear only).The Contractor shall furnish and install a low-voltage switchgear at the location shown on the plans. It shall be e metal-clad, dead front, free standing, safety type construction and shall have copper busbars of sufficient size, braced to resist allowable root mean square (RMS) symmetrical short circuit stresses, and all necessary accessories. The low-voltage switchgear shall consist of the switchgear housing, secondary metering, main breaker and feeder branch circuit. Breakers and all necessary accessories, completely wired, ready for service.

Grounding System – All non-current carrying metallic parts like conduits, cabinets and equipment frames shall be properly grounded in accordance with the Philippine Electrical Code, latest edition. The size of the ground rods and ground wires shall be as shown on the approved plan. The ground resistance shall not be more than 5 Ohms.

Panel Board and Cabinets – shall conform to the schedule of panel boards as shown on the approved plan with respect to supply characteristics., rating of main lugs or main circuit breaker, number and ratings and capacities of branch circuit breakers.

Panel board shall consist of a factory completed dead front assembly mounted in an enclosing flush type cabinet consisting of code gauge galvanized sheet steel box with trim and door.
Each door shall be provided with catch lock and two (2) keys.
Panel board shall be provided with directories and shall be p printed to indicate load served by each circuit.
Panel board cabinets and trim shall be suitable for the type of mounting shown on the approved plan. The inside and outside of panel board cabinets and trims shall be factory painted with one rust proofing primer coat and two finish shop coats of pearl gray enamel paint.
The main and branch circuit breakers for panel boards shall have the rating, capacity and number of poles as shown on the approved plan.
Breaker shall be thermal magnetic type. Multiple breaker shall be of the common trip type having a single operating handle.
For 50-ampere breaker or less, it may consist of single pole breaker permanently assembled at the factory into a multi-pole unit.

XXII. CONSTRUCTION REQUIREMENTS

The Contractor shall install the Power Load Centre Unit Sub-station or Low Voltage Switchgear and Panel boards at the locations shown on the approved Plan.
Standard panels and cabinets shall be used and assembled on the job. All panels shall be of dead front construction furnished with trims for flush or surface mounting as required.

XXIII. METHODS OF MEASUREMENT

The work under this Item shall be measured either by set and pieces actually placed and installed as shown on the Plans.

TERMS OF REFERENCE

PROJECT: UPGRADING OF ELECTRICAL MAIN LINE SYSTEM (PHASE 2), ALIJIS CAMPUS

I. BACKGROUND:

This project outlines the Objectives, Scope, and Deliverables of upgrading the electrical main system, which aims to meet the growing energy demands and improve operational efficiency of the electrical system at CHMSU-Alijis. Specifically, the project will focus on the continuation of the project upgrading of electrical main line system phase 1, aiming to ensure a sufficient, reliable, and uninterrupted power supply, which is vital for the continuous operation of campus facilities. By addressing existing limitations and expanding the system's capacity, the project will support increased electrical loads and future growth.

Additionally, the project emphasized safety, incorporating modern safety standards and practices to protect both personnel and equipment. Upgrading the electrical main line system also aims to reduce maintenance costs and operational downtimes, thereby enhancing overall system performance.

The project involves installation and connection of new wiring, electrical posts, lighting fixtures, installation of generator extended exhaust pipe, and replacement of defective primary high-voltage current transformers and lightning arrester. This project represents a significant step forward in modernizing the electrical infrastructure, laying a strong foundation for future expansions and technological advancements.

II. Objectives

The primary objectives of Phase 2 are:

1. **Upgrade and expand the electrical distribution system** to support higher load capacities and improve overall reliability.
2. **Optimize operational efficiency** by reducing downtime and maintenance requirements.
3. **Ensure compliance with updated electrical safety standards**, minimizing occupational hazards and ensuring the safety of personnel and equipment.
4. **Improve the capacity of electrical feeders** to accommodate the power requirements of all existing and future building loads.

III. Project Scope

The scope of work for the Upgrading of Electrical Main Line System Phase 2 includes the following detailed components:

1.0 General Requirements

1.1 Mobilization and Demobilization of Equipment and Personnel
- a. Mobilizing all necessary equipment, machinery, and personnel required for the project.

1.2 Site Clearing, Cleaning, and Hauling (Chipping of Wall for Exhaust Fan)
- a. Preparing the site by clearing, cleaning, and performing demolition work as necessary, including wall chipping for exhaust fan installation.
- b. Sire Clearing, Cleaning, and Hauling of all construction debris and other waste material before project turn-over.

1.3 Safety Occupational Hazards
- a. Implementing comprehensive safety measures to mitigate occupational hazards throughout the project.

2.0 Connection and Installation of 3 Phase Electrical Distribution Line

2.1 Disconnection of existing Power Supply wires from 3 x 50 KVA Transformers, and energizing the new MDP existing power supply from 3 x 167 KVA Transformers.

2.2 Installation and Connection of New Wiring from New MDP to Feeder 4 (Workshop)
- a. Supply, installation, and connection of new 3 x 100 sq. mm THW wire from the new main distribution panel (MDP) 315-Amp Circuit Breaker to Feeder 4, up to the new electrical post, in preparation for serving the workshop.

2.3 Replacement and Connection of New Wiring from Feeder 3 (3 Storey Lab - Service Entrance) to New MDP
- a. Replacing the existing 4(3 x 14 sqmm) wires, and installing new 3 x 100 sq. mm THW wire from Feeder 3, which services a three-storey laboratory, and connect to the new MDP 315-Amp CB.

2.4 Realignment and Connection of New Wiring from Feeder 2 Line to New MDP
- a. Supply, realigning, and connect new separate 2(3 x 150 sq. Mm) ACSR wires from Feeder 2 to the new MDP for optimized power distribution, and connecting each wire to the new MDP 315 Amp CB's (These will become Feeder 1 and Feeder 2).

3.0 New Electrical Post

3.1 Installation of New Concrete Electrical Post
- a. Conduct soil excavation, supply and installation of 1 pc 9-meters new concrete electrical post with cross-arm and insulators, to support the upgraded electrical distribution lines.

b. Transferring and installation of wiring to new and existing electrical post for feeders 1, 2, and 4.
c. Realignment of the existing CENECO electrical post outside the powerhouse.

3.2 Installation of Secondary Rack and Anchor Guy to Existing/New Electrical Post

a. Supply and installation of 3 heavy duty spool secondary racks with spool insulator and heavy duty guy anchor rod set to both new and existing electrical posts for enhanced stability and support.
b. Supply and installation of terminal connectors, tie-wires, insulating tape, rubber insulation tape, split bolt and other accessories.

4.0 New Lighting and Fixtures to Powerhouse

4.1 Installation of Exhaust Fan in the Electrical Room, and extended Exhaust Pipe-Muffler for the existing Diesel Generator

a. Supply and installation of industrial exhaust fan with grills, and exhaust muffler for generator (ducting) with parts including complete accessories to manage generator smoke emissions effectively.

4.2 Installation of Additional Lighting and Duplex Convenience Outlet

a. Supply and installation of 3 pcs new 18-watts tube lighting LED T8 cool daylight with housing and complete accessories enhancing lighting within the powerhouse for better visibility and operational efficiency; Supply and install I pc DCO; Supply and install a 2-pole CB in the new MDP to supply the lighting fixtures and DCO with 2 x 3.5 mm THHN wires, and with 2-gang light switch.
b. Supply and install supply wires 3 x 3.5 sq mm and a 2-pole circuit breaker for the above installations,

5.0 Supply and Installation of CT's and Lightning Arrester

a. Removal of the existing defective three current transformers and lightning arrester, including hauling of the materials.
b. Request and retrieve the list of the required ratings from the local power provider for the current transformers and lightning arrester to be supplied and installed, and other accessories required.
c. Provide and install the three new CT's and Lightning Arrester with rating approved and recommended by the local power provider to monitor and control electrical currents.
d. Process and pay the Local Power Provider the required fees for the testing of the three (3) new current transformers and (1) Lightning Arrester.

6.0 Miscellaneous Works

a. Conducting various additional works as necessary to complete the project successfully.

b. Conduct comprehensive testing and commissioning of the upgraded electrical system to ensure its reliability, efficiency, and safety.

c. Training of personnel to ensure that they have the necessary knowledge and skills to operate and maintain the upgraded electrical system.

*Note: Please see Bill of Quantities and for construction drawings for more detailed scope.

IV. SUMMARY of DELIVERABLES:

The following deliverables are expected as part of the electrical system upgrade project:

1. A comprehensive project plan documents such as Scope with PERT-CPM/timeline, cash flow, Manpower Utilization, Equipment Utilization and Approved Materials Forms conform to the quality standards for the project.
2. Connect the 3 phase distribution lines to the new MDP feeder CB's.
3. Provide new concrete electrical post including additional support of the new and existing post for the upgraded electrical distribution lines as indicated on plan.
4. Provide exhaust muffler for generator including industrial exhaust fan with grill for ventilation.
5. Improvement of lighting illumination of the powerhouse by providing additional lighting fixtures, and provide a Duplex Convenience outlet.
6. Documentation of any modifications made to the existing electrical system to ensure compatibility with the upgraded electrical main line.
7. Comprehensive testing and commissioning reports to ensure that the upgraded electrical system meets all required reliability, efficiency, and safety standards.
8. A training plan for personnel to ensure that they have the necessary knowledge and skills to operate and maintain the upgraded electrical system.

V. TIMELINE and MILESTONES

The timeline for the electrical system upgrade project shall not be more than **60 Calendar Days**.

Below are the following tentative milestones for each scope of the project and may vary depends on contractor's projection:

1. Mobilization, processing of permits including the request and retrieval of the list of required ratings of the current transformer and lightning arrester from the local power provider, and implementation of safety measures.
2. Procurement, delivery, and installation of wires, concrete post, lighting fixtures and switches, industrial exhaust fan, secondary rack 3 spool with spool insulator, connectors and accessories. Implementation of safety measures.
3. Removal of the 3 defective current transformers and lightning arrester. Implementation of safety measures.

4. Procurement and installation of exhaust muffler generator (ducting) with parts and other accessories. Implementation of safety measures.
5. Procurement of the three current transformers and lightning arrester including the request for testing of the materials and payment of fees from the local power provider. Implementation of safety measures.
6. Connection and installation of 3 phase electrical distribution line from new MDP to feeders including replacement and realignment. Implementation of safety measures.
7. Installation of the tested and recommended current transformers and lightning arrester. Implementation of safety measures.
8. Procurement and installation of new cross type concrete electrical post including guy anchor rod set and other accessories. Implementation of safety measures.
9. Testing and commissioning of the upgraded electrical system. Implementation of safety measures.
10. Conduct training and orientation for CHMSU end-user and maintenance personnel. Implementation of safety measures.
11. Site clearing, cleaning, hauling of construction materials and debris. Demobilization of equipment and personnel. Implementation of safety measures.

*Note: Please see Construction Gantt Chart for the detailed tentative milestones for each scope of the project.

VI. QUALITY STANDARDS:

The upgraded electrical system must meet all relevant regulatory and safety standards, including but not limited to:

1. Philippine Electrical Code (PEC) standards
2. Underwriter's Laboratory, Inc. (UL) standards
3. National Electrical Manufacturers Association (NEMA) standards
4. Local Utility Power Company (LUPC) Standards

The upgraded electrical main line must also meet the following quality standards:

1. High reliability
2. High efficiency
3. Easy maintenance
4. Long service life

VII. PROJECT MANAGEMENT:

1. Only Contractor that has PCAB licensed in Electrical Works can undertake the said project with experience in installation of electrical main lines.

2. The project shall be managed by a dedicated Project Manager (Professional Electrical Engineer to be specific) who will oversee all aspects of the project, procurement, implementation, testing, and commissioning.

3. The Project Manager shall be responsible for ensuring that the project is completed within the specified timeline while meeting all required quality standards.

VIII. REPORTING AND COMMUNICATION:

1. Weekly progress reports shall be provided to the PPDM Office for information of the project's status, milestones, and any issues that may arise.

2. The project manager shall also maintain regular communication with the PPDM Electrical Engineer to ensure that expectations are met and that any concerns are addressed promptly.

3. The Project Manager shall be responsible for ensuring that all changes are properly documented and implemented in accordance with the approved project plan.

Prepared by:

ENGR. MIRABELLA DI BASTIDA
PPDM Contracts Engineer

Checked by:

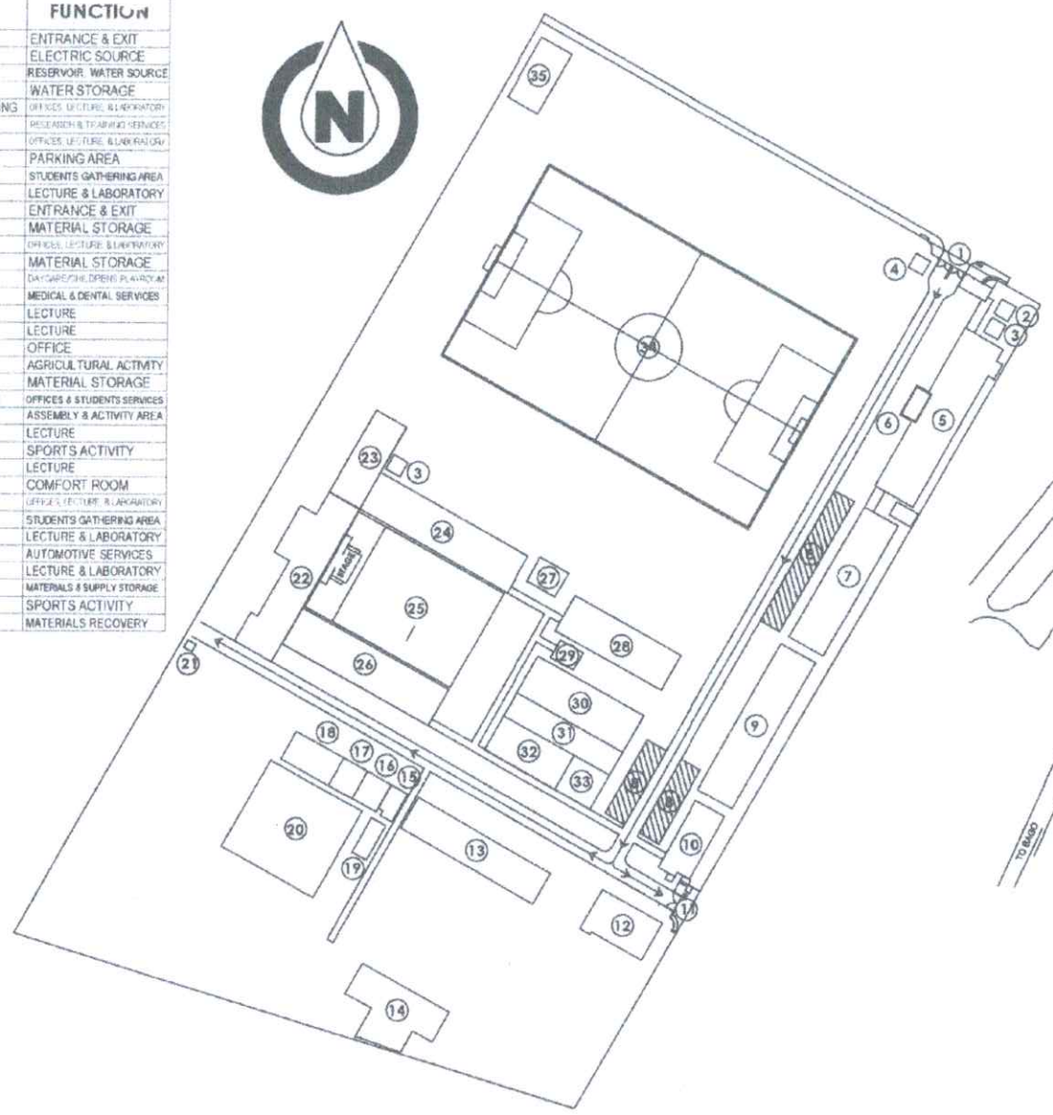
ENGR. PANFILO DESQUITADO
PPDM Electrical Engineer

Noted by:

ENGR. JESTONI ALVARAN
GSO Administrative Officer IV

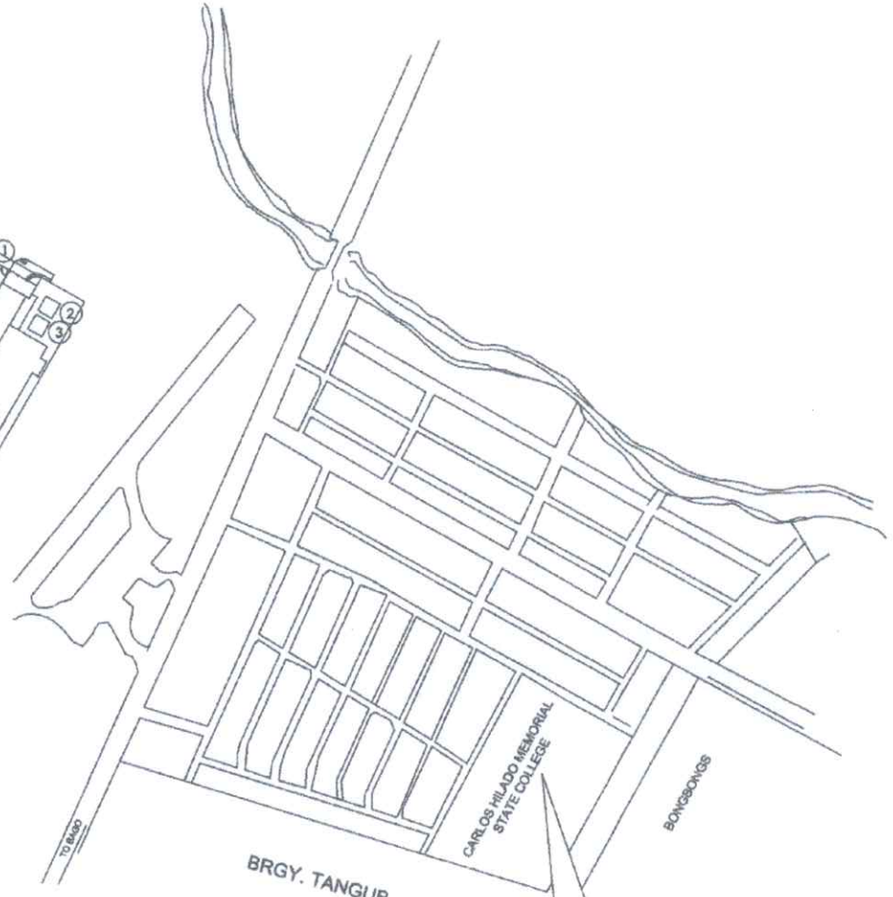
ENGR. JUN-JUN MARQUEZ
PPDM Director

NO.	BUILDING DESCRIPTION	FUNCTION
01	GATE 1	ENTRANCE & EXIT
02	GENERATOR SET	ELECTRIC SOURCE
03	WATER TANK	RESERVOIR, WATER SOURCE
04	CISTERN TANK	WATER STORAGE
05	TWO STOREY SCIENCE & TECHNOLOGY BUILDING	OFFICES, LECTURE, & LABORATORY
06	RESEARCH AND DEVELOPMENT CENTER FOR AQUACULTURE AND MARINE BIODIVERSITY	RESEARCH & TRAINING SERVICES
07	THREE STOREY LABORATORY BUILDING	OFFICES, LECTURE, & LABORATORY
08	PARKING SPACE	PARKING AREA
09	STUDENTS OPEN SPACE	STUDENTS GATHERING AREA
10	INTERNET LABORATORY BUILDING	LECTURE & LABORATORY
11	GATE 2	ENTRANCE & EXIT
12	STOCKROOM	MATERIAL STORAGE
13	TWO STOREY ACADEMIC BUILDING 1	OFFICES, LECTURE & LABORATORY
14	STOCKROOM	MATERIAL STORAGE
15	CHILD MINDING CENTER	DAYCARE/CHILDRENS PLAYROOM
16	MEDICAL & DENTAL CENTER	MEDICAL & DENTAL SERVICES
17	MM2 BUILDING	LECTURE
18	MM3 & MM4 BUILDING	LECTURE
19	ALUMNI BUILDING	OFFICE
20	VEGGIE FARM	AGRICULTURAL ACTIVITY
21	STOCKROOM	MATERIAL STORAGE
22	CASHIER, FACULTY ROOM, LIBRARY, & GUIDANCE OFFICE	OFFICES & STUDENTS SERVICES
23	AUDIO VISUAL ROOM	ASSEMBLY & ACTIVITY AREA
24	ACADEMIC BUILDING 2	LECTURE
25	COVERED COURT	SPORTS ACTIVITY
26	ACADEMIC BUILDING 2	LECTURE
27	PUBLIC TOILET & BATH	COMFORT ROOM
28	TWO STOREY TVEP BUILDING	OFFICES, LECTURE, & LABORATORY
29	STUDENTS GATHERING AREA	STUDENTS GATHERING AREA
30	AUTOMOTIVE BUILDING	LECTURE & LABORATORY
31	AUTOMOTIVE SERVICING	AUTOMOTIVE SERVICES
32	MECHANICAL BUILDING	LECTURE & LABORATORY
33	SUPPLY OFFICE	MATERIALS & SUPPLY STORAGE
34	FOOTBALL FIELD	SPORTS ACTIVITY
35	MATERIALS RECOVERY FACILITY	MATERIALS RECOVERY



1 CS CHMSU ALIJIS CAMPUS LAYOUT

SCALE NDTS



2 CS VICINITY MAP

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Negros Occidental

PROJECT TITLE:	ENDORSED BY:	CHECKED BY:	RECOMMENDING APPROVAL:	APPROVED:	PREPARED / CHECKED BY:	SHEET NO.	PAGE NO.
UPGRADING OF ELECTRICAL MAIN LINE SYSTEM (PHASE 2) - ALIJIS CAMPUS	DR. EDWIN H. BUGNA	ENGR. JUN-JUN MARQUEZ	Mrs. ROSALINDA V. TUVILLA, J.D.	NORBERTO P. MANGULABNAN, Ph.D.	FEDERICO V. DENISA JR., P.h.D CAMPUS PHYSICAL PLANT AND FACILITIES JOHN REY ANGELO G. CORNELIO CAMPUS CUT DRAFTSMAN	C	S
PROJECT LOCATION: ALIJIS CAMPUS, BACOLOD CITY	CAMPUS DIRECTOR	DIRECTOR PPDM	VICE PRESIDENT FOR ADMINISTRATION	SUC PRESIDENT III			

4/29 11:27

ELECTRICAL SPECIFICATIONS

1. All Electrical works shall conform with the provisions of the latest edition of the Philippines Electrical Codes, Rules, Regulation of the Local Gov't. Agency and those of the local Utility company.

2. Main Entrance shall be 2 SETS.3 - 250.0mm^2 THW and 1 - 80.0mm^2 THW,600V,75°C, in 5 SETS,90mmØ RSC OR CABLE TRAY LADDER TYPE.

3. Main Disconnect use 1200 AT, 3P,230V,Circuit Breaker, (See Single Line Diagram and Design Computations)

4. Method of wiring. All wirings during installations shall be in PVC embedded in concrete slabs, column inside ceiling and wooden partitions for branch circuits and sub-feeders, if exposed used RSC.

5. No Splicing of conductors insides the circuits.

6. No branch Circuits shall have a loads more than 80% of its ampacity

7. All wirings durings installations, color code must be observed.
   a.White - neutral
   b. Blue and Red color - Phase wires
   d. Orange - Additional Wire for Feeders

8. All materials and equipments to be used shall be brand new and approved as to locations and purposed and solidly grounded.

9. Minimum size of wires and conduits shall be 3.5mm^2, THHN Duraflex or approved equal, and 20mmØ PVC, Vendex or approved equal .

10. Whenever, required or necessary pullbox and junction box shall be provided even, not indicated on plans. Wires and cables 99.9% copper conductivity Duraflex. Unicon quality grade or approved equal.

11. Megger test must be conducted as requirsites of signing Electrical service connections. Any electrical effected by actual conditions or revisions. Design electrical Engineer must be consulted for final approval.

12. All Electrical works must be Direct Supervisions of any Grade Electrical Engineer and registered Master Electricians as per RA #7920\
    Mounting Heights Switch - 1.37AFF
    Conv. Outlets - 0.30 AFF
    Panelboards - 1.80m Top of Panels to floor Lines.

LEGEND & SYMBOLS:

- CONCRETE ELECTRICAL POST (NEW)
- ELECTRICAL POST (FOR FUTURE PROPOSAL)
- ELECTRICAL POST (EXISTING/RETAIN)
- ELECTRICAL POST G.I. POLE(EXISTING)
- SERVICE ENTRANCE
- MDP — MAIN DISTRIBUTION PANEL
- ANCHOR / GUY
- DISTRIBUTION CONDUCTOR (NEW / FEEDER 4)
- DISTRIBUTION CONDUCTOR (EXIST. FEEDER 2)
- DISTRIBUTION CONDUCTOR (EXIST. FEEDER 1)
- PB — PANEL BOARD
- TUBE LIGHTING LED T8 (20 WATTS)
- POWERLINE
- 3abc — 3 GANG SWITCH
- a,b,c — SWITCH INDICATOR
- EXHAUST FAN
- SECONDARY RACK 3 SPOOL

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SCHEDULE OF LOADS

CKT BR NO.	LOAD SERVED	LOAD AMPS (70% DF)	CB PROTECTION	MCCB PROTECTION (POWERHOUSE/MDP)	WIRES / CONDUIT SIZE (FROM POWERHOUSE)	REMARKS
FEEDER 1	TVEP BUILDING (MECHANICAL SHOP)	175.00 A	250 A 230V, 3P	315A MCCB 230V, 3P	(EXISTING WIRE & CONDUIT SIZE)	
	COMMON CR	28.00 A	40 A 230V, 2P			
	ACADEMIC BLDG. (3F-3J)	70.00 A	100 A 230V, 2P			
	AUDIO-VISUAL ROOM	70.00 A	100 A 230V, 3P			
	GUIDANCE OFFICE	42.00 A	60 A 230V, 2P			
	REGISTRAR OFFICE	70.00 A	100 A 230V, 2P			
	LIBRARY (SECOND FLOOR)	70.00 A	100 A 230V, 2P			
	FACULTY ROOM & CASHIER	70.00 A	100 A 230V, 3P			
	CAMPUS GYM	70.00 A	100 A 230V, 3P			
FEEDER 2	CANTEEN (GROUND FLOOR)	70.00 A	100 A 230V, 3P	315A MCCB 230V, 3P	(EXISTING WIRE & CONDUIT SIZE)	ADDITIONAL 3 PHASE WIRING FROM THE FEEDER LINE TO THE MDP (PHASE 2) @ 30 M. - ACSR WIRE
	COMPUTER BLDG.(SECOND FLOOR)	70.00 A	100 A 230V, 3P			
	FACULTY LOUNGE (THIRD FLOOR)	87.50 A	125 A 230V, 3P			
	ACADEMIC BLDG. 1	105.00 A	150 A 230V, 3P			
	ACADEMIC BLDG. (3A-3E)	70.00 A	100 A 230V, 2P			
	CLINIC AND OSAS OFFICE	70.00 A	100 A 230V, 2P			
	LIBRARY (GROUND FLOOR)	105.00 A	150 A 230V, 3P			
FEEDER 3	3 STOREY LABORATORY BUILDING (EXISTING LOAD)	280.00 A	400 A MCCB 230V, 3P	315A MCCB 230V, 3P	3 - 100.0 SQ.MM THW WIRE, 600V, 75°C	ADDITIONAL 3 PHASE WIRING FROM THE BLDG. SERVICE ENTRANCE TO THE MDP (PHASE 2) @ 36 M. WIRE
FEEDER 4	TO WORKSHOP (AUTOMOTIVE SHOP)	224.00 A	320 A MCCB 230V, 3P	315A MCCB 230V, 3P	3 - 100.0 SQ.MM THW WIRE, 600V, 75°C	ADDITIONAL 3 PHASE WIRING FROM THE BLDG. SERVICE ENTRANCE TO THE MDP (PHASE 2) @ 22 M.
SPARE	FOR FUTURE BUILDING		315 A MCCB 230V, 3P	315A MCCB 230V, 3P	3 - 100.0 SQ.MM THW WIRE, 600V, 75°C	
SPARE	FOR FUTURE BUILDING		315 A MCCB 230V, 3P	315A MCCB 230V, 3P	3 - 100.0 SQ.MM THW WIRE, 600V, 75°C	

USE: 1250 AT/ 2000 AF , 3P , 50 KAIC , 240 V , MCCB
4 SETS, 3 - 250.0 SQ.MM AND 1-80.0 SQ. MM, THW, 600V, 75°C in 90 mmØ PVC

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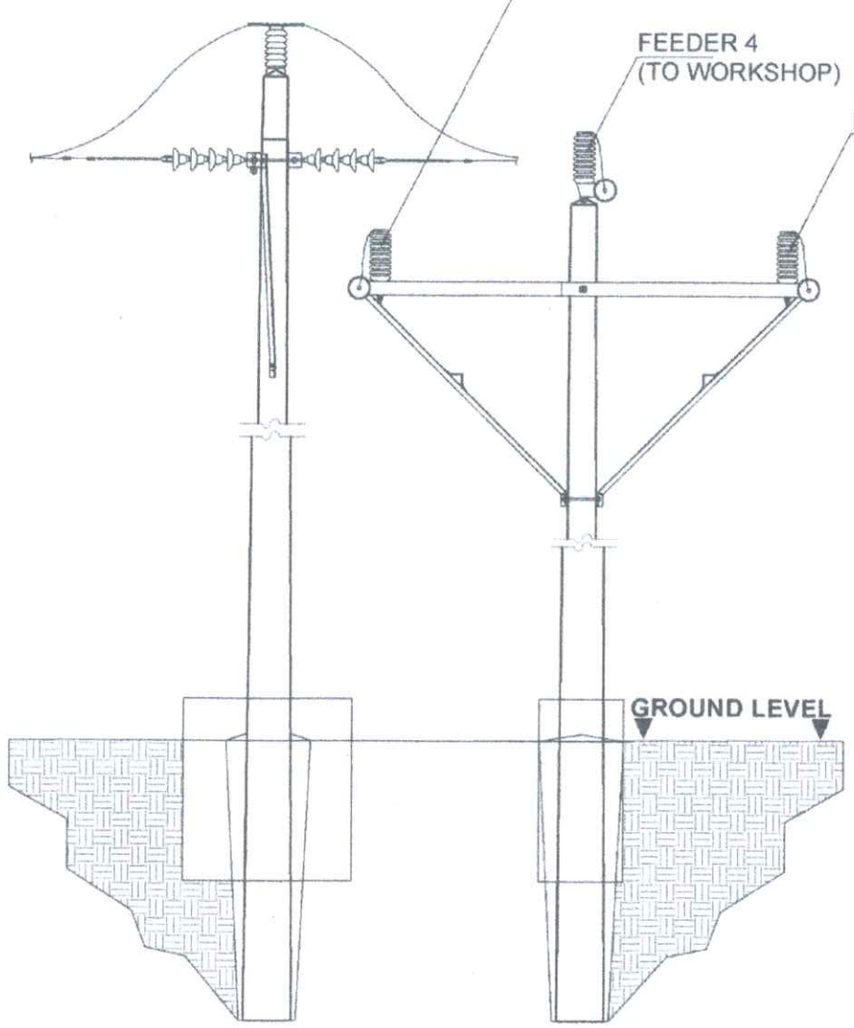
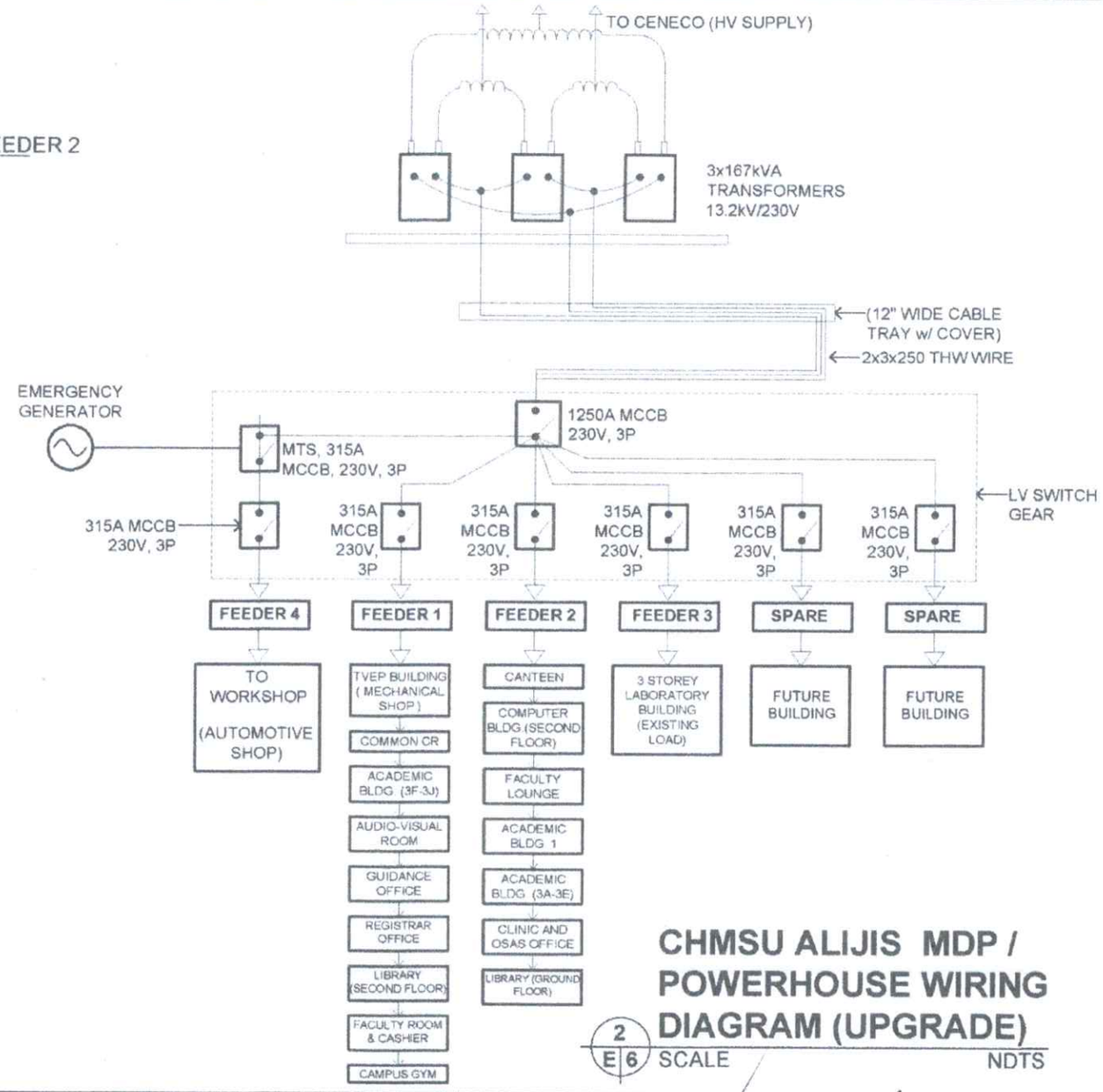


ELECTRICAL CONCRETE POST DETAIL (CROSS ARM TYPE)

1 / E 6 SCALE NDTS



CHMSU ALIJIS MDP / POWERHOUSE WIRING DIAGRAM (UPGRADE)

2 / E 6 SCALE NDTS

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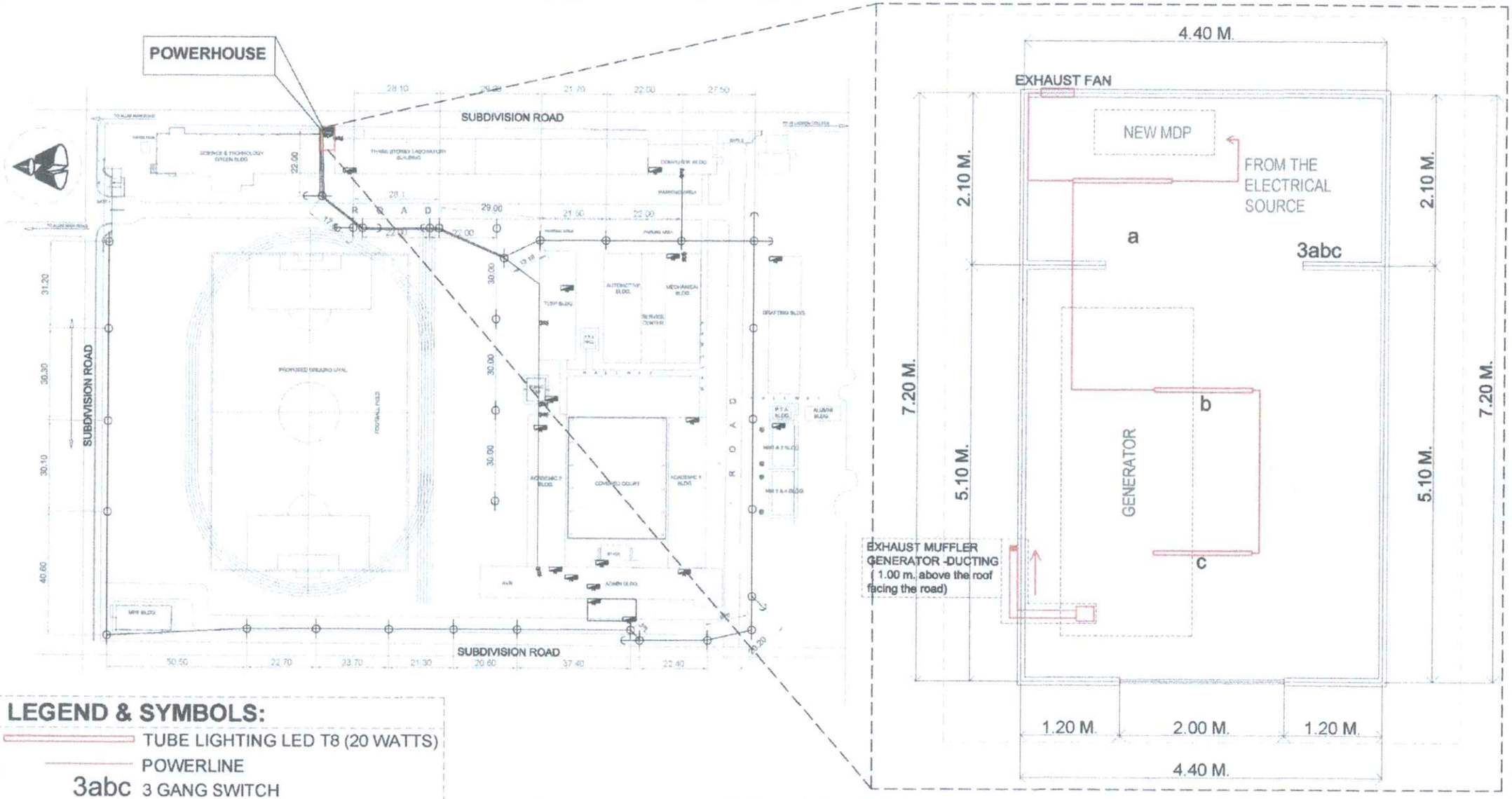

LEGEND & SYMBOLS:

- TUBE LIGHTING LED T8 (20 WATTS)
- POWERLINE
- 3abc 3 GANG SWITCH
- a,b,c SWITCH INDICATOR
- EXHAUST FAN

1/E5 POWERHOUSE ELECTRICAL PLAN (EXHAUST & ADD LIGHTINGS)

SCALE 1:60 MTS

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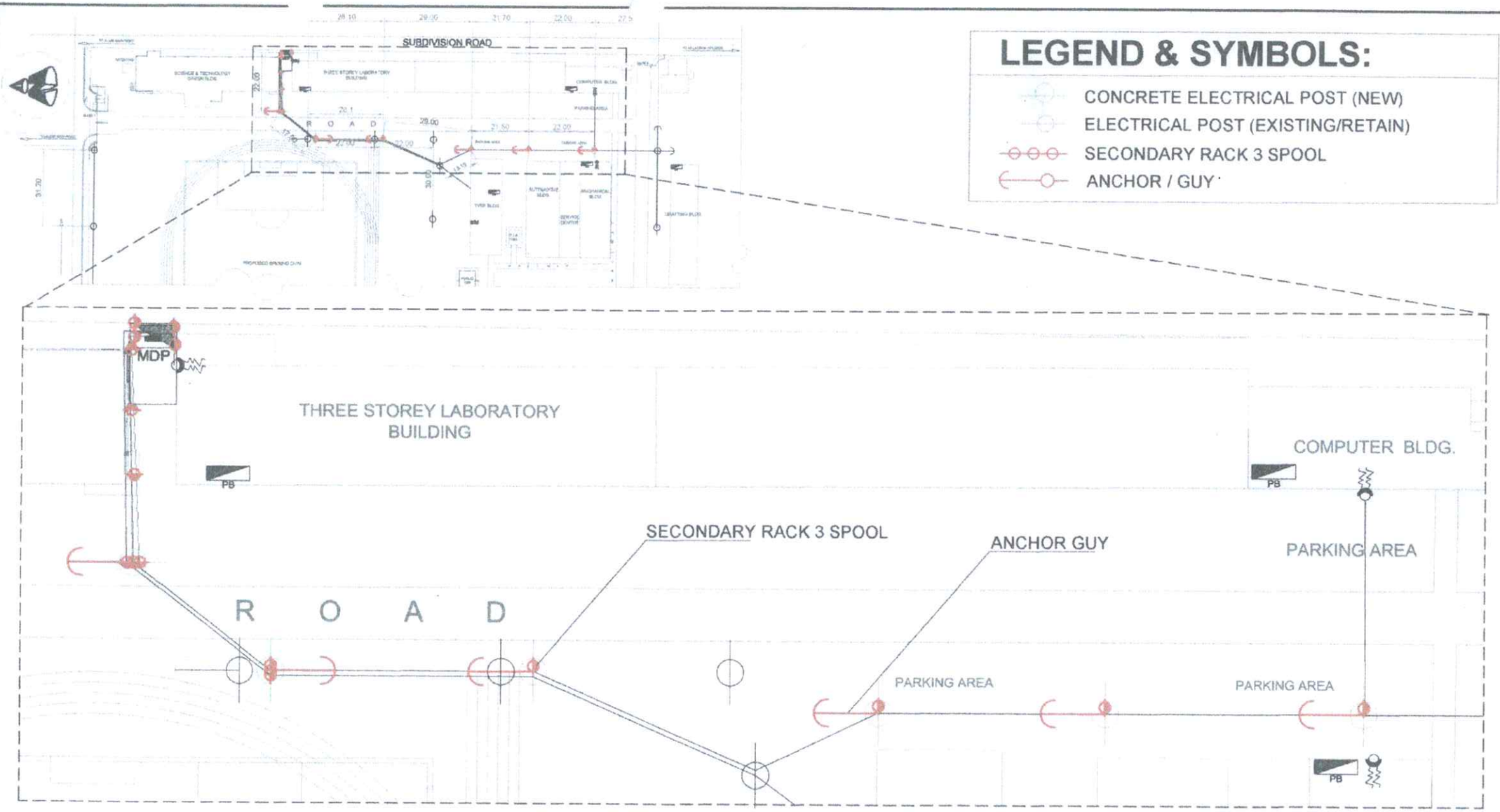

LEGEND & SYMBOLS:

- CONCRETE ELECTRICAL POST (NEW)
- ELECTRICAL POST (EXISTING/RETAIN)
- SECONDARY RACK 3 SPOOL
- ANCHOR / GUY

1/E4 ANCHOR GUY AND SECONDARY RACK LOCATION PLAN (MDP TO WORKSHOP & FEEDERS)

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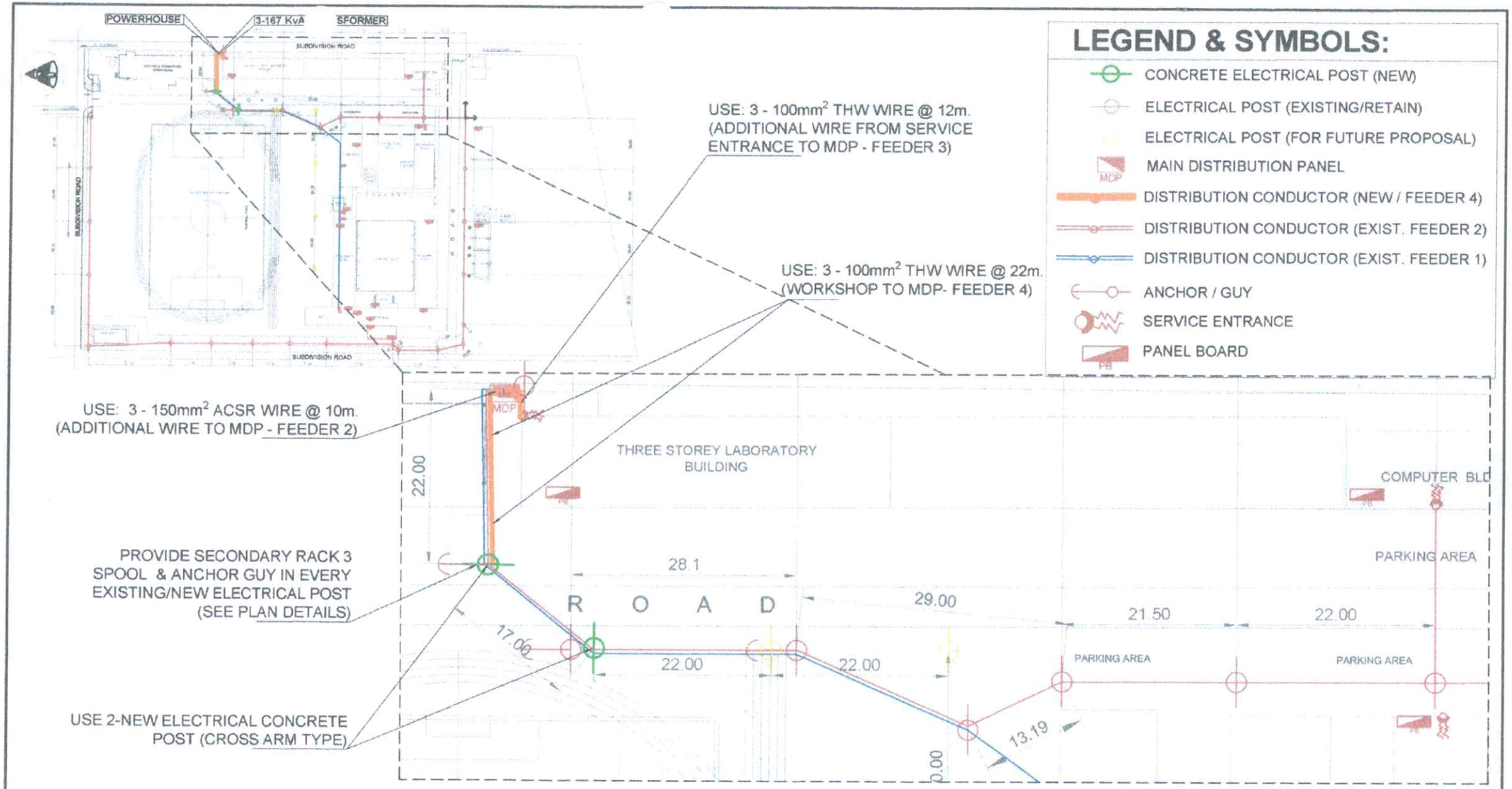

3 PHASE DISTRIBUTION CONDUCTOR - BLOW UP DETAILS (MDP TO WORKSHOP & FEEDERS)

1 E 2 SCALE 1:600 MTS

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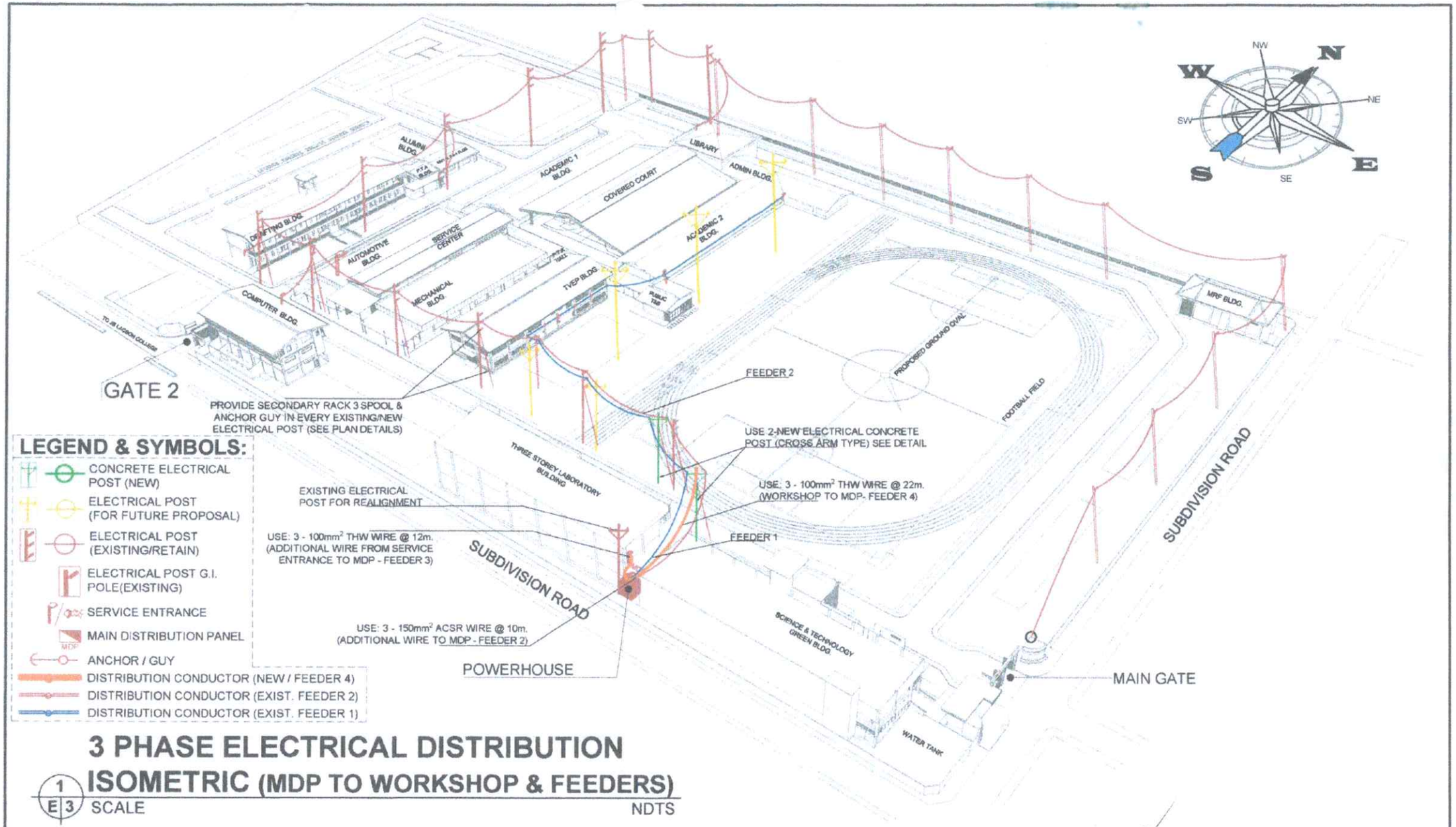
PROJECT LOCATION: ALIJIS CAMPUS, BACOLOD CITY	CAMPUS DIRECTOR	DIRECTOR PPDM	VICE PRESIDENT FOR ADMINISTRATION	SUC PRESIDENT III			



3 PHASE ELECTRICAL DISTRIBUTION ISOMETRIC (MDP TO WORKSHOP & FEEDERS)

1 / E 3 SCALE NDTS

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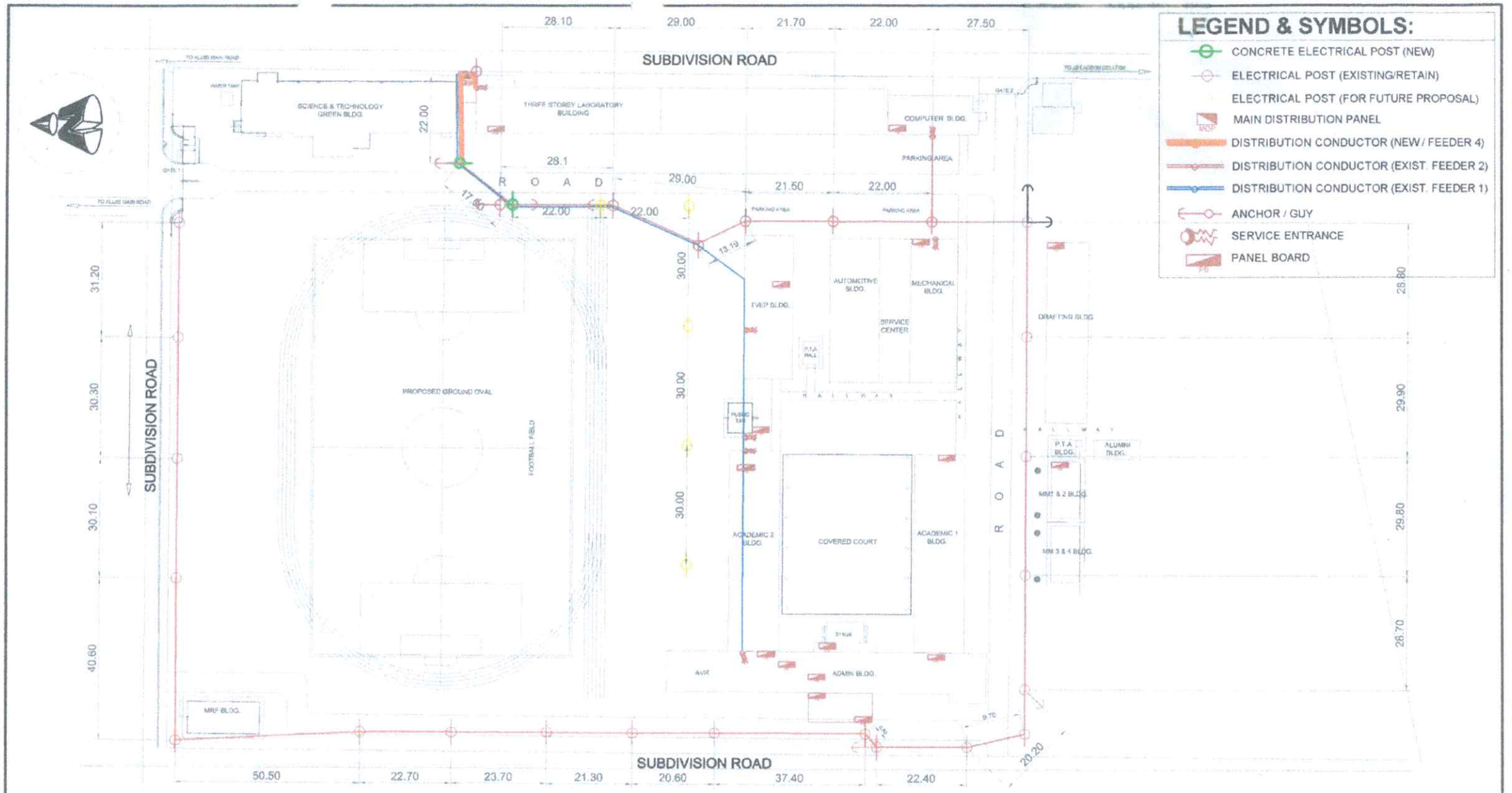
PROJECT LOCATION: ALIJIS CAMPUS, BACOLOD CITY	CAMPUS DIRECTOR	DIRECTOR PPDM	VICE PRESIDENT FOR ADMINISTRATION	SUC PRESIDENT III			



3 PHASE ELECTRICAL DISTRIBUTION LINE LAYOUT (MDP TO WORKSHOP & FEEDERS)

1 / E1 SCALE 1:1200 MTS

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Negros Occidental

PROJECT TITLE:	ENDORSED BY:	CHECKED BY:	RECOMMENDING APPROVAL:	APPROVED:	PREPARED / CHECKED BY:	SHEET NO.	PAGE NO.
UPGRADING OF ELECTRICAL MAIN LINE SYSTEM (PHASE 2) - ALIJIS CAMPUS	DR. EDWIN H. BUCNA	ENGR. JON-JUN MARQUEZ	Mrs. ROSALINDA V. TUVILLA, J.D.	NORBERTO P. MANGULABNAN, Ph.D.	FEDERICO V. DENISA JR., P.h.D CAMPUS PHYSICAL PLANT AND FACILITIES	E 1	
PROJECT LOCATION: ALIJIS CAMPUS, BACOLOD CITY	CAMPUS DIRECTOR	DIRECTOR PPDM	VICE PRESIDENT FOR ADMINISTRATION	SUC PRESIDENT III	JOHN REY ANGELO G. CORNELIO CAMPUS OJT, DRAFTSMAN		

CARLOS HILADO MEMORIAL STATE UNIVERSITY
BIDS AND AWARDS COMMITTEE
Talisay City, Negros Occidental

PROJECT REFERENCE No.: **CHMSU 24-026-0701-I**

I. PROJECT TITLE: **UPGRADING OF ELECTRICAL MAIN LINE SYSTEM (PHASE 2)**

II. LOCATION: **CHMSU ALIJIS CAMPUS**

III. SUBJECT: **PROGRAM OF WORKS**

IV. SCOPE OF WORKS

1.0 GENERAL REQUIREMENTS
- 1.1 Mobilization (Equipment Rentals)
- 1.2 Site Clearing, Cleaning, and Hauling (Chipping of Wall for Exhaust Fan)
- 1.3 Excavation, Backfilling & Compaction (New Electrical Post)
- 1.4 Safety Occupational Hazards

2.0 CONNECTION AND INSTALLATION OF 3 PHASE ELECTRICAL DISTRIBUTION LINE FROM NEW MDP TO FEEDERS
- 2.1 Installation and Connection of New Wiring from New MDP to Feeder 4 (Workshop)
- 2.2 Replacement and Connection of New Wiring from Feeder 3 (3 Storey Lab -Service Entrance) to New MDP
- 2.3 Realignment and Connection of New Wiring from Feeder 2 line to New MDP

3.0 NEW ELECTRICAL POST
- 3.1 Installation of New Concrete Electrical Post
- 3.2 Installation of Secondary Rack & Anchor Guy to Existing/New Electrical Post

4.0 NEW LIGHTING AND FIXTURES TO POWERHOUSE
- 4.1 Installation of Exhaust Fan and Exhaust Pipe (For Generator)
- 4.2 Installation Additional Lightings

5.0 MISCELLANEOUS WORKS

Note: All Design & Plans Should be referred to the identified parameters.

**********Nothing follows*******

BILL OF QUANTITIES

Item no.	Description of Works	Qty	Unit	Material Cost		Labor Cost		Total Amount
				Unit Cost	Material Sub-total Cost	Unit Cost	Labor Sub-Total Cost	Contract
1.0	**GENERAL REQUIREMENTS**							
1.1	**Mobilization (Equipment Rentals)**	1	lot					-
1.2	**Site Clearing, Cleaning, and Hauling (Chipping of Wall for Exhaust Fan)**	1	lot					-
1.3	**Excavation, Backfilling & Compaction (New Electrical Post)**	1	lot					-
1.4	**Safety Occupational Hazards**	1	lot					-
						Sub-total ₱	-	₱ -
	Sub-total, 1.0 (GENERAL REQUIREMENTS)						**Sub-total**	₱ -
2.0	**CONNECTION AND INSTALLATION OF 3 PHASE ELECTRICAL DISTRIBUTION LINE FROM NEW MDP TO FEEDERS**							
2.1	**Installation and Connection of New Wiring from New MDP to Feeder 4 (Workshop)**							
2.1.1	50mm² THW WIRE @ (154m. x 3) additional wire to Feeder 4 (Workshop)	470	m					-
				Sub-total ₱	-	**Sub-total ₱**	-	₱ -
2.2	**Replacement and Connection of New Wiring from Feeder 3 (3 Storey Lab -Service Entrance) to New MDP**							
2.2.1	100mm² THW WIRE @ (12m. x 3) additional wire to Feeder 3 (3 Storey Lab)	36	m					-
				Sub-total ₱	-	**Sub-total ₱**	-	₱ -
2.3	**Realignment and Connection of New Wiring from Feeder 2 line to New MDP**							
2.3.1	150mm² ACSR WIRE @ (10m. x 3) additional wire to Feeder 2	30	m					-
				Sub-total ₱	-	**Sub-total ₱**	-	₱ -
	Sub-total, 2.0 (CONNECTION AND INSTALLATION OF 3 PHASE ELECTRICAL DISTRIBUTION LINE FROM NEW MDP TO FEEDERS)						**Sub-total**	₱ -
3.0	**NEW ELECTRICAL POST**							
3.1	**Installation of New Concrete Electrical Post**							
3.1.1	Concrete Electrical Post Cross Type (9.00 meters)	2	pc					-
3.1.2	Transfering and Installation of Wiring to New & Existing Electrical Post (for Feeder 1,2 and 4)	1	lot					-
3.1.2	Realignment of the Existing Electrical Post in the Powerhouse	1	lot					-
				Sub-total ₱	-	**Sub-total ₱**	-	₱ -
3.2	**Installation of Secondary Rack & Anchor Guy to Existing/New Electrical Post**							
3.2.1	Secondary Rack 3 Spool with Spool Insulator (Heavy Duty)	17	set					-

3.2.2	Guy Anchor Rod Set (Anchor Rod, Guy Clamp, Guy Grip, Guy Thimble, Guy Wire, Nut & Screws and other accessories) Heavy Duty	6	set					-
3.2.3	Terminal Connectors, Jumpers, Tie-wires, Insulator Tape, Rubber Insulator, Split Bolt and other Accessories	1	lot					-
				Sub-total ₱	-	Sub-total ₱	-	₱ -
	Sub-total, 3.0 (NEW ELECTRICAL POST)						**Sub-total**	₱ -
4.0	**NEW LIGHTING AND FIXTURES TO POWERHOUSE**							
4.1	**Installation of Exhaust Fan and Exhaust Pipe (For Generator)**							
4.1.1	Industrial Exhaust Fan with Grill (16 inches)	1	pc					-
4.1.1	Exhaust Pipe for Generator (Ducting)	1	lot					-
				Sub-total ₱	-	Sub-total ₱	-	₱ -
4.2	**Installation Additional Lightings**							
4.2.1	Industrial Exhaust Fan with Grill (16 inches)	1	pc					-
4.2.2	Tube lighting LED T8 with housing and complete accessories(cool daylight, 20 watts)	3	set					-
4.2.3	3.5 mm² THHN Stranded	45	m					-
4.2.4	Junction Box (Octagonal)	5	pcs					-
4.2.5	Surface Type Switch 2-Gang	1	pc					-
				Sub-total ₱	-	Sub-total ₱	-	₱ -
	Sub-total, 4.0 (NEW LIGHTING AND FIXTURES TO POWERHOUSE)						**Sub-total**	₱ -
5.0	**MISCELLANEOUS WORKS**							
	FOR ALL OTHER ITEMS that are not included on listed Bill of Quantities in your Bid but are deemed necessesary for the completion of the works and the delivery of the project and in full compliance with all the requirements of the occupancy permit	1	lot					-
						Sub-total ₱	-	₱ -
	Sub-total, 5.0 (MISCELLANEOUS WORKS)						**Sub-total**	₱ -

PROJECT DURATION : 60 CALENDAR DAYS

A. TOTAL DIRECT COST	₱ -
B. CONSUMABLES	₱ -
C. SUPERVISION AND ADMINISTRATION	₱ -
D. TOTAL INDIRECT COST (B + C)	₱ -
E. TOTAL COST (A + D)	₱ -
F. VAT (12% of Item E)	₱ -
GRAND TOTAL PROJECT COST	₱ -